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Atomic Activism

The History and Legacy of Japan's Hibakusha Activists

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Atomic Activism

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by

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Dedication

This Master's Report is dedicated to victims of the atomic bombings of Hiroshima and
Nagasaki, both living and dead.

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Abstract

Atomic Activism

The History and Legacy of Japan's *Hibakusha* Activists

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Atomic bomb survivors, called *hibakusha*, are active in campaigning against nuclear arms, but also in demanding that the Japanese government recognize their healthcare needs and meet them. This fight for recognition, of both their status as atomic bomb survivors and of their healthcare needs, has been long and arduous, and does not exist in a vacuum. Influencing and influenced by Japanese environmental disaster cases of the twentieth century, *hibakusha* set the standard for the Japanese government to set a high burden of proof policy for victims of environmental disasters, excluding large numbers of suffering populations. Even after seventy years of litigation and reform, the Japanese government does not recognize all atomic bomb survivors. I analyze the history of *hibakusha* activism, legislation, and litigation, and compare it to other environmental cases, including the ongoing 3/11 Fukushima Daiichi Nuclear Disaster. I examine the justification for *hibakusha* petitions, how activism proceeded, how it influences other cases, and ultimately the legacies of *hibakusha* activism going forward.

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Introduction: Nuclear Healthcare

In 2007, a group of 387 Japanese citizens filed for legal recognition of their status as *hibakusha*, or atomic bomb survivors. Though not present for the bombings themselves, this group claimed that they entered the area in and around Nagasaki City in the two weeks following the atomic bombing of August 9, 1945. After ten years of appeals to higher courts, these *hibakusha* were given a definitive answer from the Japanese Supreme Court on December 17, 2017. Based on government-sanctioned scientific studies determining where fallout from the bombing fell and the areas the *plaintiffs* visited, all but one was denied legal recognition and thus access to compensation for their fallout-related illnesses. The Supreme Court approved one plaintiff's status, but for him, it was already too late. By the final ruling, the man was dead.¹

What does it mean to be officially recognized as *hibakusha*? The legal categorization itself is rather broad, enough so to include those who experienced the atomic bombings firsthand but also those who were only affected by radioactive fallout in and around both Hiroshima and Nagasaki. This fallout lasting for weeks and months afterwards, the chaotic situation on the ground did not allow for easy quarantine nor official documentation by the Japanese government or the American occupation, and thus, how many were affected remains unknown. While estimates vary, historians often

¹ "Top court dismisses Nagasaki hibakusha-recognition suit," *Japan Times*, published December 18, 2017, accessed February 1, 2018, <https://www.japantimes.co.jp/news/2017/12/18/national/crime-legal/top-court-dismisses-nagasaki-hibakusha-recognition-suit/#.WnxphqinGCp>.

put the number of casualties at 120,000 in Hiroshima and 80,000 in Nagasaki, but these estimates often only include those affected by the initial nuclear blast.² As such, many atomic bomb survivors lack official recognition as *hibakusha* from the Japanese government. Without this legal status, these *hibakusha* cannot request compensation for their healthcare needs. Fearing prejudice tied to being openly *hibakusha*, many do not seek compensation until they are already ill. In the 2017 Supreme Court case, many plaintiffs stated that they feared prejudice but could wait no longer for recognition given their medical needs and financial burden.³ Why have so many *hibakusha* waited until later in life to seek official status? How does the cultural stigma of *hibakusha* status influence the desire for official recognition?

Since 1955, there have been near constant litigation seeking clarification or expansion of what areas count as officially “radiated” or “bombed” or what illnesses count under Japanese compensation programs. Often these cases take years to resolve, and many have led to a series of laws passed by the Diet, most notably the 1995 Support Law for Atomic Bomb Survivors, which synthesized laws and legal challenges into a single, comprehensive law.⁴ Yet litigation has not stopped. Why, after seventy years, does the Japanese government continue to find itself in court? What issues do *hibakusha*

² M. Susan Lindee, *Suffering Made Real: American Science and the Survivors at Hiroshima*. Chicago: University of Chicago Press, 1994), 6-10.

³ *Japan Times*, December 18, 2017.

⁴ *Summary of Relief Measures for Atomic Bomb Survivors (2003)*, Atomic Bomb Survivors Relief Department (Hiroshima: City of Hiroshima, 2003), accessed January 7, 2018, <http://www.city.hiroshima.lg.jp/shimin/heiwa/relief.pdf>.

activist challenge, and have these challenges changed over time? Why does Japan bear responsibility for *hibakusha* when they did not drop the atomic bombs?

The dropping these bombs on Hiroshima and Nagasaki, acts of war that have not been repeated since 1945, have had a profound effect on the environment around both cities. Classifiable as environmental disasters, the atomic bombings and the activism of their survivors do not exist in a vacuum. How has *hibakusha* activism affected Japanese environmentalist groups, and vice versa? What hurdles have these activists had to overcome, and in what ways are *hibakusha* similar or different from other environmental groups? How do more recent environmental cases, such as the 3/11 Fukushima Nuclear Disaster, resemble Hiroshima and Nagasaki, and what can *hibakusha* activism, legislation, and litigation tell us as to the outcome of 3/11?

In this paper, I will analyze the history and impact of *hibakusha* activism, situating it within the realm of Japanese environmental history. The atomic bombings being the first environmental disasters of their kind in the world, the survivors of these events have successfully fought for government recognition of their continuing ill health and received compensation to assist with these illnesses. In doing so, *hibakusha* created a methodology for the Japanese government to treat survivors of other environmental disasters, such as the victims of Minamata disease. Part of this method includes a severe burden of proof policy, which excludes wide swaths of victims in both categories. While both groups faced prejudice for their illnesses, *hibakusha* have consistently been unable to fully overcome Japan's aversion to radiation-based illnesses, and attempts to expand

recognition of *hibakusha* status were met with limited progress until 1995. I propose that the legacy of *hibakusha* activism is in creating a script for the Japanese government in how it treats environmental disaster survivors, including survivors of the 3/11 Fukushima disaster.

This paper seeks to synthesize sources surrounding the legal and environmental history of atomic bomb survivors and their activism. Analyzing questions of activism, impact, and legacy, I aim to develop *hibakusha* within a larger context and to better understand the motivations and methods of their movement. How does the litigation of atomic bomb survivors connect to other cases of environmental and nuclear disaster, such as the survivors of Minamata disease outbreaks and the 3/11 Fukushima Daiichi Nuclear Disaster? In doing so, I will utilize a wide range of texts to understand the context and influence of *hibakusha*, the context of environmental history in Japan, as well as determine important differences between *hibakusha* and other groups in Japan through the twentieth and twenty-first century thus far. In sum, I propose that *hibakusha* activism is both highly influential to creating a systematic model for not only the government's treatment of pollution-based environmental disaster survivors but also for environmental activist groups to use the court system to legitimize their status as victims. In turn, *hibakusha* activists have been highly influenced by these later cases, achieving reform during periods of heavy environmental legislation and litigation. Despite this relationship, *hibakusha* have not yet been able to overcome the prejudice in Japan surrounding

radiation-based illnesses, which continues to affect future generations of nuclear disaster survivors.

This paper is divided into four parts. Chapter One deals with cultural, scientific, and legal definitions of who *hibakusha* are, and how these definitions are negotiated. Included in this analysis will be Japanese-American, Korean, European, and Japanese expatriates *hibakusha*, including how they are perceived by the Japanese government. Chapter Two explores the history of litigation and legislation related to atomic bomb survivors' medical compensation. I examine the developments that allowed for legislation and reform to take place, and activism's role in challenging unfair gatekeeping practices in court. Chapter Three establishes the environmental context of *hibakusha* activism, primarily comparing *hibakusha* to survivors of the "big four" environmental disasters. I also examine the effects both *hibakusha* activism and the "big four" cases' influence on 3/11 survivors. I conclude the paper by proposing the legacy of *hibakusha* activism, in both its effects on later cases and in the potential expansion of the term "*hibakusha*" to include their descendants.

The literature regarding atomic bomb survivors is by no means small, but where it has quantity it lacks diversity. Primary accounts of the atomic bombings are plentiful indeed, in both raw and collected formats. Most notable of these collections is the Hiroshima and Nagasaki museums' online exhibits, with hundreds of accounts in film

and written format, in the words of the *hibakusha* themselves.⁵ While most of these documents include explorations of life as a *hibakusha* years after the war, most collected volumes are interested only in the horrors of the immediate aftermath. These exhibits offer full accounts of how *hibakusha* status, both legally recognized and not, has affected their lives. These holistic approaches offer plenty of specific anecdotal evidence for the struggles of atomic bomb survivors, but they are often one-sided opinions. As such, they are useful for anecdotal evidence giving a human face to the cost of nuclear war but not in the formation of my larger argument.

Legal documents and scientific studies are useful in creating a basis by which to study trends and changes over time, both separately and together for context. Yet this is difficult when the documents are either difficult to find, in either language, or are written so inaccessibly as to make the task insurmountable for a layman. I am by no means a scientific expert on matters of radiation or genetics, beyond a general understanding of the basic concepts of each, and thus this will not be an in-depth study of studies, so much as a contextualizing of scientific findings. This often comes not from looking at the source material but from commentary, such as Yuka Kamite and Izumi, Suyama, and Koyama, whose findings do more to generate new research questions than answer existing ones.

⁵ “Introduction”, Hiroshima Archive Project (2010), accessed February 17, 2018, http://hiroshima.mapping.jp/concept_en.html.

There are sources that do examine previous scientific research, however. Chief among these is a trio of scientific history texts focusing on the work of the Atomic Bomb Casualty Commission (ABCC) and Radiation Effects Research Foundation (RERF). Susan Lindee's *Suffering Made Real: American Science and the Survivors at Hiroshima* is a history that investigates the American side of the ABCC until 1955, the year the ABCC published its first genetic study of *hibakusha*, which provides the basis for my understanding of the early scientific context from which laws and activism stem. Contemporary to Lindee are two memoirs, both by members of the ABCC. The more scholarly of these is *Physician to the Gene Pool: Genetic Lessons and Other Stories* by James V. Neel, the first director of the ABCC. One of Lindee's informants, Neel's memoir offers an overview of the genetics of *hibakusha* and the larger Japanese populace, helping to form an understanding of the baselessness of prejudice against *hibakusha*.⁶ More personal is *Song Among the Ruins* by William J. Schull, another scientist with the ABCC whose memoir covers his time in Japan until the 1970s, including his genetic work and the struggles of those whom he interacted with, both patients and doctors.⁷ While there are Japanese sources that do the same from a Japanese perspective, I have been unable to find these and analysis of the ABCC, RERF, and other scientific sources is woefully one-sided.

⁶ James V. Neel, *Physician to the Gene Pool: Genetic Lessons and Other Stories* (New York: John Wiley & Sons, 1994), 92-93.

⁷ William J. Schull, *Song Among the Ruins* (Cambridge: Harvard University, 1990), 1-6.

Other secondary sources often explore the political lives of *hibakusha* after nuclear war, delving into their struggles, and their cultural and legal activism. Of these, Susan Southard's *Nagasaki: Life After Nuclear War* begins where the majority do, but follows the lives of *hibakusha* well into the early 2010s. Perhaps the most recent text in *hibakusha* literature in any language, she explores the lives and activism of survivors of Nagasaki, writing with a journalist's eye on their struggles and suffering. Most important to my analysis will be her focus on activism and health.⁸ Another source, a monograph version of a series of articles that ran in the *Asahi Shimbun* in the early 1980s, gives a glimpse into the lives of *hibakusha* in the late 1970s and early 1980s. Looking at activism and prejudice, this offers a Japanese perspective focusing on a group of survivors from Hiroshima, though not nearly so modern as Southard's own.

I situate my work as a political, environmental, and legal history between these. Utilizing scientific history and coupling it with environmental histories of Japan, I use these to illustrate the extent and influence of *hibakusha* and the legal history of the term. I also plan to show the nuances of that term, and how different groups use the word to different ends. These definitions and their differences are important to understanding the agendas and complexities between atomic bomb survivors, the scientists who study them, and the Japanese population at-large and the government. It is thus with definitions I begin my analysis.

⁸ Susan Southard, *Nagasaki: Life After Nuclear War* (New York: Penguin Books, 2015), xv-xxi.

Chapter 1: Survival: Definitions and Implications of *Hibakusha*

“Who in the world could have gone through such a tragic experience but the A-bomb victims? However, the path they have chosen was not retaliation. ‘We shall never repeat the same mistake again.’ ‘Humanity cannot coexist with nuclear weapons.’ The path they have chosen is to abolish nuclear weapons. What an exalted spirit!”-Koji Ueda, “My thoughts as a younger age A-bomb survivor”⁹

Who are the *hibakusha*? The question is simple yet complex. In short, they are survivors of the atomic bombings of Hiroshima and Nagasaki. Yet the more one examines that definition, the less coherent it becomes. *Hibakusha* is a Japanese term, created by the Japanese, for the Japanese, but others beyond the Japanese survived the atomic bombings, and there are other nuclear incidents that Japanese subjects have been exposed to and have survived. A number of Korean, American, British, and Dutch citizens also survived Hiroshima and Nagasaki. At the time Koreans were Japanese subjects, and along stranded Japanese-Americans were brought to both cities as laborers during the war. Later, on March 1, 1954, the Japanese fishing vessel *Daigo Fukuryu Maru*, or Lucky Dragon 5, was fishing off the Bikini Atoll when the United States initiated the first hydrogen bomb; the ship had unintentionally drifted into the fallout zone of the Castle Bravo tests. By the time they returned to port in Japan, the crew was heavily irradiated, all of them ill, with one sailor dying from exposure after arriving home. Often these men are lumped in with *hibakusha* as atomic bomb survivors, yet the circumstances—the timing, the type of bomb, the fact it was an accident—dictate that these men are not *hibakusha*.

⁹ Koji Ueda, “My thoughts as a younger age A-bomb survivor”, Hiroshima Archive Project, accessed April 21, 2018, http://hiroshima.archiving.jp/index_en.html.

When *hibakusha* activists and the Japanese government speak of *hibakusha*, they typically do not speak of the same group typically. What differences exist between definitions of *hibakusha*, and what is the purpose of differing definitions? The obvious answer is that there are differing agendas on both ends of this spectrum, yet they are not the only parties to politicizing the use of the term *hibakusha*. After activists and the government, a third group, scientists, regularly publishes findings on *hibakusha* which offer doctors guiding principles on how to treat *hibakusha* and grant atomic bomb survivors and their children ideas of what their medical future, indeed their genetic lineage, might look like based on radiation damage. This same science has been used by the Japanese government to determine who counts as *hibakusha* and what compensation and treatments the Japanese government will cover.

There is thus a distinction between *cultural*, *scientific*, and *legal* definitions of *hibakusha*. What do each of these mean, and how do they differ from one another? What nuances exist within each individual definition? In what ways do they overlap and how are they distinct? Which groups are included in each definition, and why? How do these definitions challenge one another, and what motivates these challenges?

This chapter therefore aims to explore the term *hibakusha* in all of its iterations for the purpose of understanding the motivations of the groups that define these term variations. Each of these definitions is steeped in the historical and political understanding each agent brings to the table, and as such, they come to similar yet separate conclusions. Issues of nationality, identity, and location determine which

definition fits whom and where. Cultural definitions of *hibakusha* are the broadest category, including anyone who was present for the bombing or who was affected by radiation in the months after the bombings, and who shares their experiences; it does not consider nationality or ethnicity, instead focusing on shared experience, often motivated by activism and political objectives. Scientific definitions are those who show evidence of having been affected by the blast and subsequent fallout, be it radiation or scarification, and have been subjected to study; this latter half of the definition does not consider everyone, as scientific studies of *hibakusha* are almost universally focused on Japanese *hibakusha*. Finally, a legal definition of *hibakusha* includes those within two kilometers of the blast, who entered the area of Hiroshima or Nagasaki within two weeks of the blast, and whose illness can be linked definitively to radiation damage from there. Until recently it only allowed Japanese to be *hibakusha*, and still requires most who receive treatment under Japanese law to receive that treatment from specific facilities, thus forcing ill *hibakusha* to live near those facilities and alienating ex-patriates.¹⁰

This chapter is divided into four parts. The first provides a brief overview of *hibakusha* and the subsequent three each exploring a different definition of *hibakusha*. By chapter's end, each definition will be fully fleshed out, and their intersections explored at length. These definitions will, for the remainder of this paper, be used in

¹⁰ “原子爆弾被害者に対する援護に関する法律”, accessed January 8, 2018, http://elaws.e-gov.go.jp/search/elawsSearch/elaws_search/lsg0500/detail?lawId=406AC000000117#3.

exploring *hibakusha* activism and Japanese governmental response, in both a legislative and legal sense.

HIBAKUSHA: HISTORY AFTER HIROSHIMA

The first atomic explosion at the Trinity Test near Los Alamos, New Mexico, in July 1945 was done in meticulously scientific circumstances. Lacking a large enough lab to contain the blast, the New Mexican desert offered a wide enough plain to prevent fallout from being a real issue for the farmers nearby whose land the U.S. government had not bought up for testing.¹¹ Tested on a desert plain, the mountains, hills, and bays near Hiroshima and Nagasaki could not be more different than the testing location.

The bombing of Hiroshima took place on August 6, 1945, without issue, with a clear sight of the city allowing the crew of the *Enola Gay* to land the bomb near the designated bombing center; thus, the area of effect was larger, the casualties higher, than at Nagasaki. Nagasaki could not have been more different. Chosen as the secondary target for the August 9th bombing, Nagasaki was chosen after Kokura proved too cloudy. After the crew chose to move on, they found Nagasaki just as cloudy, but unwilling to return to base with the bomb, the crew dropped their load over what they thought was Nagasaki's town center. They instead hit one of Nagasaki's valleys, thus sparing the rest of the city from the blast and most of the fallout.¹² In Hiroshima there was an estimated

¹¹ Richard Rhodes, *The Making of the Atomic Bomb* (New York: Simon & Schuster, 1986), 675-678.

¹² Rhodes, 710-711.

90-140,000 killed instantly, and 40 to 80 thousand in Nagasaki, with many of those dying in the weeks and months after the bombings.

While many were incinerated in the blast radius or from instantly-fatal injuries, more died from their injuries and illnesses in the immediate aftermath.¹³ Almost immediately Imperial Japanese government sent scientists, doctors, and military aid to Hiroshima and later Nagasaki, trying to better understand what happened and how to help its subjects. Reports from Hiroshima and Nagasaki weighed heavily on the Emperor and his advisors when surrender was discussed, though none of them saw the damage personally until after war's end.¹⁴ By the time of Japan's surrender, the United States already had comprehensive plans on how to best study the survivors.

Doctors, American and Japanese, worked intensively to understand what they were dealing with. While research had been done on radiation applied to living organisms in the past, including the accidental exposure of the famous Curie family in their own Nobel Prize-winning research on radiation, there had never been such a massive group from which to draw samples and studies.¹⁵ Budding geneticists and several scientists from the Manhattan Project transferred to Japan to study the aftereffects, and while on-the-ground reporting of Hiroshima and Nagasaki was censored in Japan by the American military, in the United States reports such as John Hersey's *Hiroshima* very much shaped

¹³ Robert Jay Lifton & Greg Mitchell, *Hiroshima in America: Fifty Years of Denial* (New York: Grosset/Putnam Books, 1995), 10-16.

¹⁴ Tsuyoshi Hasegawa, *Racing the Enemy: Stalin, Truman, and the Surrender of Japan* (Cambridge: Harvard University Press, 2005), 195-214.

¹⁵ Rhodes, 44-48.

public opinion not just of the atomic bombing of the article's namesake city but of the survivors.¹⁶

It was during this period that two terms came to be used in relation to the atomic bombings and their survivors. *Genbaku* (原爆) primarily refers to the bombing itself and while it can be applied to the victims, it is primarily used where in English one would use the term "atomic bomb." For example, the Hiroshima Peace Dome, or A-bomb Dome, is known in Japanese as the *Genbaku Domu* (原爆ドーム). While *genbaku* can be used to refer to atomic bomb survivors, and initially was, the term *hibakusha* (被爆者) came into common usage and has remained the predominant term for atomic bomb survivors. The term's Kanji characters are more appropriate, literally meaning "person exposed to the explosion." Given its usage in promotional material in Japanese media, *hibakusha* has come to be used in English as well, though many are ignorant of the term outside of those who study them.

The Atomic Bomb Casualty Commission (ABCC) was established in 1947, an official collective of Japanese and American scientists answering to both governments dedicated to studying atomic bomb survivors and the effects of the bomb on them.¹⁷ As such atomic bomb survivors of all stripes were subjected to scientific scrutiny: no illness was left unexamined, no injury unexplored, nothing left to chance. American doctors were forbidden by the American government from giving *hibakusha* medical treatment as

¹⁶ John Hersey, *Hiroshima* (Stellar Books, 1946), v-ix.

¹⁷ M. Susan Lindee, *Suffering Made Real: American Science and the Survivors at Hiroshima* (Chicago: University of Chicago Press, 1994), 17-37.

not to corrupt their findings, thus making Japanese doctors the only source of medical treatment many *hibakusha* would have.¹⁸ The ABCC would go on to produce a number of groundbreaking studies on genetics and radiation, beginning in 1955 and lasting until 1972, when the ABCC would become the Radiation Effects Research Foundation (RERF), which continues research to this day.

The rules of the ABCC proved frustrating for Japanese doctors, however. Since all illnesses had to be documented as relevant to research, almost all illnesses, from the common cold to minor infections, were listed as “radiation sickness” during this time.¹⁹ This meant that any communicable disease *hibakusha* contracted could be considered “radiation sickness,” and was labeled as such. This record-keeping policy led to the popular misconception held by many in Japan that one could become irradiated from exposure to *hibakusha*. Many believed, and still believe, that *hibakusha* are infectious and radiation is a contagion that they can catch.

In the decades following the atomic bombings, attempts made by *hibakusha* activists, government officials, and doctors and chemists to counter this belief in radiation-as-contagion. Using digestible bits of public science, these efforts proved ineffective in countering the public’s understanding and the stigma that came from it. This belief was again illustrated after the 2011 Fukushima Daiichi Nuclear Disaster, with

¹⁸ Lindee, 117-142; William J. Schull, *Song Among the Ruins* (Cambridge: Harvard University Press, 1990), 125-131.

¹⁹ Richard Baker, *The Hiroshima Maidens: A Story of Courage, Compassion, and Survival* (New York: Viking Press, 1985), 35-38; Lindee, 143-165.

many believing those fleeing Fukushima and Tohoku could infect them with radiation sickness.²⁰

By the mid-1950s, *hibakusha* were beginning to find a voice of their own. Bolstered by a strong anti-nuclear sentiment growing in the wake of the Cold War, *hibakusha* became a strong face for this movement, and in Japan, *hibakusha*, whether injured, ill, or simply present at the time of the bombing, would give voice to the battle cry of “No More Hiroshimas.” International efforts such as the American-funded Hiroshima Maidens project, an attempt by anti-nuclear philanthropist Norman Cousins to provide plastic surgery for twenty-five *hibakusha* women in order to help them become more “marriageable,” would bring attention to *hibakusha* in ways similar to John Hersey’s article.²¹ Despite this, many *hibakusha* were critical of outreach projects, whether foreign or domestic, fearing that they would bring undue attention to a group already criticized as “exploitive” or “attention-seeking” by many in Japan.²² In the case of the Hiroshima Maidens project, one *hibakusha* died due to exposure to anesthesia, and some remarked in their later years that the exploitive nature of such projects made their lives harder.²³ The plastic surgery, as noticeable as any scar, marked them as *hibakusha*,

²⁰ Satoko Oka Norimatsu, “Protecting Children Against Radiation: Japanese Citizens Take Radiation Protection into Their Own Hands”, *Asian-Pacific Journal* vol. 9 25 (July 2, 2011), accessed April 26, 2018, <https://apjif.org/2011/9/25/Satoko-Norimatsu/3549/article.html>.

²¹ Baker, 11-12; Kazuo Chujo, *Hiroshima Maidens: The Nuclear Holocaust Retold* (Tokyo: Asahi Shimbun, 1984), 75-92.

²² Baker, 174-179.

²³ Chujo, 105-109

visibly recognizable, and as such, subject to the erroneous beliefs regarding *hibakusha* and contagion.

Dedicated to world peace and nuclear disarmament, *hibakusha* and their allies in Japan and around the world also became dedicated to memorializing the experiences of *hibakusha*, using their stories as a powerful deterrent against future nuclear war.²⁴

Throughout this period, these same activists continued to fight the Japanese government for recognition of their status and for compensation for expensive procedures and regular check-ups to check their health. Now in their twilight years, *hibakusha* activists are no less vital to the anti-nuclear movement, which has grown stronger in the face of North Korean nuclear weapons tests and the 3/11 nuclear disaster of 2011, their activism spreading to include anti-nuclear energy.²⁵

Despite a common history, who falls under the definition of *hibakusha* is largely dependent on context and the intent of the speaker. It is important to define these definitions by their boundaries, in both function and intention.

BOUND BY THE BOMB: CULTURAL DEFINITIONS OF *HIBAKUSHA*

“Let us reflect on the great social revolutions of the past, such as the abolition of slavery, the end of colonialism, the end of apartheid, women’s rights and civil rights for all in the United States. These movements began in the minds of a few, were scoffed at, and eventually triumphed. Like these movements the abolition of nuclear weapons is basically a moral issue to ensure the future for our children and all future generations.-Setuko [sic] Thurlow²⁶

²⁴ “Introduction”, Hiroshima Archive Project (2015), accessed February 17, 2018, http://hiroshima.mapping.jp/concept_en.html.

²⁵ Yuki Tanaka, “The Atomic Bomb and ‘Peaceful Use of Nuclear Energy’”, *The Asian-Pacific Journal* vol. 9 13 (March 21, 2011), accessed April 26, 2018, <https://apjif.org/2011/9/13/Yuki-Tanaka/3502/article.html>.

²⁶ Setuko Thurlow, “Continue Talking Hiroshima”, Hiroshima Project Archive, accessed April 21, 2018, http://hiroshima.archiving.jp/index_en.html.

Cultural definitions of *hibakusha* are by far the most inclusive, used by activists and their allies. Looking beyond nationality, anyone who experienced either atomic bombing or the effects of fallout in the weeks and months after the bombings can be counted in this cultural definition of *hibakusha*. Inclusion in this cultural definition of *hibakusha* is largely based on one's own sense of identity, or rather, how one internalized their experience with either the blasts or the ensuing fallout. Simply because one experienced the atomic bombings does not mean that the person must identify as *hibakusha*.

The most recognized *hibakusha* are those who were physically maimed. Immediately apparent injuries from the blasts at Hiroshima and Nagasaki were varied, but commonly include severe burns, misshapen organs and limbs, and scars. Many of these were large enough or painful enough to be difficult to hide, and thus many such *hibakusha* elected to simply not do so.²⁷ Many activists, such as the late Sumiteru Taniguchi of Nagasaki, were well-known for using their scars in their activism, showing off their scars and deformed bodies as a jarring example of what nuclear war can do.²⁸

It is more difficult to outwardly identify other *hibakusha*. Many are impossible to discern from other Japanese of the same age, and aside from distinctions such as regional dialect there is nothing that gives them away. What marks many *hibakusha* who are not visibly injured is their willingness to share their experiences. The vast majority of

²⁷ Yoshihide Hiraiwa, "Under the Mushroom Cloud," Hiroshima Archives Project, accessed April 26, 2018, http://hiroshima.archiving.jp/index_en.html.

²⁸ Susan Southard, *Nagasaki: Life After Nuclear War* (New York: Penguin Press, 2015), 214-218.

literature related to atomic bomb survivors collects the stories and experiences of Japanese *hibakusha*, and often by name. With such cases, these *hibakusha* become marked as someone willing to share their experience, whether in public forums, to media such as authors, journalists, or record their experiences for posterity. Both Hiroshima and Nagasaki have large archives of these experiences and have since 2009 begun publishing these online in English and Japanese.²⁹ These accounts are also prominently displayed at both city's respective museums.

As such, what marks these *hibakusha* is their willingness to be connected to Hiroshima and Nagasaki in a public way. It is not their scars but their stories on display that makes them known as *hibakusha*. For many this is a point of pride, but there are many *hibakusha* unwilling to be identified openly. Since 1945, many *hibakusha* have moved away from Hiroshima and Nagasaki permanently simply to avoid being reminded of or associated with the atomic bomb. Yet many of these cannot avoid being publicly marked, as to be legally recognized as *hibakusha* requires government documentation and treatment from specific medical facilities associated with *hibakusha* illnesses, which is a public identification even if the *hibakusha* does not associate themselves with *hibakusha* activism or experience-sharing.

Thus most publicly-identifying *hibakusha* belong to activist organizations. There are numerous groups focused on specific goals, be they the simple organization of

²⁹ Hiroshima Archive Project, accessed April 21, 2018, http://hiroshima.archiving.jp/index_en.html; The Nagasaki Archive Project, accessed April 21, 2018, <http://e.nagasaki.mapping.jp/p/nagasaki-archive.html>.

hibakusha living in a single neighborhood in Nagasaki or a group of all Hiroshima *hibakusha* dedicated to anti-nuclear activism. Each of these belongs to a national congress of *hibakusha* activists, called the *Nihon Hidankyō* (日本被団協), or the Japan Confederation of A-Bomb and H-Bomb Sufferers Organization. Inclusive of *Lucky Dragon 5* survivors, this group contains any and all Japanese *hibakusha*, and thus excludes non-Japanese *hibakusha*.³⁰ This applies for South Koreans, who have their own *hibakusha* organizations and overarching group, working in tandem with the Japanese but each group focusing on individual goals as well. When *Hidankyō* refers to *hibakusha*, unless it clarifies, it refers primarily to Japanese *hibakusha*.

Atomic bomb survivors include Koreans, Americans, British, and Dutch survivors, though few are legally recognized as *hibakusha* in Japan. Koreans, Japanese subjects with full rights from 1910 to 1953, are among the most numerous of these, and include members of both North and South Korea. Very few Koreans are recognized by the Japanese government as *hibakusha*, and thus the majority must be recognized as falling into cultural definitions alone, due to their activism (international or Korean), their experience, and their willingness to share this publicly. Similarly, American and European *hibakusha*, whether of Japanese descent or not, are *hibakusha* by virtue of having survived the bomb, but those that survived the initial dose of radiation sickness

³⁰ “About Hidankyo”, Nihon Hidankyo, accessed April 29, 2018, <http://www.ne.jp/asahi/hidankyo/nihon/english/about/about2-01.html>.

have been less active in political activism. There are fewer American organizations dedicated to *hibakusha*, and almost all of them are dedicated to anti-nuclear activism.

Cultural definitions of *hibakusha* are expansive and inclusive, and largely defined by *hibakusha* themselves. While those who discriminate against *hibakusha* also use these cultural definitions, solidarity in facing this prejudice helps *hibakusha* to unify themselves within their own networks and organizations, though these are sometimes set by national borders and interests. More inclusive than scientific or legal definitions, many *hibakusha* would be content for cultural activists' definitions to be the only ones. Not all experiences, and indeed not all radiation exposure, is equal in the eyes of the government, and science.

PHYSICIANS TO THE GENE POOL: SCIENTIFIC *HIBAKUSHA*

“However, that summer, while training for his new job at an automobile factory in Saitama Prefecture, he was attacked by a high fever of unknown origin. A persistent temperature higher than 39 degrees forced him to return to Hiroshima.

He was unable to work for a year. ‘Why do I have such a weak body?’ Blaming himself for not living up to his own expectations, he cried again and again in frustration.”-Yoshika Sunamoto³¹

One of the lingering criticisms of the American military and the ABCC in the aftermath of the atomic bombings is the lack of good record-keeping. Japanese records of the ABCC would often include categorical identifiers that would be unintelligible to American scientists and vice-versa, and the methods of the American and Japanese scientists varied highly. Similarly, name recording in English often would include only

³¹ Yoshika Sunamoto, “Day after day he fought the disease but never lost his passion for life,” *The Chugoku Shimbun*, Hiroshima Archive Project, accessed April 21, 2018, http://hiroshima.archiving.jp/index_en.html.

last names, a deeply flawed system given the ubiquity of some surnames in Japan.³² As such, it took several years, well into the 1950s, for records of *hibakusha* to be streamlined.

While other criticisms that can be laid at the feet of scientific studies of *hibakusha*, the advent of the 1950s saw egregious record-keeping removed from that list. The scientific study of *hibakusha* is the basis of a scientific definition of *hibakusha* can be drawn, derived from decades of research meant to clarify and resolve inconsistencies and issues in research over time. Primary issues include the length of time during which radiation levels in the area around Hiroshima and Nagasaki remained harmful, how far out of the blast radius injuries were inflicted, and the nature of illnesses and what can be definitively tied to radiation exposure.

Perhaps the most pressing and debated issue with regards to science is how far from the blast radius injuries took place, and how far the effects of fallout can be established. Hiroshima and Nagasaki are surrounded by mountains, with the cities being built in valleys and on islands in the area around these mountains. In both cases, the mountains affected the direction of the fallout plume, and in the case of Hiroshima specifically, the geography affected which regions in the larger Chugoku region were affected. Based on changes in ABCC and later RERF studies over time, areas around Hiroshima have been reclassified from fallout-free zones to fallout zones, and in some cases, areas that were previously thought to be irradiated were determined to not-

³² Lindee, 17-32.

irradiated by as new measurement systems produced more accurate data.³³ While the ABCC was revolutionary in genetics and radiation studies during its time, methods, measures, and categorizations have changed in the decades since the initial ABCC studies. Revisions are often necessary, but can sometimes come with the side-effect of bringing unintentional harm to the *hibakusha* they study.

Fallout varies in presentation, but often came in the form of particulates mixed with ash, soot, and the air in general, this last point being almost undetectable. Other presentations of fallout such as the “black rain,” were caused when the pressure from the blast caused moisture in the air to fall with this ash as a literal black liquid that stained the areas around Hiroshima and Nagasaki. Made most famous by Ibuse Masuji’s novel *Black Rain* and the subsequent film adaptation, black rain is a symbol of how data changes over time. Initially, the original doctors and scientists at Hiroshima and Nagasaki declared “black rain” as harmless, and indeed, many exposed to the rain have yet to develop any illnesses that can be linked to radiation exposure. Since the formation of the ABCC, however, studies have shown that “black rain” was irradiated, and thus a legitimate form of radiation exposure.³⁴

Scientific definitions of *hibakusha* thus varies, yet is notable because to study an atomic bomb survivor, criteria must exist to determine who is and is not *hibakusha*.

³³ Lindee, 237.

³⁴ Kiyoshi Shizuma, Satoru Endo, and Yoko Fujikawa, “Isotope Ratios of ²³⁵U/²³⁸U and ¹³⁷Cs/²³⁵U in Black Rain Streaks on Plaster Wall Caused by Fallout of the Hiroshima Atomic Bomb”, *Health Physics* vol. 102 no. 2 (February 2012), 152-160.

Exposure to radiation appears in the tissue and bones, though they are not perfect indicators. Techniques to measure these have not always existed, however, and thus early genetic studies of *hibakusha* are reliant on faulty record-keeping. How is a scientific definition formed out of this chaos? The only consistent measure from 1947 onward is the numeric, faceless *hibakusha*: the results of studies. Though methods have developed that allow for individual identification, the quantity of specific illnesses, of specific symptoms, has been consistently used since 1945 in the study of irradiated individuals in Japan. In short, a scientific definition of *hibakusha* is one that identifies common markers and diseases of *hibakusha* and studies them: these subjects are *hibakusha*.

Thus, the scientific definition deals not with narrative or experience but with medical records and scientific data. It focuses on medical treatments and collecting data for further study. Because studies are limited to those who are willing to subject themselves to study post-1950s, this definition often excludes non-Japanese survivors and those who have left Hiroshima and Nagasaki, or Japan entirely. While in the twenty-first century there are more nuclear disasters and indeed more survivors of these events in the world beyond Japan, Japan has offered the world its first testing ground for research on radiated populations, and this research has proven incredibly valuable to genetics, nuclear studies, chemistry, physics, and modern medicines involving radiation treatments. It is not the only deciding factor to who is and is not a *hibakusha*, however, and the Japanese government's legal definition of who is *hibakusha* does not always rely on the most up-to-date scientific studies.

THE BURDEN OF PROOF: LEGAL *HIBAKUSHA*

“I’d like to warn the society and to sleep forever after watching abolition of nuclear weapons on earth with my own eyes. The government has long kept saying that we the victims of atomic bombs and airstrikes should accept our war damages, which THEY brought us, and they don’t seem to change their attitude. We can never accept such tragic harm on us because that means we allow another war.”-Hisako Kimura³⁵

The legal definition of *hibakusha* is the most exclusive and perhaps the clearest, for several reasons. Japanese laws since 1957 have defined who is and is not *hibakusha* in order to specify what rights to medical treatment they have. Over time, this definition has been challenged and changed by litigation and legislation. Both of these will be explored in-length in Chapter II, though here we will explore the definition enough to differentiate it from cultural and scientific definitions.

The 1995 Atomic Bomb Survivor Support Law, the largest and most comprehensive law regarding *hibakusha* in Japanese history, defines *hibakusha* as persons directly exposed to the blast and anyone within a two kilometers radius at the time of the bombings, those who entered those areas up to two weeks after the blast, or those who were otherwise exposed to radiation in specified exceptions, such as “black rain” around Hiroshima and Nagasaki.³⁶ To be considered *hibakusha*, an atomic bomb survivor must prove that they fall within one of these three categories, using evidence to prove their status. Until 2007, only Japanese citizens living in Japan were granted legal *hibakusha* status, due to their proximity to nine medical facilities that have been approved for treatment of *hibakusha*-related illnesses. These *hibakusha* are granted medical

³⁵ Hisako Kimura, “Dear Young Generations,” The Hachioji Hibakusha Association, Hiroshima Archive Project, accessed April 21, 2018, http://hiroshima.archiving.jp/index_en.html.

³⁶ “原子爆弾被害者に対する援護に関する法律”

subsidies and compensation for treatments, as well as fully-covered medical check-ups once a year that look at government-specified “*hibakusha* illnesses,” specific illnesses that have been linked to *hibakusha* population studies.³⁷

This definition is the one most clearly defined, and puts the burden of proof on the *hibakusha*: they must provide evidence that they fall into one of those three categories or they are denied legal recognition as a *hibakusha*, and thus access to medical resources. By tying these medical resources to nine medical facilities in Tokyo, Hiroshima, and Nagasaki, the Japanese government imposes additional gatekeeping on *hibakusha* in Japan as it limits how far away *hibakusha* can reasonably live from these facilities. Medical treatment given in any other hospital in Japan will not be covered by the '95 Support Law, as it is not one of the approved facilities and thus not subject to compensation or subsidy. This exclusivity has been a point of contention between not just *hibakusha* and allied activist organizations, but also scientists such as William Schull, a former high-ranking ABCC geneticist who studied *hibakusha* exclusively from 1947 to 1955 and periodically until the creation of the RERF in 1972.³⁸ Despite using scientific studies to define its terms, the '95 law is highly selective in its choice of studies. In selecting two kilometers from the blast radius as the limit of the law's recognition, RERF studies from the previous two decades had expanded that radius to five kilometers across several studies. While using scientific studies to legitimize their findings, the government

³⁷ “原子爆弾被害者に対する援護に関する法律”

³⁸ Schull, vii-viii.

is selective as to which studies they endorse.³⁹ While challenges in court are sometimes successful previously, the 1995 Support Law has been upheld in court with consistency, with very few exceptions. By setting clear standards and putting the burden of proof on atomic bomb survivors, the '95 law can be seen as the government's official stance on who is and is not *hibakusha*.

CONCLUSION: DEFINITIONS IN THEORY AND REALITY

These three definitions are not in and of themselves mutually exclusive, they simply offer different parameters for measuring who is and is not *hibakusha*. With cultural definitions being the most inclusive and the legal definition being the most exclusive, scientific definitions of *hibakusha* often fall somewhere in between. It is similarly scientific definitions that have changed the most, given the nature of research, data, and shifts in scientific paradigms over time.

Cultural definitions of *hibakusha* are those who publicly identify themselves as such or record their experiences for posterity, yet not all *hibakusha* do so. Some who achieve scientific recognition or legal status do not politically campaign or have no experience to share, given the second and third categories of legal *hibakusha*. Yet there are those who would argue that subjecting one's self to scientific study and to legal approval of a status *is* a public display, as these are matters of public record to a point. It

³⁹ Michael Herzfeld, *Anthropology: Theoretical Practice in Culture and Society* (Malden: Blackwell Publishing, 2001), 2-3.

is not unreasonable to assume that these are cultural actions, yet the motivation behind them differs from activists and those interested in preserving history.

Whatever the case, the act of calling all survivors of Hiroshima and Nagasaki *hibakusha* is a simple one, yet lacks nuance that explains the treatment of *hibakusha* by the public and the government and why the laws regarding *hibakusha* have seen so many challenges in court or shifts in inclusion. These differences of definition, where terms are unclearly defined, allows for differing definitions, and allows for there to be gaps in categorical identifiers. Recognizing these three categories helps to bridge that gap.

Chapter 2: Atomic Activists: Recognition, Litigation, and Reform for *Hibakusha*

Nijū hibakusha are rare. Having survived both atomic bombings, these “double survivors” faced unlikely odds in making it through both Hiroshima and Nagasaki, yet according to the creators of the documentary *Twice Bombed, Twice Survived: The Doubly Atomic Bombed of Hiroshima and Nagasaki*, there were 165 living *nijū hibakusha* as of 2006.⁴⁰ However, only one is recognized by the Japanese government. Tsutomu Yamaguchi worked for Mitsubishi Heavy Industries during the Second World War, and was in Hiroshima on a business trip with two of his colleagues when the atomic bomb went off on August 6, 1945. Only three kilometers away from the blast, Yamaguchi was heavily burned on his left side and deaf in one ear. Despite his injuries, he and his colleagues returned home the next day to Nagasaki, where he received treatment. Returning to work on August 9th, Yamaguchi was describing how he survived to a supervisor when his workplace, again only three kilometers from the epicenter of the blast, was hit with the blast of the second bomb. Despite the closeness this time, because of the circumstances of the bombing itself, he faced no additional injuries. Recognized as a *hibakusha* due to documents proving he was in Hiroshima at the time of the blast, Yamaguchi was uninterested in proving where he was in his hometown at the time of his blast until 2009, when the Japanese government recognized him as the first and thus far

⁴⁰ Hideo Nakamura, *Twice Bombed, Twice Survived: The Doubly Atomic Bombed of Hiroshima and Nagasaki*, 2006.

only officially recognized *nijū hibakusha*. He did so to prove a point, that double *hibakusha* did exist. He died a year later, from stomach cancer.⁴¹

Active in *hibakusha* politics, Yamaguchi's story is an exception in many ways. Beyond his status as *nijū hibakusha*, that Yamaguchi had the needed paperwork to prove where he was at the time of the Hiroshima blast is itself uncommon, with most *hibakusha* unable to meet the government's standards of proving their location at the time of the blast. He did not have to spend much time in court, even in 2009, where the court recognized his claim to *nijū hibakusha* relatively quickly compared to most other embattled *hibakusha*.

Hibakusha activists and their allies, in and out of Japan, have banded together since the 1950s to challenge the Japanese government's stringent list of criteria to grant legal *hibakusha* status. Similarly, as science monitored new development in *hibakusha* illness and genetics, *hibakusha* used this science as grounds by which to expand what medical treatments the government covered and where treatment was allowed. Yet despite these years in court, change came only gradually, there being few revisions before the 1995 Atomic Bomb Survivor Support Law expanded coverage, compensation, and the criteria for who counted as *hibakusha*. Yet this did not end litigation, as Yamaguchi's 2009 suit to have his *nijū hibakusha* status recognized shows.

⁴¹ "Tsumotomu Yamaguchi dies at 93; Hiroshima and Nagasaki survivor", *The Los Angeles Times* January 7, 2010, accessed April 29, 2018, <http://www.latimes.com/local/obituaries/la-me-tsumotomu-yamaguchi7-2010jan07-story.html>.

As cultural definitions of *hibakusha* formed shortly after the end of World War II, activists found that initial legal definitions of *hibakusha* were quite different from their own, and as such, used the court system to challenge legal criteria of *hibakusha*. As more scientific data was published from 1955 onward, activists and the government utilized scientific boundaries as justification for grounds of their own arguments. What criteria did legal definitions of *hibakusha* require, and why were they revised over time? What grounds did activists use to challenge the Japanese government, and how successful were these challenges? How has scientific data been used by both sides, and what motivates the government in choosing to acknowledge some data over other? How has litigation affected legislation and reform, and how has reform failed to prevent future litigation? What unintended consequences have come out of litigation, and are successes in court always to the benefit of all *hibakusha*?

This chapter explores the legal history of *hibakusha* activism with regards to the Japanese healthcare system and the criteria for legal recognition of *hibakusha* status. Borrowing from Tarrow's analysis of movements in power, I will examine the periods of legislation and analyze why certain decades see more success in challenging that legislation in court than others.⁴² I will begin by looking at the development of the Atomic Bomb Casualty Commission (ABCC), the effects of the Treaty of San Francisco, and how early attempts to humanize *hibakusha* and their experiences backfired. Next, I will analyze the

⁴² Sidney Tarrow, *Power in Movement: Social Movements, Collective Action and Politics* (New York: Cambridge University Press, 1994), 16-27.

origins of *hibakusha* activism and subsequent the 1957 Atomic Bomb Victims Medical Care Law, particularly how it offered *hibakusha* assistance yet proved intentionally exclusive in who it recognized. I will then analyze the law, litigation against it, and legislative reforms between 1957 and 1995. I will focus on how the Japanese government carefully chose to reform the 1957 law and how litigation sometimes led to unintended consequences that did not favor a more inclusive definition of *hibakusha*. 1995's Support Law offered many *hibakusha* the reform they sought, yet since then there has continued to be challenges against that law. I will close with the most notable of these cases, the 2007 Overseas *Hibakusha* Case, concluding that the goals of modern *hibakusha* activists are not the same as initial *hibakusha* activists. Throughout, the legal definition will continually be challenged by cultural and scientific understandings of who *hibakusha* are.

SUBJECTS OF SCIENCE: 1945-1955

The Japanese government was quick to send scientists to Hiroshima when reports came in that something had blasted the city to rubble on August 6. Fearing a new kind of weapon, physicists were sent as well as doctors to better understand what was happening.⁴³ Physicists, aware of the possibilities of an atomic bomb, confirmed the nature of the bombings in both cities, and understanding potential exposure to radiation

⁴³ Tsuyoshi Hasegawa, *Racing the Enemy: Stalin, Truman, and the Surrender of Japan* (Cambridge: Harvard University Press), 184-185

from plutonium and uranium, doctors and chemists quickly got to work not just treating *hibakusha*, but studying them.⁴⁴

By 1947, the year of the Atomic Bomb Casual Commission's (ABCC) founding, Japanese scientists had already recorded a notable increase in cancerous growths and other mutation-based illnesses in *hibakusha*. Subjected to examination by American and Japanese doctors and scientists, atomic bomb survivors were largely unable to say no to scientific scrutiny and complied as best they could; scholars such as Lindee have noted that they complied with Japanese doctors more than American.⁴⁵ While word of mouth spread regarding the nature of *hibakusha*'s illnesses, the information it spread was not always accurate. To the contrary, most information was based on hearsay about radiation being contagious, which led to public prejudice against irradiated survivors. Douglas MacArthur was careful about how much information was officially released in Japan, censoring most information regarding *hibakusha*. Scientists and doctors, silenced by censorship, were unable to combat inaccurate information from spreading by word of mouth during the early years of the American occupation.⁴⁶ This failure to publicly engage with the Japanese people about *hibakusha* and their illnesses would weigh on the conscience of many ABCC scientists.⁴⁷

⁴⁴ M. Susan Lindee, *Suffering Made Real: American Science and the Survivors at Hiroshima* (Chicago: University of Chicago Press, 1994), 3-16

⁴⁵ Lindee, 17-56.

⁴⁶ William J. Schull, *Song Among the Ruins* (Cambridge: Harvard University Press, 1990), 36-60.

⁴⁷ Schull, 261-274.

ABCC procedures varied greatly depending on the illness and the researcher. As American doctors and scientists only recorded data and were required to refuse *hibakusha* treatment by Congressional decree, Japanese doctors and scientists were the only healthcare professionals available to provide *hibakusha* with medical treatment.⁴⁸ This American censure on treatment did not apply to the experimental treatment of specimens taken from *hibakusha*, including those who died from their wounds or illnesses. These samples were heavily experimented on and examined. Both American and Japanese ABCC officials used cadavers and amputated limbs for in-depth examinations of scar tissue and irradiated flesh, often without the consent of *hibakusha* or their families. Their voices censored, there could be no media outrage against the ABCC's acquisition of research material.

The Treaty of San Francisco, the official treaty which ended the war between the United States and Japan, determined that the people of Japan had no right to sue the United States for any compensation.⁴⁹ Ratified in 1951 and put into effect in April of the next year. For *hibakusha*, the Treaty of San Francisco meant medical treatment and financial aid could only come from the Japanese government.

Initially, the Japanese government offered nothing in the way of compensation for *hibakusha*. This largely stemmed from a lack of scientific knowledge on the matter. Without this information, the Japanese government had no idea of what kind of coverage

⁴⁸ Lindee, 117-142.

⁴⁹ Arata Osada, *Children of Hiroshima* (Tokyo: Publishing Committee for 'Children of Hiroshima', 1980), x..

to offer *hibakusha* or even if it was necessary. Yet there was a precedent for healthcare compensation, as the modern Japanese healthcare system can be said to stem from the Pacific War.⁵⁰ Healthcare reform beginning in 1938 focused on providing care for those who were sacrificing for the war effort. From soldiers and their families to the businesses that worked for the war effort, the government provided benefits that included health insurance, housing, and pensions.⁵¹ As victims of an act of war brought on by the military, *hibakusha* were commonly understood in Japan to fit into this category of wartime aid. *Hibakusha* demanding assistance from the government for the sacrifice of their health and well-being had legal precedent.

As the US military's censorship of scientific findings relating to the atomic bombs and their effect on Hiroshima and Nagasaki lifted in 1952, faces like that of Sadako Sasaki, a young girl in Hiroshima during the atomic bombing, brought a humanizing element to the illnesses of *hibakusha*. Tirelessly optimistic and full of hope, the girl who folded a thousand paper cranes for peace and understanding died of leukemia at the age of twelve in 1955.⁵² This proved an important milestone in *hibakusha* activism: their movement needed faces. Such stories gave the *hibakusha* the sympathy of the Japanese public, who took the story to heart in spite of prejudice against *hibakusha* in general.

⁵⁰ Gregory J. Kasza, "War and Welfare Policy in Japan", *The Journal of Asian Studies* vol 61, no. 2 (May 2002): 432-433.

⁵¹ Kasza, 423-428.

⁵² "The Story of Sadako Sasaki", Hiroshima International School, accessed April 28, 2018, http://www.hiroshima-is.ac.jp/?page_id=230.

With more faces, *hibakusha* activist groups hoped to gain support not just at home but abroad.

In both Hiroshima and Nagasaki, efforts to memorialize the dead began shortly after the end of the Second World War, forming in the creation of both peace parks. The city and prefectural governments of both Hiroshima and Nagasaki, some of whose leadership was killed in the atomic bombings, were then as now highly sympathetic to *hibakusha* concerns and efforts. Representatives from these prefectures similarly are the most vocal in supporting atomic bomb survivors, a natural extension of the local and prefectural politics. Both memorial parks completed in 1955, with national and international support, including funding from the national government of Japan and from numerous philanthropic organizations around the world connected to anti-nuclear proliferation efforts.

Despite budding activism, *hibakusha* groups lacked cohesion as a movement during the early portion of the 1950s. This, combined with a lack of publicly accessible scientific data regarding *hibakusha* and their illness, prevented any activism attempts from gaining any traction. Yet with growing awareness of cases like Sadako's, where cancer developed in otherwise healthy patients, activists in both Hiroshima and Nagasaki realized that something had to be done to give support to what was an increasingly common issue for *hibakusha*. Without scientific data, there was nothing to base any comprehensive support system on.

LEGISLATION AND ACTIVISM: 1955-1995

Prior to 1955, a number of small *hibakusha* support groups formed in Hiroshima and Nagasaki, often organized by *hibakusha* themselves but occasionally formed by doctors, scientists, and religious leaders in both cities. These groups were often focused on specific goals, such as finding employment, continuing education away from non-exposed students, and using religion to give emotional and social support.⁵³ Unless connected to larger organizations, such as the Catholic Church in Nagasaki or anti-nuclear activism networks connected to the Methodist Church in Hiroshima, these were often limited in what they could provide financially, in part because of censorship. Under American occupation, censorship laws against *hibakusha* included outreach, and thus prevented *hibakusha* from organizing beyond smaller groups. By the mid-1950s city-wide organizations were forming, 1955 would be a catalyst for not just forming activist movements, but the grounds for legislation.

1955 saw the first wave of comprehensive findings by the Atomic Bomb Casualty Commission. These reports focused on varied topics such as genetics and reproduction, increased cases of cancer, scarification, and rates of general illness.⁵⁴ Presented to the U.S. Congress and the Japanese Diet, these documents confirmed that not only did the atomic bombings increase the rate of illness, but that *hibakusha* would continue to develop health issues. It was unknown how many would develop illnesses, and the initial

⁵³ Richard Baker, *The Hiroshima Maidens: A Story of Courage, Compassion, and Survival* (New York: Viking Press, 1985), 55-82.

⁵⁴ Lindee, 57-79.

findings were rife with vague answers to questions such as how long radiation in both cities might affect the health of those who visited Hiroshima and Nagasaki, what illnesses might occur, and how it might affect their genes going into the future. Such studies would take time. What it offered were key answers in that mutations such as cancer would become increasingly common in *hibakusha* populations over time, and as such, confirmed fears that their healthcare would be a constant and lifelong concern.

These findings were what *hibakusha* activist groups had been waiting for. By 1955, American and other international groups interested in utilizing *hibakusha* as to fight growing Cold War tensions between nuclear-armed nations such as the United States and the Soviet Union. Such activists as philanthropist Norman Cousins and author Pearl S. Buck worked with a Japanese Methodist minister, who brought twenty-five young women from Hiroshima to New York for a series of corrective surgeries to make them more “marriageable.”⁵⁵ Named the “Hiroshima Maidens” by American media, they made several public appearances before their surgery. Hailed in the United States as the face of nuclear war, at home they were not met as heroes but instead criticized as attention-seeking opportunists.⁵⁶ Even among *hibakusha*, there was much to be critical of: they had been pawns of the Americans, many had thought. *Hibakusha* activist would have to advocate for themselves, on their own terms.

⁵⁵ Baker, 11-12.

⁵⁶ Kazuo Chujo, *Hiroshima Maidens: The Nuclear Holocaust Retold* (Tokyo: Asahi Shimbun, 1984), 55-57

The following year, at the 2nd World Conference Against A and H-Bomb, early activist groups in Hiroshima and Nagasaki joined forces and created the *Nihon Hidankyō*, or the Japan Confederation of A- and H-Bomb Sufferers Organization. Dedicated to fighting the proliferation of nuclear weaponry, the group included *hibakusha* as well as the survivors of the *Lucky Dragon 5*, the fishing vessel accidentally exposed to the United States' Castle Bravo hydrogen bomb testing in the Bikini Atoll.⁵⁷ Stating these weapons deprived them of their health and their livelihoods, *Hidankyō* has created international networks to pool resources to challenge the Japanese government to recognize *hibakusha* rights and healthcare concerns. 1956 is when organized *hibakusha* healthcare activism can be said to begin in earnest.

After the Treaty of San Francisco, the Japanese government was fully sovereign once more and attempted to maintain the stability it had gained in the occupation. Due to party fragmentation, conservatives gained control of the Diet in this early period. By 1955, the year of the ABCC's reports, the socialist factions in Japan were attempting to regroup after fracturing in the early 1950s, and create a cohesive political coalition against post-war conservatives. *Hibakusha* activism, aligned to these leftist groups and other anti-nuclear activists, sought healthcare coverage by the Japanese government. Their demands were simple: recognition of *hibakusha* as having ongoing healthcare issues, and the establishment by the Japanese government of a system assisting *hibakusha*

⁵⁷ "About Hidankyo," Nihon Hidankyo, accessed March 31, 2018, <http://www.ne.jp/asahi/hidankyo/nihon/english/about/about2-01.html>.

in treatment and financial coverage of these healthcare issues. With the release of the ABCC's reports, *hibakusha* felt they had the scientific data to make their case.

In 1957, the Japanese government passed the first law providing benefits for atomic bomb survivors. Translated as the Atomic Bomb Victims Medical Care Law, the law provided some healthcare benefits and subsidies to *hibakusha*, but came with a stringent set of criteria one had to prove first before these became available. Though simple, in sum these criteria required a *hibakusha* to have physical evidence of their exact location in relation to the nuclear blast.⁵⁸ While not an uncommon demand at the time, such a task would prove herculean for many *hibakusha*. Many *hibakusha* near the blast were physically damaged to the point that most of what they carried with them was destroyed in the blast, be it clothes, backpacks, paperwork, and vehicles in some cases. Unless one had documentation, such as Tsutomu Yamaguchi did, *hibakusha* status was legally beyond reach.

This was the first official legal definition of *hibakusha*. A person who could be legally recognized as *hibakusha* was one caught in the exact blast radius of the atomic bombings, and was able to prove it. This was a highly exclusive definition, excluding those who were outside of the blast radius but were affected by debris, radiation, and the force of the blast, which affected those as far away as five kilometers.⁵⁹ It also excluded those who fell into fallout zones, or who entered the cities following the atomic

⁵⁸ Susan Southard, *Nagasaki: Life After Nuclear War* (New York: Penguin Press, 2015), 221.

⁵⁹ Richard Rhodes, *The Making of the Atomic Bomb* (New York: Simon & Schuster, 1986), 713-715.

bombings. One of the primary reasons for the law's highly exclusive criteria was, at the time, the ABCC had not done extensive research on the range of fallout beyond the blast. While highly exclusive to large parts of the *hibakusha* community, it did include *hibakusha* who no longer lived in Japan. Benefits at that time included an annual check-up and medical care for their *hibakusha*-related illnesses.

Given the express difficulty with proving *hibakusha* status under this method, many *hibakusha* had to turn to suing the government, stating that this was too difficult a task. For many of these this was a matter of life or death: either they had already had procedures performed to fight off cancer and other illnesses and needed the compensation to ease their financial burden, or they feared they would develop these illnesses and wanted to be prepared.⁶⁰ Yet suing the government would prove difficult. Litigation is costly and time-consuming in Japan, something that ill *hibakusha* cannot deal with alone; the 2017 decision to reject *hibakusha* status for almost 400 *hibakusha* took ten years to decide.⁶¹ Activist organizations like *Hidankyō* have worked with international networks to guarantee that funds were available to *hibakusha* who could not afford to sue, thus assisting willing *hibakusha* with their court cases. For many *hibakusha*, however, trial would only put their status on display and make them targets of prejudice. For others, they did not consider themselves *hibakusha*, because they either were not sick, or there

⁶⁰ Southard, 219-221.

⁶¹ "Top court dismisses Nagasaki hibakusha-recognition suit," *Japan Times*, published December 18, 2017, accessed February 1, 2018, <https://www.japantimes.co.jp/news/2017/12/18/national/crime-legal/top-court-dismisses-nagasaki-hibakusha-recognition-suit/#.WnxphqinGCp>.

was still insufficient science to support their claim that they were affected by the atomic bombings.

The ABCC, which became the Radiation Effects Research Foundation (RERF) in 1973, continued to publish information after the 1955 reports, and continues to do so today. Several such reports include revisions to initial findings. They found that fallout spread much further than previously predicted, and indeed, the blast radius was not the only place irradiated.⁶² By the 1957 law's standards, anyone not in the blast radius was excluded from the pool of potential legal *hibakusha*.

Legally, however, this case faced numerous hurdles. In 1963, Japan passed universal health insurance for all, which insured all *hibakusha*. Despite universal insurance, however, most *hibakusha* found that this was not enough to pay for their healthcare expenses, and many more were still not recognize by the 1957 law. Continuing criticism and litigation, alongside this growing body of literature, prompted the Japanese Diet to pass the first revision of the 1957 law, the 1968 Act on Special Measures for Atomic Bomb Survivors, aiming not to expand the legal definition of *hibakusha* status but to expand benefits. Focusing primarily on a medical "allowance" for *hibakusha*, this measure was primarily an attempt to help stave off growing healthcare costs. For many, this fix was not enough: it did not expand the list of covered illnesses nearly enough, and it did not lighten the burden of proof policy the government set before many *hibakusha*. The Diet returned in 1974 with Act 86, a revision of the two previous laws that had

⁶² Lindee, 250-251.

become known as the “Two Acts for Atomic Bomb Survivors.” This revision clarified that there would be guidelines for annual check-ups, granting that specific illnesses related to *hibakusha* would be given preference. It was in this law that designated medical facilities in Hiroshima, Nagasaki, and Tokyo as the only places *hibakusha* could receive treatment. Finally, Act 86 also stated that compensation for “general injuries” and the illnesses from them would be covered by benefits.

Act 86 came after several years of environmental litigation and legislation, during which the general public and media began to support legislative protections for those suffering from man-made environmental disasters. In these cases, pollution into the natural environment caused locals across Japan to become sick in a number of different ways. Though not initially supportive, the Japanese public and media eventually came to the defense of these groups against corporations, leading to large settlements and a number of environmental regulations.⁶³ *Hibakusha* activists, connected to these groups through their socialist and other leftist allied groups, used this momentum to push their agenda forward, granting them victories in both the 1968 law and Act 86. Not all reforms would prove to be to their benefit, however.

A further amendment in the same year, Directive 402, clarified that *hibakusha* status only applied to those in Japan or its territories, and thus excluded those who resided outside of Japan. Those who moved out of Japan were not eligible for medical treatment, or the medical allowance granted by the 1968 law. It was this directive that

⁶³ Conrad Totman, *Japan: An Environmental History* (New York: I.B. Tauris & Co., 2016), 260-261.

would cause *hibakusha* litigation to reach the Supreme Court of Japan for the first time. For the previous two decades, Korean *hibakusha* now living in South Korea had been illegally immigrating to Japan seeking treatment for their developing illnesses. When challenged by the Japanese government, these illegal immigrants stated that there was nothing in the initial two *Hibakusha* laws that dictated that treatment was reserved only for Japanese *hibakusha*. While true, this prompted the 1974 Directive 402, and in 1978 the Supreme Court maintained that those who entered Japan illegally from South Korea for medical treatment were not entitled to any of the benefits of previous laws.

Despite steps forward prompted by a period of environmental reforms, Directive 402's clarification of the "Two *Hibakusha* Laws" proved a devastating blow for many expatriates and foreign *hibakusha*, particularly Koreans whose Japanese citizenship was revoked in 1952 and whose chance at government-mandated healthcare was being denied.

These reforms of the 1970s still failed to address revisions to the scientific finding utilized by these laws, including the effects of fallout zones and the spread of radiation beyond the initial blast radius. The RERF's regular release of new studies on genetics and environmental pollution during the 1970s onward would prove to give *hibakusha* activists more evidence to use in court in the coming decades.

Another of the lingering criticisms of these reforms was access to the three specific medical facilities predicated the need to live in either Hiroshima, Nagasaki, or Tokyo; those who lived in other areas of Japan had to travel so far for medical treatment

that it almost negated the benefit of subsidized healthcare. By geographically locking medical treatment to these three facilities, it assumed that these facilities would be enough to treat the hundreds of thousands of *hibakusha* still alive, and the growing group of legally recognized *hibakusha* especially.

The 1980s saw a rise in the need to revise the healthcare system in Japan, namely by adding hierarchical tiers of status to the system.⁶⁴ With litigation still challenging the *hibakusha* healthcare system as it was, there were suggestions that the system of *hibakusha* recognition be tiered as well. Recognition would be dependent on the type of exposure: those who were affected by the blast directly (those already recognized), those outside of the blast radius but still affected by the blast, those affected by fallout in its many forms (including “black rain”), and those who entered the area after the fact (those not recognized). Throughout the decades prior to the 1990s, litigation allowed for specific exceptions to the legal definition, such as granting those injured but not in the immediate blast range or those suffering from very clear radiation damage, yet these were case-by-case and did not universally apply. A further revision would be needed to synthesize these contradictory legal outcomes. First, the healthcare branch of the *hibakusha* movement would need to find the right momentum.

⁶⁴ Naoko Kato, Masahide Kondo, Ichiro Okubo, and Toshihiko Hasegawa, “Length of hospital stays in Japan 1973-2008: Hospital ownership and cost-containment policies”, *Health Policies* vol. 115, 2-3 (2014): 180-188.

THE 1995 SUPPORT LAW AND AFTER

By the early 1990s, the Japanese government shifted towards change once more. The end of the Showa Era and beginning of Heisei marked the beginning of recession, and with it changes to political ideology in Japan. The Japanese Diet, itself shifting away from the Liberal Democratic Party for the first time towards a more left-leaning coalition government, faced a new wave of calls for revisions to the previous two *hibakusha* laws. Over the last two decades, a number of judges had granted legal *hibakusha* status based off of new science that expanded radiation beyond the blast radius and included fallout, despite the law stating firmly that treatment was specifically for those injured or affected by the blast itself. These legal victories proved paradoxical, as they were not universally applied for all *hibakusha*, creating a messy web of legal precedence that contradicted one another. Similarly, some judges allowed for treatment to be applied to illnesses not yet covered by the 1974 pair of reforms.

With the march of time, there were also more newcomers to the *hibakusha* cause. Some who had not previously considered themselves *hibakusha* began showing signs of *hibakusha*-related illnesses. While these men and women had only been in Hiroshima or Nagasaki for a short amount of time in the period after the bombings, they developed radiation-based sicknesses decades later, and in need of assistance for their expanding medical costs.⁶⁵ The largest issue, however, was proving that these illnesses were radiation-derived, rather than simply just chance mutation. Early genetics, even in the

⁶⁵ Southard, 222-227.

early 1990s, had a difficult time showing that radiation had caused these mutations. *Hibakusha* had been an important research group for genetic testing, and by the 1990s could be used to prove specific illnesses were caused by radiation exposure with some accuracy.

Additionally, the trio of medical facilities recognized as *hibakusha* facilities began to show signs of strain. The government medical facilities proved unable to care for the hundreds of thousands of *hibakusha*, regardless of their medical needs or officially recognized status. This precipitated a new call to expand the number of facilities that could treat *hibakusha*.⁶⁶ These problems, combined with the previous laws' outdated science and the continuing problems with the burden of proof policy, created enough zeal within *hibakusha* groups to push for legislative change. With political support from the socialist sector of the new government coalition and with sympathy high in the public at the fiftieth anniversary of the bombings, *hibakusha* finally had the momentum they needed to demand expanded access and benefit revision.

Called the Atomic Bomb Survivor Support Law, the bill passed in 1995 offered sweeping change for *hibakusha*. Collecting decades of exceptions, precedents, and expanded scientific knowledge, the law set about redefining who was and was not *hibakusha*. The first notion was to create the three categories of *hibakusha*, using the tiered healthcare models of the 1980s as a basis. These three categories were: those in the blast radius or within two kilometers of the blast; those who entered the area around the

⁶⁶ Southard, 220.

blast radius in the two weeks after the atomic bombings; and those otherwise exposed to fallout, such as “black rain” or within the fallout plumes (often in the mountains and difficult to prove). By expanding the geographical area and situational criteria, this expansion naturally increased the number of legally-confirmed *hibakusha*, though there are not clear numbers on this. The number of illnesses supported by subsidies, compensation, and coverage by the law increased, in addition to regular yearly check-ups to guarantee that no *hibakusha*-related illnesses were developing.⁶⁷ Additional medical facilities in Tokyo, Hiroshima, and Nagasaki were also designated, adding enough that there were three per city for a total of nine facilities. The law did not come without restriction, however. Like the 1968 law, *hibakusha* were forced to receive treatment from a designated facility in one of these three cities, which forced them to permanently remain near them.

In this law, *hibakusha* activist groups’ goal of legal status-recognition and healthcare expansion was met. Most scientifically and culturally-defined *hibakusha* became legally recognized, and most treatments were covered by the law. The movement had accomplished most of its goals, but not for everyone. The burden of proof policy was still in place, requiring *hibakusha* to be able to pinpoint their exact location in Hiroshima or Nagasaki some fifty years later. Indeed, also excluded from this victory were non-Japanese citizens, continually ignored under Japanese law, and *hibakusha* who lived too far from the facilities in Hiroshima, Nagasaki, and Tokyo as the necessary travel made

⁶⁷ Southard, 220.

treatment inaccessible for some. Similarly, at this point scientific definitions recognized that five kilometers around the blast radius showed evidence radiation exposure. The new legal definition defined the geographical distance from the blast radius as two kilometers, thus diminishing the range of those who could be counted under the law as a first-tier *hibakusha*. The tiered system offered differing benefits, such as the level of compensation and subsidy, and as such, it guaranteed that fewer first-tier *hibakusha*, who received the best benefits, were recognized.⁶⁸

While the Support Law offered many *hibakusha* the medical attention and compensation they needed, it was not the end of the movement. Though many, now in their twilight years, had gained legal status, not all had. *Hibakusha* who discovered their illnesses later in life, who had not previously self-identified as *hibakusha* publicly, began to find it necessary to seek compensation for their medical fees. Like their legal forerunners, these newcomers had to prove they were *hibakusha* by the Support Law's new definition. This process could take months or even years, depending on the nature of the illness and the proof presented, as well as scientific evidence given that might show certain illnesses are more likely depending on one's exposure to radiation, and the results were not always to the liking of *hibakusha* in court.⁶⁹

This new phase of activism seeks to expand the progress of the Support Law in the same way litigation from 1957 onward did with the original Medical Relief Law. A

⁶⁸ *The Japan Times*, December 18, 2017.

⁶⁹ *The Japan Times*, December 18, 2017.

large difference between the two, however, is that there is relatively less new science being used in this phase of activism, as most of the science recognized by the Japanese government as relevant. Indeed, RERF research does not always release relevant data, some of their studies being limited to genetic studies using cumulative data, and relevant findings do not automatically redefine who is and is not legally *hibakusha*. When in court judges have deemed it necessary to update the science, the burden has been on the *hibakusha* and their lawyers to prove the expansion is necessary. This process is more similar to the litigative successes of the 1980s, where case-by-case exceptions were made based on science that did not create a single precedent recognized in all cases. The current goal of the *hibakusha* medical activism is still to expand access, but now it is in much smaller motions and movements, with less challenge to the Support Law than activists prior to 1994 gave the Two *Hibakusha* Laws.

One challenge, however, was that of Japanese expatriates seeking medical subsidies and compensation. By 2003, there was enough challenge from *hibakusha* activists, at home and abroad, that the Japanese government issued a Cabinet Order to revise and eliminate Directive 402, thus getting rid of the need for *hibakusha* to live in Japan. This motion came as a result of a Supreme Court ruling in which Directive 402 and other directives relating to medical treatment and residency in Japan were called into question as highly discriminatory and found illegal by the court.⁷⁰ Thus, Japanese

⁷⁰ Masami Nishimoto, "Little progress seen in allowing A-bomb survivors overseas to apply for A-bomb disease certification," *Hiroshima Peace Media Center* (December 9, 2009), accessed April 15, 2018. <http://www.hiroshimapeacemedia.jp/?p=14789>

subjects living in the United States and abroad were finally subject to allowance, subsidized treatment, and compensation for past medical treatments. They still needed to receive their medical treatment from one of the nine medical facilities, requiring them to travel to Japan to get their treatment. Any treatment received abroad would not be subject to compensation, no matter the treatment. This victory would not be the last piece of litigation, and it would not be the last success *hibakusha* activists found.

2007 saw the landmark Overseas Hibakusha Case, where the Japanese Supreme Court ruled that the Japanese government had to compensate seventy South Korean *hibakusha* for their healthcare costs related radiation-based illnesses. Using the 2003 Cabinet Order and pressure from *hibakusha* activists who proved that, by the standards of the 1995 law these Korean *hibakusha* were entitled to compensation despite not being Japanese, the Supreme Court ruled in their favor. Despite this victory, there have been no further cases in which Korean *hibakusha* have received compensation, and fewer overall challenges of the burden of proof policy in court. Activism continues, but with the advanced age of many *hibakusha* and the amount of time they stand to spend in court by challenging the law, the push for change seems more difficult. Despite this hurdle, efforts remain.

CONCLUSION: RECOGNITION AND CONTEXT

Narumi Shimohiro was twelve years old when she and her family survived the blast at Hiroshima. Two kilometers from the hypocenter of the blast, her mother, younger sister, and great-grandmother all died, forcing the surviving Narumi and her elder sister

to travel to Nagasaki, to take the bodies to the family shrine while their father, as a member of the Navy, stayed behind. Arriving in Nagasaki on August 15, she and her sister delivered the bodies and returned home. However, upon returning, their hair began to fall out and they faced continuous vomiting, signs of prolonged radiation exposure. The two survived, but had been exposed to both bombs. Narumi was later told by a suitor's mother that she should never marry, causing her anguish enough that she considered suicide while visiting the family shrine. She never married, and while not dedicated to *hibakusha* activism, she shares her experience out of anger towards the United States and the continued existence of nuclear weapons.⁷¹ She, like almost all *nijū hibakusha*, is not recognized by the Japanese government as having survived both bombs.

The history of *hibakusha* and their activism is a long one, showing the numerous disadvantages they have had to overcome to gain access to recognition and healthcare assistance. Yet for all of these victories and setbacks, *hibakusha* activism does not exist in a vacuum, and the importance of the environment and man-made pollution cannot be overstated. Atomic bombs being man-made, this disaster can be firmly placed on the heads of human agents. By analyzing other man-made, environmental disasters of the twentieth and twenty-first century, trends can be detected, and the influence of *hibakusha* activism measured.

⁷¹ “Narumi Shimohiro-Agony of suffering both atomic bombings”, *Chugoku Shimbun*, in Hiroshima Archives Project, accessed April 21, 2018, http://hiroshima.archiving.jp/index_en.html.

Chapter 3: Victims of Geography: *Hibakusha* and Environmental Disaster Cases

The categorization of nuclear warfare as categorically separate from chemical warfare is surprisingly uncontroversial. A category devised by one of the lead manager of nuclear development in the United States James Conant, a former chemical weapon designer who feared their work would be outlawed and unusable under international treaties, this new classification bypassed regulations against chemical weapons.⁷² Yet a nuclear weapon has a chemical component beyond the simple incendiary effects, causing intense build-ups of radioactive materials that drift in the fallout over the surrounding area. Nuclear weapon regulations in the 1960s banned above ground testing due to how common radioactivity from these tests was found thousands of miles from the blast sites, with housewives in Georgia noting that radioactivity from Nevada had gotten into their milk.⁷³ Climate scientists have noted that at the height of nuclear testing in the late 1950s, there was a notable lowering of global temperatures, against the trend of global warming. The chemical effects of nuclear weapons has long been noted, and with it, the environmental consequences.

Within Japan itself, Hiroshima and Nagasaki are considered man-made environmental disasters.⁷⁴ While the firebombing of Tokyo killed more civilians than

⁷² Richard Rhodes, *The Making of the Atomic Bomb* (New York: Simon & Schuster, 1986), 397-399.

⁷³ Matthew L. Wald, "U.S. Atomic Tests in 50's Exposed Million to Risk", *The New York Times* July 29, 1997, accessed April 29, 2018, <https://www.nytimes.com/1997/07/29/us/us-atomic-tests-in-50-s-exposed-millions-to-risk.html>.

⁷⁴ Robert Jay Lifton and Greg Mitchell, *Hiroshima in America: Fifty years of Denial* (New York: Grosset/Putnam Books, 1995)348

either nuclear blast, the long-term environmental damage from nuclear radiation led to many scientists such as Leo Szilard who worked on the Manhattan Project to predict, albeit incorrectly, that Hiroshima and Nagasaki would be uninhabitable for almost a century after the fact.⁷⁵ Yet neither city nor the surrounding region was ever truly abandoned, and instead was rebuilt on top of the ruins. By the 1970s, when the ABCC became the RERF, there was no harmful residual radiation to speak of.⁷⁶

The radioactive fallout from both bombs was unexpected by its creators, yet recognized immediately as an environmental pollutant. Defined as a harmful outside agent that causing an unwanted effect on the environment, fallout from nuclear fission is present in both nuclear weapons and nuclear energy production, with the latter creating fallout in a controlled manner that can be dealt with.⁷⁷

Environmental disasters in Japan caused by man-made pollutants, Hiroshima and Nagasaki included, are a notable part of Japan's environmental history. The Japanese government, from the Edo Period onward, has historically enacted environmental legislation as reactionary to public controversy and litigation rather than a preemptive precaution to protect subjects.⁷⁸ This policy is especially highlighted in the twentieth century's "big four" environmental pollution cases. These four cases have a large impact

⁷⁵ Lifton and Mitchell, 40-41.

⁷⁶ James V. Neel *Physician to the Gene Pool: Genetic Lessons and Other Stories* (New York: John Wiley & Sons, 1994), 79-80

⁷⁷ Rhodes, 731-732.

⁷⁸ Conrad Totman, *Japan: An Environmental History* (New York: I.B. Tauris, 2016), 143-144.

on shifting environmental laws and regulations in Japan from the 1970s onward, and as such, offer a standard by which other activist movements can be judged.

Hibakusha activists have interesting parallels to other environmental activists and their causes shares many similarities with these four cases, especially that of Minamata disease. Caused by mercury build-up in the environment from corporate dumping, Minamata disease saw activism, litigation, and legislation from the 1950s to the early 1970s very similar to *hibakusha*'s early years in court and in the Diet. Yet by the 1970s, the experience of the victims of the two man-made environmental disasters diverge in the effectiveness of activism. In what ways do *hibakusha* and sufferers of Minamata disease share similar histories, and what are the key differences? How has the success of the “big four” pollutant cases set a precedent for environmental law in Japan, and how have *hibakusha* been affected by this shift?

Looming over the legacy of Minamata and *hibakusha* activists is Japan's latest environmental disaster. The 2011 Fukushima earthquake, tsunami, and nuclear meltdown is well-known around the world for its trans-Pacific environmental implications, and yet its management revealed some faults with modern Japanese environmental and nuclear regulations.⁷⁹ Legal proceedings are just beginning against Tokyo Electric Power Company (TEPCO) and its mismanagement of procedures and regulation regarding the meltdown and evacuation. Yet while journalists compare 3/11 to previous nuclear events

⁷⁹ “Fukushima radioactive water leak an ‘emergency’” BBC News, August 5, 2013, accessed April 29, 2018, <http://www.bbc.com/news/world-asia-23578859>.

in Japan, Hiroshima and Nagasaki chief among them, the actual environmental damage and suggested legislation seems more to mirror the proceedings of the “big four” cases.

This chapter will explore the context of *hibakusha* activism within Japanese environmental legal history. I first explore the parallels between the activism and legislation of *hibakusha* and Minamata cases from the 1950s to 1970s. I then analyze the shift in public opinion from national antagonism to overwhelming support due to further cases of Minamata disease and other pollutant-related cases. From here I will explore the divergence of effectiveness of *hibakusha* activism from the success of the “big four” pollutant cases, and explore how these four cases gave *hibakusha* activists momentum for reform in the late 1960s and early 1970s, as well as exploring the effects of these four cases on the RERF and the advancing scientific literature on *hibakusha*. As a final comparison, I will explore the 3/11 disaster, and while it is far too early to examine the legal outcome of 3/11, one can note the failures of regulation in 3/11 as indicative of the limitations of previous activism. In this I will evaluate why *hibakusha* are most commonly cited regarding 3/11 survivors, and why the “big four” victims are more appropriate a comparison, except where prejudice is concerned.

VICTIMS: *HIBAKUSHA* AND MINAMATA DISEASE COMPARISON

With the release of the first ABCC findings in 1955, *hibakusha* had a scientific basis to demand assistance from the Japanese government regarding their healthcare.⁸⁰

⁸⁰ M. Susan Lindee, *Suffering Made Real: American Science and the Survivors at Hiroshima* (Chicago: University of Chicago, 1994), 217-242.

Connected with international groups and uniting under a larger organization in the *Hidankyō hibakusha* organization, *hibakusha* activism gained enough momentum to see the 1957 Atomic Bomb Victims Medical Care Law passed, granting *hibakusha* who could prove their status medical assistance.⁸¹ This system of compensation and support, after passing the burden of proof clause set by the government, would be the standard for later environmental cases. This standard is highlighted by the first of the “big four” environmental cases to receive national coverage. It was between these two years, in 1956, that the first cases of what would be known as Minamata disease were reported in Kumamoto Prefecture, between Hiroshima and Nagasaki on Japan’s Kyūshū island.

Minamata was a small town reliant heavily on the fishing industry and on the local chemical plant, owned by the Chisso Corporation since the early 1900s.⁸² Beginning in April of 1956, a number of children, women, and later men reported severe nervous disorders ranging from temporary paralysis to death. Doctors at the local hospital, owned by the Chisso Corporation, were at a loss. Additional, there were reports that cats nearby were affected by “dancing cat” disease, where they would lose control of their muscles and appear to be dancing, before seizing up and dying.⁸³ Researchers from nearby Kumamoto University were called-in in to attempt to discover the source of both syndromes, and determined that the cause was the poisoning of the common food supply,

⁸¹ Susan Southard, *Nagasaki: Life After Nuclear War* (New York: Penguin Books, 2015), 221.

⁸² Totman, 264.

⁸³ Masazumi Harada, *Minamata Disease*, trans. Tsushima Sachie and Timothy S. George (Minamata Patients Alliance, 1972), 10.

which was fish caught in Minamata Bay and the nearby Shiranui Sea.⁸⁴ By the end of 1956, these researchers had determined that heavy metals in the water supply had affected the fish, and the likely source was the Chisso Corporation's local factory.⁸⁵

One of Japan's most powerful chemical corporations, Chisso had been dumping into Minamata Bay since the 1930s. While Chisso did dump a number of heavy metals, researchers spent 1957 and 1958 attempting to determine which one was most consistently present in the bodies of victims, both living and dead. It was not until 1959 that mercury was determined to be the cause, and from this finding, everything seemed to fall into place. Throughout this period of data collection, victims consistently blamed the Chisso Corporation, and continual attempts at receiving compensation were met with demands by the courts and Chisso to prove what the press had started calling "Minamata disease" came from their chemical dumping. While previously Chisso had suggested numerous alternatives, researchers found that mercury build-up, and specifically methylmercury, was found most pronounced near the canals used to carry water from the Chisso plant to Minamata Bay.⁸⁶ The source was undoubtedly Chisso Corporation.

Both the Kumamoto University and the Ministry of Health, Welfare, and Labor independently and definitively proved the link between Minamata disease and methylmercury. With scientific proof, victims then had to prove it was Chisso responsible. While they did find sympathetic support among the scientists who studied

⁸⁴ Harada, 38-39.

⁸⁵ Totman, 264.

⁸⁶ Harada, 38-40.

Minamata disease, local fishermen whose livelihood was threatened, and environmental activists, local populations and the prefectural and city governments proved antagonistic to Minamata disease victims and their families. Outside of fishing, the largest industry in Minamata was the Chisso Corporation, and many feared that action against the Chisso Corporation would disrupt and potentially permanently damage the local economy. These fears, combined with early prejudice from initial reports that Minamata disease might be contagious, meant that the public did not support Minamata disease victims or their allies, though more overall sympathy was given to fishermen. Chisso agreed to pay the fishing co-ops for damages to their industry, and promised to clean up the local environment and reroute chemical dumping directly into the Shiranui Sea, where it would theoretically disperse rather than build up.⁸⁷ By the end of 1959, Chisso had agreed to give compensation to Minamata disease victims and the families of the deceased, but first they had to prove what they suffered from was Minamata disease.

The Ministry of Health, Welfare, and Labor stopped short of blaming Chisso Corporation for the methylmercury poisoning, and thus set up a stringent set of criteria for Minamata disease to be “accurately” applied to victims seeking compensation. In the 1930s in Britain, a similar build-up of mercury in agriculture had led to the creation of Hunter-Russell syndrome.⁸⁸ Minamata victims had to show all twelve signs of Hunter-Russell syndrome in order for their mercury poisoning to be labeled Minamata disease

⁸⁷ Harada, 56.

⁸⁸ Takashi Yorifuji et. al., “Critical Appraisal of the 1977 Diagnostic Criteria for Minamata Disease”, *Archives of Environmental & Occupational Health* vol. 68, no. 1 (January 2013), 22-29.

and thus gave them access to the compensation. For the dead, their remains cremated, this ruling by the Japanese courts and the Ministry of Health, Welfare, and Labor made proving Minamata disease in their loved ones impossible. For the living, this would prove difficult: as doctors and scientists would later point out, mercury poisoning in Minamata differed greatly from Norfolk in Britain.⁸⁹ To show all twelve signs of Hunter-Russel syndrome was to put a victim near to death.

Like the 1957 Medical Care Law's burden of proof policy for *hibakusha*, this criteria shows another example of legal gatekeeping to prevent victims access to compensation. While the courts ruled in their favor, the letter of the law made it difficult for victims to gain access to the fruits of their labor, and to access these was to face further prejudice from a hostile public.⁹⁰ Like *hibakusha*, misinformation and victim-blaming in the Japanese media, outside of sympathetic leftist and environmentalist groups, made it shameful for victims of Minamata disease to seek compensation and to allow themselves or their families to be publicly identified.

Both groups would actively campaign for their right to be recognized and their compensation to be fair, though in the media "fair" was often something closer to "stealing."⁹¹ While *hibakusha* based their claim on the military pension system set up during the Second World War, using the "victims of wars caused by the military" justification, Minamata disease victims were criticized as entirely selfish, putting money

⁸⁹ Yorifuji et. al., 22-29.

⁹⁰ Harada, 68-77.

⁹¹ Harada, 79-89.

before the good of the community.⁹² While environmentalist pointed out that wanting to clean up Minamata Bay and the Shiranui Sea were for the good of the larger community, this did not stop the antagonism from local populations or from the prefectural government, who largely worked with Chisso Corporation to the corporation's benefit.

Both groups continued to campaign for easier access to compensation and care during the 1960s, and in both cases, scientific research proved to be overall beneficial to this cause. Scientists continued to look at the effects of methylmercury poisoning on victims as well as on the unborn, proving fetuses and newborn children could show symptoms of the disease.⁹³ Both groups of scientists also looked into clean-up methods, with the ABCC helping to create methods to reduce radiation levels in Hiroshima and Nagasaki, while Kumamoto University researchers, alongside Chisso Corporation scientists whose research was covered up, proved that efforts by the Chisso Corporation to clean up Minamata Bay were ineffective and that dumping directly into the Shiranui Sea was instantly harmful to the fish population and nearby fishing villages there.⁹⁴

By the late 1960s, however, new developments elsewhere in Japan caused the similarities between the two groups to diverge. *Hibakusha* may have set the standard, but it would be Minamata disease and the other “big four” cases that would change the expected outcome, by rewriting the script for victims nationally in ways *hibakusha* have not.

⁹² Yorifuji et. al., 22-29.

⁹³ Harada, 68-70.

⁹⁴ Harada, 56.

DIVERGENCE: THE “BIG FOUR” CASES AND THEIR EFFECT ON *HIBAKUSHA*

In 1965 Minamata disease broke out once again, but not in Minamata. In Niigata Prefecture, cats and later people along the Nagano River began showing signs of methylmercury poisoning.⁹⁵ Soon recognized as Minamata disease, the differences in the situation proved a catalyst to reassessing Minamata’s litigation. The victims in Niigata were downriver from the Showa Electrical Company, and were not themselves employed by the corporation. As such, these were all unified by their outrage, as was local media. By 1966, Kumamoto University experts proved this was also Minamata disease, and by 1968, the Showa Electric Company settled rather than face a lengthy court battle, a surprising victory despite Showa Electric denying any liability despite settling. A large part of this victory, activists claimed, was national support for Niigata Minamata victims.⁹⁶

Two other cases during this period similarly reshaped public opinion towards environmental pollutant victims. Beginning in 1912, villages in Toyama Prefecture began to show signs of cadmium poisoning, causing them to suffer bone weakness and kidney failure.⁹⁷ Called *itai-itai* disease for the pains its victims reported, the towns in Toyama Prefecture worked with the Mitsui Mining and Smelting Company to prevent further contamination of their waters and soil, to no avail. After decades attempting to prove the Mitsui Company was liable and of seeking alternate solutions to the courts, victims and

⁹⁵ Reiko Seki, “Participatory Research by Niigata Minamata Disease Victims, and Empowering These Victims”, *International Journal of Japanese Sociology* vol. 15, no. 1 (November 2006), 26-39.

⁹⁶ Seki, 26-39.

⁹⁷ Totman, 260.

their families sued in 1968, with the court finding them guilty of exposing these victims to cadmium in 1971, with further victims recognized in the following decades.⁹⁸

Elsewhere in Mie Prefecture, the burning of petroleum and crude oil created smog that led to the rise of pulmonary diseases in 1960. Linking these to sulfur oxide pollution from the nearby Showa Yokkaichi Oil Company, fishermen and local populations exposed to high levels of smog sued to stop the harmful practices brought on by Japan's push to shift away from coal to petroleum power.⁹⁹ A class action lawsuit of victims found the company responsible in 1970, and further victims have since been validated in court.

These cases, along with the two cases of Minamata disease, are known as Japan's "big four" pollution cases.¹⁰⁰ They are regarded as having a profound effect on Japanese environmental law, with each case affecting existing or creating new regulations, with regional and national policies shifting to better serve victims. Local and national governments have set up policies to guarantee that corporations found guilty are responsible for cleaning up the regions they have polluted. Public support in the cases of Niigata Minamata disease, *Itai-itai* disease, and Yokkaichi asthma led to a reassessment of the treatment and settlements in the case of the original Minamata case. In 1970, the Japanese Water Pollution Control Act was enacted, establishing safety standards against pollution in waterways used for public use and for fishing, and by 1977 the Japanese

⁹⁸ Masanori Kaji, "Role of experts and public participation in pollution control: the case of Itai-itai disease in Japan", *Ethics in Science and Environmental Politics* vol. 12 no. 2 (July 6, 2012), 99-111.

⁹⁹ Peng Guo et. al., "Mortality and Life Expectancy of Yokkaichi Asthma patients, Japan: Late effects of air pollution in 1960-1970s", *Environmental Health* vol. 7, no. 8 (2008).

¹⁰⁰ Totman, 260.

government took over clean-up of Minamata Bay from Chisso Corporation's less than successful attempts.¹⁰¹ By 1973, Japanese courts found that Chisso Corporation was liable for more cases of Minamata disease, that Hunter-Russell Syndrome criteria was too strict, and that the previous settlements for Minamata victims was too light. The new settlement, coming to ¥937 million, remains the largest settlement in Japanese history. The legacy of these four cases marks a major shift in Japanese environmental law, as well as better treatment of the victims of pollution cases.

It is during this period, in the late 1960s and 1970s, that *hibakusha* activism fell behind the progress Minamata and other environmental victims make. The reforms *hibakusha* activists achieve in the late 1960s and early 1970s are a reaction to the momentum and power of these environmental movements. The 1968 Act on Special Measures for Atomic Bomb Survivors, the first major reform to the 1957 law, came in the same year as the Niigata Minamata disease settlement case and as Minamata disease in Kumamoto Prefecture saw new trials and new waves of media-supported activism rising. These reforms, expanding benefits without changing the burden of proof policy, are different from the 1973 shift in Minamata disease markers, which allowed victims both living and dead more access and more compensation. The late 1960s saw a new wave of support for environmental activism, yet *hibakusha* activists were unable to rewrite their own narrative and as such, were left behind. Because Niigata Minamata disease put the narrative of the Minamata victim in a different light, they reformed the

¹⁰¹ Totman, 264; Harada, 56.

image of environmental disaster victims from selfish and greedy locals attempting to take advantage of the local corporate benefactor to locals unfairly affected by corporate progress. Unlike the Minamata victims *hibakusha* were never able to rectify the public's understanding of radiation poisoning. Despite the wealth of publicly accessible scientific evidence to the contrary, public perception of radiation as contagious persists to this day.

Legislative reforms the *hibakusha* activists sought out in the early 1970s created unintentional roadblocks, blocking access for expatriates and geographically locking medical care to three locations across Japan instead of anywhere. Act 86 acknowledged that *hibakusha*'s illnesses came from multiple sources and not just blast exposure. This law included a small reform that *hibakusha* activists campaigned for, alongside new rules with unintended consequences, making this something of a Pyrrhic victory. After the late 1970s Supreme Court ruling stating that Koreans were not subject to healthcare or compensation, *hibakusha* activism would not see major reform again until 1995.

Hibakusha activist during this period did not achieve reform on their own. The 1968 law, Act 86, and Directive 402 came about during a period of great environmental reform from the "big four" cases, and in spite of the prejudice of the Japanese public. While an achievement on their own, the gap between the early 1970s and 1995 in reform shows the limits of *hibakusha* activism on their own. When the 1995 Support Law was passed, it occurred at the same time as the fiftieth anniversary of the atomic bombings, when remembrance and memorialization of World War II was at a peak. Because of public animosity for radiation-related illnesses, *hibakusha* reform has relied on

momentum from other events in order to achieve true reform in the Japanese legal and legislative systems.

The changes in *hibakusha* activism are not the only divergence from the past caused by the “big four” cases. The role of researchers in exposing environmental pollution in the “big four” cases reshaped the focus for many scientists, including in the ABCC and its successor organization, the RERF. Prior to the 1970s, research on the environment looked primarily at the blast radius and radiation’s effects on it, with the majority of the ABCC’s researchers looking more at genetic shift and illnesses drawn from radiation exposure. During the 1970s, the RERF adjusts its range to look at fallout zones and the effects therein, thus realizing that the blast radius was not the only area in either city affected by long-term radiation exposure.¹⁰² Thus, scientific definitions of who counted as *hibakusha* were expanded to include those outside of the blast radius, which in turn changed the way *hibakusha* activists approached litigation.

The effects of environmental reforms in the 1960s and 1970s on *hibakusha* activism are subtle but present in the changes *hibakusha* activists achieved. Despite momentum created by the “big four” cases, however, *hibakusha* have had much more to overcome in the form of radiation-based prejudice. It would be another environmental disaster that would highlight the contemporary form of this, in the form of the 3/11 Nuclear Disaster.

¹⁰² Schull, 270-274.

MELTDOWN: *HIBAKUSHA* AND THE “BIG FOUR” CASES AT FUKUSHIMA

At 2:46 PM on March 11, 2011, Japan felt the full force of a magnitude-9 earthquake, the strongest ever recorded. Its epicenter off Honshu’s northeastern coast, buildings across the Tohoku region collapsed, killing and trapping those within. Fifty minutes later, a large tsunami rushed onto the shores of northeastern Japan, traveling up to six miles inland. In the days and weeks after this, video after video would find its way into circulation on news channels showing cars, people, animals, and buildings being swept away in the wave. Four years later in 2015, the Japanese National Police Agency reported 15,895 deaths, 6,165 injuries, 2,539 people missing, with the United Nations estimating that the total cost of damages was upwards of ¥15 trillion yen, making it the costliest natural disaster in human history.¹⁰³

Management of the aftermath would prove no better. TEPCO, Japan’s largest nuclear power company, owned a nuclear power plant right on the coast, affected by both earthquake and tsunami, TEPCO downplayed the damage down to their six reactors, attempting to manage the threats to meltdown rather than lose the reactors by pouring water on them that would immediately end the threat.¹⁰⁴ The Japanese government became aware of the extent of the damage and the cover-up a few weeks later, but allowed TEPCO to continue to manage the situation. This included allowing residents in

¹⁰³ Shaun Burnie, “Fukushima Bill”, *Asia Times* March 31, 2017, accessed April 29, 2018, <http://www.atimes.com/article/tepcos-fukushima-expensive-industrial-accident-history/>.

¹⁰⁴ Shaun Burnie, Matsumara Akio, and Murata Mitsuei, “The Highest Risk: Problems of Radiation at Reactor 4, Fukushima Daiichi”, *The Asia-Pacific Journal* vol. 10, no. 4 (April 22, 2012), accessed April 29, 2018, <https://apjif.org/2012/10/17/Shawn-Burnie/3742/article.html>.

nearby towns to return to their homes. With management of the situation not improving and the meltdown likely causing more damage than TEPCO was not accurately reporting, by April 11 the Japanese government had no choice but to reveal the extent of the damage: Fukushima had become a 7 on the International Nuclear Event Scale, the same level as the infamous Chernobyl disaster of 1986 in Ukraine.¹⁰⁵ High levels of nuclear leakage from these reactors was spreading across the Pacific Ocean, and to this day, it remains unknown how extensive the damage truly is.

The 3/11 Disaster is the product of typical Japanese energy policy creating environmental hazards with international ramifications. Given the nuclear nature of the disaster and the country of origin, many journalists, academics, and politicians have pointed to Hiroshima and Nagasaki as precedent for nuclear disaster in Japan and to *hibakusha* as to how survivors of Fukushima might be treated.¹⁰⁶ While true, the environmental disaster itself and the way forward seems to have more in common with the “big four” environmental disasters, in both scope and scale.

Japanese energy policy is largely determined by the ruling administration’s relationship to the energy industry, and often works in the favor of energy producers. Corporate regulations are loose in Japan regarding how worker safety and environmental concerns from leakage, in part because there has never been a large-scale Japanese

¹⁰⁵ Arkadiusz Podniesinski, “Fukushima: A Second Chernobyl?”, *The Asia-Pacific Journal* no. 14, vol. 2 (November 1, 2016), accessed April 29, 2018, <https://apjif.org/2016/21/Podniesinski.html>.

¹⁰⁶ Sayuri Romei, “6 years after the Fukushima disaster, its victims are still suffering”, *The Washington Post* March 10, 2017, accessed April 26, 2018, https://www.washingtonpost.com/news/monkey-cage/wp/2017/03/10/six-years-after-the-fukushima-disaster-its-victims-are-still-suffering/?noredirect=on&utm_term=.77184c23bf29.

nuclear energy disaster before 2011. As Japanese nuclear power plants must be built next to bodies of water, the surrounding areas are often under threat if something goes wrong, and previous activism and the science cited by them has pointed this out to no avail. Prior to 3/11, engineers and plant workers were allowed to be exposed to more than five times the level of radiation that international agencies suggest as the maximum limit of exposure.¹⁰⁷ Within the TEPCO example itself, the Japanese government did not immediately take over management of the 3/11 disaster, waiting until the situation had reached nuclear meltdown to do so.

The Japanese government has been heavily criticized from all sides with regards to their own management of 3/11, both before and after taking over the Fukushima Daiichi Power Plant. Part of this criticism is how long it took the Japanese government to take over management, but this has precedence. In 1970, based off the “big four” environmental disasters, the Japanese government passed laws that declared all waterways in Japan had to be free of pollution.¹⁰⁸ Despite this law, it was not until 1977 that the Japanese government took over clean-up of Minamata Bay and Shiranui Sea from Chisso Corporation, whose methods of clean-up were known by scientists to be ineffective as early as 1960.¹⁰⁹

¹⁰⁷ Paul Jobin, “Fukushima One Year On: Nuclear workers and citizens at risk”, *The Asia-Pacific Journal* vol. 9, no 3 (March 2, 2012), accessed April 29, 2018, <https://apjif.org/2012/9/18/Paul-Jobin/3729/article.html>.

¹⁰⁸ Totman, 264.

¹⁰⁹ Harada, 56.

Experts in the Japanese energy industry predict 3/11 will precipitate a major rise in environmental regulations. This was the case with Yokkaichi asthma, one of the “big four” illnesses. Created by smog produced by Showa Yokkaichi Oil Company’s petroleum burning, this ailment led to stricter clean air regulations in Japan. Yet as Fukushima becomes more distant, experts note that activism wanes and public interest fades, causing concern that regulation will not fully solve all of the issues posed by 3/11. Yet the Yokkaichi asthma case shows that real change can occur, and that environmental activism in Japan often has the backing of the media in the right circumstances.

3/11 and 3/11 victims are most commonly compared to *hibakusha*, yet perhaps a more apt comparison are survivors of the “big four” pollution cases. Like the “big four” cases, the environmental damage and subsequent health problems were caused by a mismanagement of industrial wastes which polluted the local environments to a devastating effect. Like the pollution cases of the 1960s and 1970s, anti-nuclear energy sentiment has been at an all-time high since 2011, and international attention has brought light to the extensiveness of this activism.¹¹⁰ Just as in those four cases, survivors of 3/11 have a corporation to sue, though arguably 3/11 survivors have grounds to sue the Japanese government as well. Doing so might bridge the gap between “big four”

¹¹⁰ David H. Slater, Nishimura Keiko, and Love Kindstrand, “Social Media, Information, and Political Activism in Japan’s 3.11 Crisis”, *The Asia-Pacific Journal* vol. 10, no. 1 (June 7, 2012), accessed April 29, 2018, <https://apjif.org/2012/10/24/David-H.-Slater/3762/article.html>.

environmentalists and *hibakusha*, who can only sue the Japanese government with nothing else in between, but thus far litigation has only been brought against TEPCO.¹¹¹

In almost all aspects, 3/11 more resembles the “big four” environmental cases, including the government’s industry-backed lack of regulation beforehand. The major link between *hibakusha* and 3/11 activists is radiation exposure, and the prejudice it brings.

CONCLUSION: LEGACY AND PREJUDICE

Hibakusha activists are situated within Japan’s environmental history as running parallel to some of Japan’s largest environmental disaster victims. However, they diverge from those cases in that it has required momentum to achieve success in the Diet.

Sufferers of Minamata disease faced similar burden of proof policies in having their illness and the compensation it brings recognized, and it was not until their disease was recast by the outbreak of Niigata Minamata disease that activists were able to reform the public’s perception of victims and their circumstances. *Hibakusha* have never had that opportunity, even with Japanese leftist media such as the *Asahi Shimbun* fighting for them over the decades.¹¹² Because of prejudice stemming from public misunderstanding of radiation-based illnesses, *hibakusha* have had to rely on the momentum from other events to achieve reform in the legislature and in court. A large part of the momentum during the 1960s and 1970s stems from the Japanese public’s willingness to explore

¹¹¹ “Tokyo court orders Tepco to pay \$10 million in damages over 2011 disaster: media”, *Reuters* February 7, 2018, accessed April 29, 2018, <https://www.reuters.com/article/us-tepco-fukushima-liability/tokyo-court-orders-tepco-to-pay-10-million-in-damages-over-2011-disaster-media-idUSKBN1FR0WC>.

¹¹² Kazuo Chujo, *Hiroshima Maidens: The Nuclear Holocaust Retold* (Tokyo: *Asahi Shimbun*, 1984), 111-117.

environmental pollution in a victim-supportive light, and later in the 1990s with the fiftieth anniversary of the atomic bombings. While 3/11 more resembles the big four environmental disasters in the Japanese government's response, the one way 3/11 most resembles *hibakusha* and their activism is in their inability to overcome prejudice against radiation poisoning.

On December 2nd, 2016, Kyodo News reported that an elementary school teacher was under investigation for calling a child from Fukushima a “germ.” The student had informed the teacher that the other students had called him a “germ” before summer break, and five days later, the teacher began adding “germ” to the student's name.¹¹³ Other cases include students being verbally and physically assaulted by their peers, with fellow students making a gun-like gesture and pointing it at the Fukushima survivor classmates and saying “Radiation! Bang Bang!”¹¹⁴

While the Japanese public began as sympathetic to 3/11 survivors, as the Japanese government began resettling survivors whose homes were exposed to radiation, the people of those cities were not above showing their prejudice to these refugees. Even at

¹¹³ “Niigata elementary school teacher calls Fukushima evacuee a ‘germ’”, *The Japan Times*, December 2, 2016, accessed December 3, 2017, <https://www.japantimes.co.jp/news/2016/12/02/national/social-issues/niigata-elementary-school-teacher-calls-fukushima-evacuee-germ/#.WshQaojwaCo>

¹¹⁴ Thomas Wilson, Minami Funakoshi, “Six years on, Fukushima child evacuees face menace of school bullies”, Reuters, March 9, 2017, accessed April 29, 2017, <https://www.reuters.com/article/us-japan-fukushima-bullying/six-years-on-fukushima-child-evacuees-face-menace-of-school-bullies-idUSKBN16H074>

market in Tokyo, farmers around Fukushima and the larger Tohoku region have had to place Geiger counters beside their crops to prove they are not irradiated.¹¹⁵

Unlike Minamata disease, where prejudice stemmed from a desire to protect the local economy, there has been no rehabilitation of radiation-based illnesses in Japan. Whether *hibakusha*, or survivors of the *Lucky Dragon 5*, no amount of public activism has managed to dissuade the Japanese public away from the idea that radiation exposure is a contagion that must be contained. While still an emerging trend, survivors of 3/11 are showing just how embedded this prejudice is across Japan. What remains to be seen is whether 3/11 survivors can successfully establish themselves as separate from *hibakusha* in such a way as to maintain public support and outrage against TEPCO and the Japanese government over the Fukushima disaster.

If the legacy of *hibakusha* activism shows anything, it is that 3/11 survivors will face many years of litigation, without much public support.

¹¹⁵ Katsuji Imata, “Five years after 3.11-the struggle of Fukushima’s farmers continue”, *Japan NPO Center*, May 13, 2016, accessed April 29, 2018, <http://www.jnpoc.ne.jp/en/stories-from-tohoku/tohoku-interview-fukushima-farmers/five-years-after-3-11-the-struggles-of-fukushimas-farmers-continue/>.

Conclusion: Legacies of *Hibakusha* Activism

On February 24, 2018, an article distributed via Kyodo reported that the Ministry of Health, Welfare, and Labor had announced that they would be setting aside ¥30 million for *hibakusha* storytellers to travel to universities and public venues around the world.¹¹⁶ Selected by the cities of Hiroshima and Nagasaki to share their experiences at each city's museums, these 100 storytellers will receive English lessons in order to meet a high demand, with the 2016 fiscal year reporting 180 requests for storytellers in Japan and around the world. Due to high transportation costs, many of these requests were not met. Thus, the earmarked program will ensure that *hibakusha* storytellers are able to meet these demands. including "legacy successors," a group of non-*hibakusha* trained to maintain and share the experiences of *hibakusha* after their deaths. The article ends by noting that the average age of the 164, 621 survivors as of March 2017, was 81.

In their twilight years, *hibakusha* are surprisingly active. Whether participating in one of the storytelling organizations in either city, activist organizations fighting nuclear armament, or advocating that all *hibakusha* have their statuses recognized and illnesses covered, *hibakusha* are on the move. Atomic bomb survivors are highly motivated and well-funded through donations, international networks, and now, government funding to spread their message and fight their fights. This has not always been the case, however. *Hibakusha* have long struggled in court challenging the legal definition of *hibakusha*, and

¹¹⁶ "Hibakusha storytellers get state funding for travel," *Japan Times* February 24, 2018, accessed April 20, 2018, <https://www.japantimes.co.jp/news/2018/02/24/national/hibakusha-storytellers-get-state-funding-travel/#.Wty9EMgvyCo>.

while they have earned recognition by and large, it has not been done cheaply. These successes do not exist in a vacuum either, as *hibakusha* activism works within the context of larger environmental disasters. Though an act of war, the atomic bombings of Hiroshima and Nagasaki have had a wide range of effects on the cultural, political, environmental, and legal landscapes, in Japan and beyond.

The legacy of *hibakusha* continues to be an open question. No doubt sharing their experiences will be instrumental to continuing their legacy, but what those experiences tell us will largely depend on our choices regarding nuclear proliferation. *Hibakusha* activists fighting for recognition of their own status and for assistance in treating their ill health have informed how the Japanese government has treated other groups, including other environmental pollution victims. While these groups have rewritten their narrative away from prejudice, *hibakusha* still continue to face prejudice from the public. As evidenced by the Ministry of Health, Welfare, and Labor's willingness to assist them in their storytelling efforts, some of that prejudice seems to have worn off. The article on the government's "storyteller" grant notes that some of the requests came from areas outside of Hiroshima and Nagasaki prefectures in Japan, including Akita and Fukushima.¹¹⁷ Yet the numerous cases of radiation-based prejudice and discrimination against Fukushima survivors persist, showing that prejudice has not decreased so much as transferred to another set of victims. How far this modern prejudice goes for *hibakusha* is unknown, but the good-will gesture by the Ministry of Health, Welfare, and Labor seems

¹¹⁷ *The Japan Times*, February 24, 2018.

to suggest a willingness to support their activities and the numbers seem to show a public interest in interacting with these survivors outside of Hiroshima and Nagasaki.

Though this gesture might indicate good-will, *hibakusha* are still engaged in litigation against the 1995 Support Law. Cases such as the December 2017 Nagasaki case, where after ten years in court only one of over 300 plaintiffs was granted legal *hibakusha* status and only then posthumously, indicate that there are many who still fight to have their status recognized.¹¹⁸ The burden of proof has greatly lessened since the introduction of the 1995 Law, especially when compared to the 1957 law or its many revisions. But the proof of burden criteria remains a strong barrier to many *hibakusha*. The need for proof will always be there, but it is not nearly so strict as it once was. It is unclear if “official” numbers of *hibakusha* are the number of legally-certified *hibakusha* or if they are self-reporting *hibakusha* in Hiroshima and Nagasaki prefectures, but there are still plenty of cases of *hibakusha* attempting to have their status legally verified. There are still battles to be fought.

It is unlikely that there will be major reform to *hibakusha* laws in the future, given the dwindling number of *hibakusha*. The 1995 Law was late enough that most illnesses are covered and there is no need to challenge the compensation or illnesses covered under the law. What is being challenged is the burden of proof policy the government has set in place, which, even adding additional tiers of radiation exposure, still exclude those who

¹¹⁸ “Top court dismisses Nagasaki hibakusha-recognition suit,” *Japan Times*, published December 18, 2017, accessed February 1, 2018, <https://www.japantimes.co.jp/news/2017/12/18/national/crime-legal/top-court-dismisses-nagasaki-hibakusha-recognition-suit/#.WnxphqinGCp>.

were outside of the two-kilometers beyond the blast radius or those who entered Hiroshima and Nagasaki beyond two weeks after the bombings. Despite these *hibakusha*, there is less need by activists and thus less push. More than that, the environmental context is decades removed.

The environmental legacy of the *hibakusha* activism is in setting a standard for future cases. The burden of proof policy, strict and exclusive, was the model set for cases such as Minamata disease, and thus the two cases are parallel to one another for over a decade in challenging the government for recognition and facing public prejudice. The very basis of the prejudice facing 3/11 survivors is based on fear and misinformation regarding radiation-related illnesses created during the American occupation never being properly corrected in the Japanese public. Yet these later cases, namely the “big four” cases, eventually eclipsed the atomic bombings in impact in environmental regulation and legislation, with precedence going to those cases.

Hibakusha legislative reform came in times of either great upheaval in environmental history, or restored interest in the atomic bombings. During the late 1960s and 1970s, the impact of the “big four” environmental cases cannot be overstated, and reforms for *hibakusha* during this period includes expanded coverage and compensation but also stricter control over who has access to healthcare and where. It would be misleading to assume that these reforms, whether good or bad, were the doing of other environmental groups alone; *hibakusha* activists achieved these on their own merits with their own agendas in mind, and yet their timing is no accident. Their inability to rewrite

the narrative of “contagion” and radiation-based illnesses continues to not only hurt them but now 3/11 survivors. The 1995 Law, occurring fifty years after the atomic bombings, and now the travel funds for storytellers offers a chance to observe how prejudice can be put aside in the public and governmental sphere. What would it take to make this permanent? What would help the Japanese public reevaluate radiation-based prejudice?

The legacy of *hibakusha* activism is more than simply fighting for the few *hibakusha* unrecognized by the government, or against nuclear energy and weapons. Within the *hibakusha* community, there remains an open question of what will happen to their children and grandchildren, called by some second- and third-generation *hibakusha*. Initial work by geneticists in the ABCC and RERF indicated that there was almost no change to children born by *hibakusha* after 1947. As they reach middle age and older, this population claims to have an increase in incidents of illnesses labeled radiation-based for their parents, when compared to their non-*hibakusha* Japanese peers.¹¹⁹ For over a decade now *hibakusha* and their children have been campaigning for the Japanese government to expand *hibakusha* healthcare compensation and subsidies to second-generation *hibakusha*.¹²⁰

During the 1970s, prejudice against second-generation *hibakusha* and even third-generation *hibakusha* was noted by the original survivors, with parents preventing their

¹¹⁹ Susan Southard, *Nagasaki: Life After Nuclear War* (New York: Penguin Books, 2015), 291-292.

¹²⁰ “Child of Hiroshima survivors sue for coverage under hibakusha assistance law”, *The Japan Times*, February 17, 2017, accessed April 20, 2018, <https://www.japantimes.co.jp/news/2017/02/17/national/crime-legal/children-hiroshima-survivors-sue-coverage-hibakusha-assistance-law/#.WtzgbMgvvCo>.

children from playing with or marrying descendants of atomic bomb survivors.¹²¹ There are emerging studies that look into second-generation *hibakusha* psychological health, as worries about their physical health have had an adverse effect on their overall well-being.¹²² What few studies have been done on specific diseases confirm the original findings, that the effect of the atomic bombs on children of *hibakusha* is negligible, and yet *hibakusha* continue to protest and demand reform.¹²³ Further research is needed to understand the validity of second-generation *hibakusha*'s claims, and what illnesses if any are caused by their parents' radiation exposure.

The research done thus far should have twofold ramifications. The first is that despite the prevailing prejudice in Japan, exposure to radiation has not had an adverse effect on the children of *hibakusha*, unless they were in-utero in 1945. Any fears that non-*hibakusha* have that their own genetics will be "affected" are unfounded. The second such ramification is that these findings also call the actions of *hibakusha* activists into question. If studies continue to confirm that there is no link between the cancer rates of second-generation *hibakusha* and the radiation exposure of their parents, why do *hibakusha* call for expansion of the 1995 Support Law to their children? On what grounds

¹²¹ Richard Baker, *The Hiroshima Maidens: A Story of Courage, Compassion, and Survival* (New York: Viking Press, 1985), 171-220; Kazuo Chujo, *Hiroshima Maidens: The Nuclear Holocaust Retold* (Tokyo: Asahi Shimbun, 1984), 102-105.

¹²² Yuka Kamite, "Prejudice and Health Anxiety about Radiation Exposure from Second-Generation Atomic Bomb Survivors: Results from a Qualitative Interview Study", *Frontiers in Psychology* vol. 8 (August 2017), accessed April 20, 2018, <https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01462/full>.

¹²³ Shizue Izumi, Akihiko Suyama, and Kijiro Koyama, "Radiation-related mortality among offspring of atomic bomb survivors: A half-century of follow-up," *International Journal of Cancer* 107, no. 2 (November 1, 2003), accessed April 22, 2018, <https://onlinelibrary-wiley-com.ezproxy.lib.utexas.edu/doi/full/10.1002/ijc.11400>.

do they stand? With science against them, how will *hibakusha* make their case for their children and survivors who do not have legal status?

If the history of *hibakusha* activism is proof of anything, it is that change does not come on its own. It must be fought for, and the timing of *hibakusha* activists must be precise. 3/11 has come and gone, the third great nuclear event to Japanese environmental history, and this one without any change for survivors of Hiroshima and Nagasaki. What will precipitate the next change?

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