Beyond Peace: Pluralizing Japan's Nuclear History平和を越えて――日本の核の歴史を非単純化する

Shi-Lin Loh

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Abstract: This paper examines the construction of Hiroshima and Nagasaki as signifiers of "peace" in postwar Japan. It offers alternate ways of understanding the impact and significance of "Hiroshima and Nagasaki" in historical context and argues that national readings of the history of the cities obscure nuances in the local narratives of the atomic bombs in each place.

Keywords: Hiroshima, Nagasaki, nuclear weapons, postwar Japan, atomic bombings, culture, commemoration, history, science, Atoms for Peace

> …As the only nation in human history to be bombed with atomic weapons, Japan will continue to comply with its Peace Constitution and firmly maintain the Three Non-Nuclear Principles, with its strong commitment not to repeat the tragedy of Hiroshima and Nagasaki.
>
> After the war, Hiroshima witnessed great development as an international city of peace and culture. The desire of the citizens of Hiroshima in their post-war efforts towards the realization of world peace has reached and grasped the hearts of the people of the world…
>
> - Koizumi Junichirō, August 6, 2005[1]

On the 60th anniversary of the bombing of Hiroshima, at the annual Peace Memorial Ceremony held in the city, former Japanese Prime Minister Koizumi Junichirō made a speech highlighting the "tragedy" of the world's only two atomic-bombed cities as the main reason for the present-day linkage of Hiroshima and Nagasaki to "world peace." His narrative of atomic bombs-as-peace implicitly links the local, the national and the international. The atomic bombs, a "tragedy" for the cities of Hiroshima and Nagasaki, are also claimed for the entirety of Japan, the "only nation in human history to be bombed with atomic weapons." Finally, this national victimization is then transposed into the universal, moral goal of "world peace."

Koizumi speaking at Hiroshima in 2005

What alternative understandings does this official reading elide? In the immediate post-war

period, "Hiroshima and Nagasaki" in Japan were not instantly held up as national symbols of "peace," and even less so as signifiers of "culture" – two deeply ambiguous terms assumed to be phenomena with homogenous, universal meanings and values. In fact, for the first decade after the end of Japan's war in Asia, the two A-bombed cities remained firmly in the shadow of other major events: the Allied Occupation of Japan, the start of the Cold War and the crackdown on Communism, and the Korean War. It hardly helped that the hibakusha (victims; literally, "explosion-affected people") of both cities were often feared and socially marginalized. Many of them had faces and bodies grotesquely damaged by heat and radiation from the explosions; many of them were considered tainted with the contagious poison of the atomic bombs.[2]

Existing scholarship has insightfully critiqued the construction of "Hiroshima" as a universal symbol of world peace.[3] In this short essay, I take the same critical stance, but adopt three perspectives not usually considered in the existing literature. First, I trace an alternative narrative of peace which occurred in Nagasaki in the immediate aftermath of its bombing. Next, I explore divergences in the popular conceptualization of "Hiroshima" and "Nagasaki" in Japan. Following this, I examine the process by which understandings of nuclear science and nuclear energy were propagated in Japan during the first decade after the war. I offer these alternate understandings of "Hiroshima" to pluralize the meanings of the atomic bombings of Japan in two main ways. My primary assertion here is that "Hiroshima and Nagasaki" are better understood as distinct entities with localized narratives. In particular, Nagasaki's status as the lesser-known city in Hiroshima's shadow has left its post-bombing history woefully understudied. Second, I argue that the atomic bombings not only unleashed fears about nuclear apocalypse (and fostered concomitant anti-war sentiments). In Japan, the atomic bombings of Hiroshima and Nagasaki not only pushed people to reflect on the horrors of nuclear war (and therefore the desirability of peace); they also re-conceived and re-shaped their relationship with the emerging nuclear age.

I.

Nagai Takashi with his family shortly before his death from leukemia in 1951

Japan, from 1945 to 1952, lacked a social and political environment which permitted the free circulation of ideas and information opposed to the interests of the state. Under the Allied (in reality, American-led) Occupation, a regime of censorship prevailed in which information about the physical and human damage inflicted by the atomic bombings could not be published.[4] Most ordinary people would have had little or no knowledge of what an "atomic bomb" was, or of the effects of radiation on human flesh, still less of the true extent of the devastation of Hiroshima and Nagasaki. Newspapers initially called the bomb a "new-type" weapon without specifying how it was a unique weapon. Similarly, the Emperor's famous speech announcing Japan's defeat only mentioned that the enemy possessed "a new and most cruel bomb" capable of causing "incalculable" damage. Towards the end of the Occupation, some cracks in the censorship appeared. One text which made it to press was a famous memoir by a Nagasaki physician and Catholic, Nagai Takashi, called Nagasaki no kane

(The Bells of Nagasaki). The Occupation authorities, however, agreed to its publication only with inclusion of an appendix which detailed the Japanese invasion of Manila – a decision which, as Dower and others have pointed out, equated inhumanity of the Japanese attack on Manila with the atomic bombing of Nagasaki.[5]

In fact, as earlier mentioned, Hiroshima and Nagasaki had not yet become the focal points of the narrative of Japanese national suffering in the Asia-Pacific war. By the time of Japan's surrender, 66 Japanese cities – including Hiroshima and Nagasaki – had been fire-bombed, leaving many of them in ruins not dissimilar to the destruction in the two atom-bombed ones. A good illustration of this comes from how some members of the Diet opposed a proposal to pass laws that would release extra public funds to the two atomic-bombed cities for reconstruction. Many other cities had been bombed and suffered high casualty tolls, they said; on what grounds should Hiroshima and Nagasaki be singled out for special treatment?[6]

Tokyo in ruins after American firebombing in 1945

Despite these naysayers, the Hiroshima Peace Memorial City Construction Law and the Nagasaki International Cultural City Construction Law were promulgated in 1949.[7] Still, it is apparent that a widespread national consensus on Hiroshima and Nagasaki as the foci of Japanese suffering as victims of atomic bombs did not emerge till after 1954. In that year, a fishing boat ironically named the Lucky Dragon #5 became the accidental victim of a U.S. hydrogen bomb test, sparking a national anti-nuclear movement and interpretations of Japan having suffered a "third bombing."[8]

Testing tuna for radioactive contamination following the Lucky Dragon No. 5 **incident**

Hiroshima quickly adopted the slogan of "No More Hiroshimas" and locals engaged in a range of official and grassroots activities to commemorate the victims of the bomb. These included publishing survivor accounts and organizing citizen rallies.[9] In Nagasaki, however, "peace" as a response to the bombings also acquired a religious dimension. Urakami Village, located in ground zero of Matsuyama district, had a significant Catholic population. It also housed one of the largest Catholic churches in Asia in the early twentieth century. The bomb shattered Urakami Cathedral, under which a congregation of Catholic believers were taking shelter. Nagasaki church officials claim that about 8,500 Catholics in the vicinity of the hypocenter perished.[10] The Catholics of Urakami

held the first mass commemoration of their fallen brethren in November 1945 at the ruins of Urakami Cathedral. Dr. Nagai Takashi, speaking at the service, offered the following thesis on behalf of the Catholics:

> It was the providence of God that carried the bomb to its destination. …Nagasaki, the only holy place in all Japan – was it not chosen as a victim, a pure lamb, to be slaughtered and burned on the altar of sacrifice to expiate the sins committed by humanity in the Second World War?[11]

The ruins of Urakami Cathedral in 1945

Nagai's designation of Nagasaki as the "only holy place in all Japan" recalls the 1549 establishment of a Portuguese Jesuit mission in the city and the subsequent Catholic conversion of many Japanese in the area. From the late sixteenth to the nineteenth centuries, the overlords Toyotomi Hideyoshi, Tokugawa Ieyasu, and the line of Tokugawa shoguns instituted a ban on foreign religions, making Nagasaki a locus of anti-Catholic persecution.[12] Though the Meiji government lifted the ban on Christianity in 1873, Catholics still faced entrenched prejudice. Even today, members of Nagasaki's wartime generation still recall anti-Catholic epithets that they heard before and during the war. Some termed Catholicism kuro-kyō , the "black faith;" others called Catholics yaso, a corrupted and derogatory pronunciation of "Jesus".[13]

Urakami Cathedral, Nagasaki's most famous architectural victim of the atomic bomb, further reflected this traumatic pre-war history of Catholicism in Japan. First constructed in 1892 and completed in 1914, the Catholics who had labored to bring Urakami Cathedral into existence saw it as a monument to the liberation of their faith from two centuries of religious persecution. To some Catholics, therefore, its destruction seemed tantamount to a new onslaught on their people and their faith.[14] The Nagasaki bombing bears the irony of a Christian nation dropping an atomic bomb on the most Christian place in Japan – an irony that did not escape several Japanese commentators.[15] Such an interpretation doubtless resonated in certain quarters of Nagasaki.

II.

Each city's brush with atomic weapons occurred under divergent circumstances. Hiroshima, lying on its fan-shaped delta, sustained thorough and widespread devastation. In Nagasaki, however, a mountainous terrain with hills and ravines shielded a certain portion of the urban area from complete devastation. "Fat Man," Nagasaki's plutonium bomb, had a blast energy about twice that of "Little Boy," Hiroshima's uranium missile. A U.S. military observer, visiting Nagasaki one month after the bombing, wrote: "Nagasaki is still alive and functioning while Hiroshima is flat and dead."[16] Although battered by secondary damage from fires, blast winds and radiation, the government of Nagasaki City escaped immediate confrontation with the worst of the devastation – in marked contrast to the Hiroshima government, where the mayor himself had died in the explosion. The overall psychological impact of the bomb in Hiroshima seems to have been greater than in Nagasaki. A summary report

submitted by the United States Strategic Bombing Survey almost a year after the bombings noted that "certainty of defeat was much more prevalent at Hiroshima, where the area of devastation and the casualties were greater, than at Nagasaki."[17]

Divergence also appears in the symbolic field that surrounds Japan's two atom-bombed cities. It is encapsulated in the phrase Ikari no Hiroshima, inori no Nagasaki: Hiroshima rages, Nagasaki prays.[18] The binary of rage and prayer is a comparison commonly invoked in Japanese commentaries on both cities.[19] Even Americans referenced it. A column in TIME claimed that "the main difference between the two cities is that Hiroshima has remained a stark symbol of man's inhumanity to man; Nagasaki is a monument to forgiveness".[20] The origins of this phrase are obscure. One Japanese scholar of the anti-nuclear movement and Hiroshima bombing dates it to the 1960s as a mass media catch-copy (a Japanese amalgam of the English "catchphrase" and "copy").[21] Ikari-inori is an essentializing framework for how the two cities have expressed their relationship to the atomic bombings within the anti-nuclear pacifist movement after Bikini. According to this paradigm, Nagasaki is taciturn about its atomic experience owing to a religious past of Christian martyrdom. Hiroshima, on the other hand, can vent its rage in the absence of such historical baggage.

A Madonna scarred by the bombing serves as a powerful symbol in Nagasaki

But what is it based on? Nagasaki is often treated as the "passive" city in opposition to "active" Hiroshima, despite there being little political or economic basis for this distinction. Beginning in the mid-1950s, for instance, activists and officials in both cities scrambled to install new bomb-related organizations and monuments – hibakusha support groups, atomic bomb hospitals, and peace museums.[22] If Nagasaki appears to lag behind Hiroshima in comparisons of the quantity and timing of the two cities' officially sponsored activities (e.g. city councils established to serve hibakusha needs), the difference in each city's size and revenues must be taken into account: Nagasaki has a population under half of Hiroshima's, which puts it at a financial disadvantage relative to Hiroshima.[23] Without concrete reasons to distinguish between Hiroshima and Nagasaki as "active" and "passive" cities, ikari and inori are best seen as a phenomenon whose root influences are social and cultural in nature. This simplistic binary overlooks the fact that anger and prayers have always simultaneously existed among the people of both Nagasaki and Hiroshima, and it glosses over the details of each city's post-bomb experiences. Above all, this reductive juxtaposition of the cities detracts from the message of peace that anti-nuclear and peace activists strive to broadcast: that Hiroshima and Nagasaki, as Japan's and the world's first victims of atomic warfare – in other words, as both transnational and national symbols of the horrors of nuclear war – have a unique role to play in promoting peace. The formulaic ring of ikari no Hiroshima, inori no Nagasaki has prolonged their shelf life far beyond their relevance.

III.

The study of Hiroshima and Nagasaki, surrounded by a complex of history, politics and memory, is fundamental to our understanding of postwar Japan's involvement with the nuclear age. Nonetheless, the mushroom cloud and the scarred bodies of the hibakusha are not the only

symbols of Japanese nuclear history. As the Fukushima crisis of March 11 demonstrates, Japan's involvement with nuclear issues goes beyond the survivors of Hiroshima and Nagasaki. An exclusive focus on Hiroshima and Nagasaki can make it seem counter-intuitive that Japan is now the third-largest consumer of nuclear power in the world. In the words of one journalist for the Huffington Post: "Incredibly, the Japanese, the only victims of nuclear war, adopted nuclear energy after the war. And more incredibly in the late 1960s, [Japan] purchased reactors from General Electric that, a few years later, would be proven unsafe and banned in the United States".[24] Statements in this vein contain several assumptions. First, that Japanese people were always aware of the devastation of Hiroshima and Nagasaki. Second, that Hiroshima and Nagasaki – that is, the suffering caused by nuclear weapons and warfare – were the only lenses through which the Japanese viewed nuclear technology. Third, that there was somehow a singular response of "the Japanese" across the board to nuclear issues including Hiroshima and Nagasaki. Fourth, that the link between nuclear energy and nuclear warfare was always explicit and well-understood. The first three, as the earlier sections of this essay showed, do not bear scrutiny. Neither does the fourth.

One widespread interpretation of Japan's defeat blamed its lack of scientific prowess. Hiroshima and Nagasaki, in this reading, pointed to the superior science of the United States and Japan's need to catch up. Scientific education had to be improved, and more money made available for research and development. But science and technology also carried an ideological side. They became equated with democracy: to achieve both required the construction of a rational society trained in logical thinking and provided with freedom of thought and expression.[25] This explains both the cultural status that science possessed in the popular press of Japan after the war, and the relatively benign Occupation-period censorship of topics which highlighted positive applications of nuclear technology.[26] In Dower's words, "a seemingly technological response to defeat contained within itself a political logic that contributed greatly to support for casting off the shackles of the imperial state and instituting progressive reforms."[27] In fact, some even saw the destructive origins of nuclear energy as an opportunity for the advancement of nuclear technology; in both a practical and moral sense, beneficial uses of nuclear science owed their existence to the atomic bomb. In 1949, the theoretical physicist Taketani Mitsuo argued that the repeated use of nuclear power for destructive ends could be prevented through fostering an educated understanding of science, ethics and government in society – though he eventually recanted that initial optimism.[28]

Anti-nuclear sentiments were far from the only Japanese responses to the atomic bombings. In the immediate postwar years, before Hiroshima and Nagasaki came to the forefront of national consciousness about the human costs of nuclear weapons in Japan, individuals and scholars within civil society attempted to familiarize people with nuclear science and technology. The reform of scientific education further carried a strong ideological dimension in two ways: first, it was viewed as a necessary component of Japan's reconstruction after the Asia-Pacific war; second, it was seen as a complementary facet of Japan's development as a democratic nation and ally of America – in other words, as a Western outpost in the "free world." The import of the concept of the "peaceful atom" went hand in hand with the sale of U.S. reactors and uranium to Japan via the U.S.-Japan Atomic Energy Agreement on November 14, 1955.[29] With respect to nuclear technology, this led to a government stance of wholeheartedly embracing "atoms for peace" as reconstruction efforts began to take off.

The "Atoms for Peace" campaign tied nuclear technology with human progress

Dwight D. Eisenhower, in his famous speech before the United Nations General Assembly in December 1953, aimed to "hasten the day when fear of the atom will begin to disappear from the minds of the people and the governments of the East and West."[30] Eisenhower's "Atoms for Peace" address directly preceded the creation of the International Atomic Energy Agency (IAEA), which officially started in 1957.[31] "Atoms for Peace" as a concept had great appeal to governments looking to develop nuclear power, and Japan's was no exception. In the view of Imai Ryūkichi, a nuclear engineer and general manager of the Japan Atomic Power Company, this framework allowed the Japanese to focus on how "nuclear energy can have a bright and practical side" rather than just its destructive potential.[32] Three months after Eisenhower's speech, a conservative group of politicians led by future Prime Minister Nakasone Yasuhiro submitted a budget for nuclear development in the House of Representatives which passed in a mere month. Subsequently, the Ministry of International Trade and Industry (MITI) as well as Keidanren, Japan's largest association of business organizations, formed working committees to research applications of nuclear power. "Atoms for Peace" in Japan was aggressively promoted through a traveling exhibition held in various cities throughout Japan, including Hiroshima. This promotional campaign received a fillip from the sponsorship of Shōriki Matsutarō, owner of the Yomiuri Shinbun and CIA agent.[33] One measure of its success may be how even anti-nuclear activists lent their support to the development of nuclear energy for peaceful uses.[34]

Conclusion

Nationalism and Japanese exceptionalism went hand in glove over Hiroshima and Nagasaki. Though viewed as tragedies of the past, they were also turned into opportunities for the future. Placed at the center of narratives of victimization, they also formed part of key arguments for the promotion of nuclear science in the name of the same "peace" that anti-nuclear activists called for. In 1952 Taketani Mitsuo called for Japanese nuclear power on the ground that because Japan was the only nation that had suffered the A-bombs, it had an especial right to pursue atomic energy for peaceful purposes (even if other nations could do the same).[35] Such a view implied the peaceful coexistence of anti-nuclear activism with the rise of nuclear power plants – and, indeed, movements opposing nuclear energy developed in tandem with institutional and market incentives for its promotion during the 1950s and 1960s.[36]

Many issues remain beyond the confines of this brief essay. Nuclear energy in Japan, though supposedly implemented along democratic, independent and transparent lines, developed in quite the opposite direction.[37] Much more could be said about groups marginalized by the officially formulated Hiroshima-as-peace framework. The Koreans and Chinese brought to the Japanese mainland as forced labor during the war, for instance, with advocates for the former group denied an official memorial in the grounds of the Hiroshima Peace Memorial Park until 1999.[38] Or, indeed, the Japanese hibakusha themselves, abstracted into symbols of national suffering while their social needs remained sorely neglected by the central government.[39] Ultimately, hitching the atomic bombings to the

cart of national identity and international ethics should not obscure the other ways that Hiroshima and Nagasaki have been understood in Japan - by local residents, foreigners, and people outside the two cities; by physicists and policymakers. These are but some groups whose views deserve closer study.

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NOTES

[1]Official provisional translation of the Japanese; text taken from "Address by Prime Minister Junichirō Koizumi at the Hiroshima Memorial Service for the Hiroshima Peace Memorial Ceremony." link (http://www.kantei.go.jp/foreign/koizumispeech/2005/08/06aisatu_e.html)(accessed August 20, 2011).

[2] John Dower, "The Bombed: Hiroshimas and Nagasakis in Japanese Memory," Diplomatic History 19:2 (1995), 279-81.

[3] Olwen Beazley, "Politics and Power: the Hiroshima Peace Memorial (Genbaku Dome) as World Heritage," in Sophia Labadi and Colin Long, eds., Heritage and Globalisation (New York: Routledge: 2010), 60-64; Lisa Yoneyama, Hiroshima Traces: Time, Space and the Dialectics of Memory (Berkeley, CA: University of California Press, 1999).

[4] However, texts on the science around the bomb made it out to press relatively easily. High school and university students, between 1946 and 1949, could consult a new series of books and manuals on topics such as quantum mechanics and theoretical nuclear physics, including translations of Western textbooks. See the Guide to the Gordon W. Prange education book collection, the

University of Maryland Libraries: occupation-period censored education books 1945-1949, eds. Akemi Noda and Eiko Sakaguchi (Tokyo: Bunsei Shoin, 2007), 272-80. For a detailed study of Nagai Takashi's influence see Chad Diehl, Japan's Postwar Hagiography: Atomic-Bombing Author Nagai Takashi and Occupation Censorship (M.A. thesis, Columbia University, 2005).

[5] Nagai Takashi, The Bells of Nagasaki, trans. William Johnston (New York: Kodansha International,1984).

[6] Hiro Saito, "Reiterated Commemoration: Hiroshima as National Trauma," Sociological Theory 24:4 (2006), 353-376.

[7] The laws are officially called the Hiroshima heiwa kinen toshi kensetsu ho（広島平和記念都市建設法); and the Nagasaki kokusai bunka toshi kensetsu ho（長崎国際文化都市建設法). The Japanese text of both laws is available online through the e-Gov website of Japan's Ministry of Internal Affairs and Communications. "Hiroshima heiwa kinen toshi kensetsu hō," link (http://law.e-gov.go.jp/htmldata/S24/S24HO219.html); "Nagasaki kokusai bunka toshi kensetsu ho," link (http://law.e-gov.go.jp/htmldata/S24/S24HO220.html)(accessed October 01, 2011). An English translation of the Hiroshima law is included in Teramitsu Tadashi, et al., Hiroshima heiwa kinen toshi kensetsu hō no seitei no tōji o furikaette – kankeisha ni yoru zadankai (Hiroshima: Kobunshokan, 1987).

[8] The line "thrice victimized by nuclear bombs" appeared in virtually every petition against nuclear weapons. Nagasaki poet Yamada Kan described Bikini as a "third death" in the shadows of Hiroshima and Nagasaki. Yamada Kan, "Mitabi no shi," Kioku no koshū (Nagasaki: Nagasaki Bunkensha, 1969), 22.

[9] Chūgoku Shinbun, ed., Nenpyō Hiroshima: kaku jidai 50-nen no kiroku (Hiroshima: Chūgoku Shinbunsha, 1995); Chūgoku Shinbun and Hiroshima International Cultural Foundation, eds., The Meaning of Survival: Hiroshima's 36 year commitment to peace (Hiroshima: The Chūgoku Shinbun and the Hiroshima International Cultural Foundation, 1983).

[10] Church officials claim that about 8,500 Catholics in the vicinity of the hypocenter perished. Catholic Archdiocese of Nagasaki, "Seikatsu no naka no kyokai: Urakami kyokai," link (http://www.nagasaki.catholic.jp/dai8_6.htm)(accessed August 21, 2011).

[11] Nagai, Bells, 107.

[12] Mikiso Hane, Premodern Japan: a historical survey (Boulder, CO: Westview Press, 1991), 123-8; Urakawa Wasaburo, Urakami Kirishitan shi (Ōsaka: Zenkoku Shobo,1943).

[13] Author's personal interview with Hirose Masahito, Nagasaki hibakusha and activist (August 11, 2008).

[14] Ibid.

[15] See for instance the review by journalist Tagawa Taisuke, "Nagai Takashi: Nagasaki no Kane," link (http://www.nishinippon.co.jp/nnp/book/kyushu100/2007/02/post_56.shtml)(accessed August 20, 2011). On the Vatican's silence on the atomic bombings, see Kevin J. Wetmore, Jr., "The Cross and the Bomb: Two Catholic Dramas in Response to Nagasaki," The Journal of Religion and Theatre, 1:1 (Fall 2002), 103-5.

[16] George Washington University has a valuable collection of documents recording such viewpoints, scanned from the holdings of the U.S. National Security Archives. Tinian Files, "Cable CAX 51948 from Commander in Chief Army Forces Pacific Advance Yokohoma Japan to Commander in Chief Army Forces Pacific

Administration, September 14, 1945." link (http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB162/77b.pdf) (accessed August 21, 2011).

[17] United States Strategic Bombing Survey, The Effects of Atomic Bombs on Hiroshima and Nagasaki (Washington: United States Government Printing Office, 1946). Available here (http://www.ibiblio.org/hyperwar/AAF/USSBS/AtomicEffects/index.html). (accessed September 21, 2011)

[18] A more literal translation would be "Hiroshima of rage, Nagasaki of prayer," but I have elected to use this more graceful translation by John W. Treat, Writing ground zero: Japanese literature and the atomic bomb (Chicago: University of Chicago Press, 1995), 301.

[19] One indicator of the phrase's place in popular discourse is the existence of a page dedicated to explaining it n the Japanese version of Wikipedia. See the entry for "Ikari no Hiroshima, inori no Nagasaki," link (http://ja.wikipedia.org/wiki/%E6%80%92%E3%82%8A%E3%81%AE%E5%BA%83%E5%B3%B6_%E7%A5%88%E3%82%8A%E3%81%AE%E9%95%B7%E5%B4%8E)(accessed August 30, 2011).

[20] "Tale of Two Cities," TIME (Friday, May 18, 1962). Available here (http://www.time.com/time/magazine/article/0,9171,896171,00.html). (Accessed September 18, 2011).

[21] Author's personal interview with Ubuki Satoru, Hiroshima resident and scholar (August 26, 2008).

[22] Chūgoku Shinbun, The Meaning of Survival; Nagasaki Sōgō Kagaku Daigaku Heiwa Bunka Kenkyujo [NKSD], ed., Nagasaki – 1945-nen 8-gatsu 9-ka (Tokyo: Iwanami Shoten, 1995).

[23] Detailed statistics on the populations of each city can be found on their respective government websites. For Hiroshima City, consult the Hiroshima-shi tōkei sho, link (http://www.city.hiroshima.lg.jp/kikaku/joho/toukei/11_book/22/book_b.html), files B-1-1 and B-1-2 (accessed January 21, 2011); For Nagasaki City, see the Nagasaki-shi no jinkō, link (http://www1.city.nagasaki.nagasaki.jp/toukei_data/jinko/index.html)(accessed August 21, 2011).

[24] Norman MacAfee, "What Began in Hiroshima Must End in Fukushima," The Huffington Post. Available here (http://www.huffingtonpost.com/norman-macafee/what-began-in-hiroshima-m_b_844835.html). [Accessed August 22, 2011].

[25] Dower, "The Bombed," 279-81.

[26] Ann Sherif, Japan's Cold War: Media, Literature and the Law (New York: Columbia University Press, 2009) 51-2.

[27] Dower, "The Bombed," 280.

[28] Taketani, an admirer of the Soviet Union, may also have had political motivations for expressing this opinion. A 1948 article in the magazine Sekai carried his praise for Soviet nuclear technology. Around the same time, the Japan Communist Party asserted that Soviet possession of nuclear power formed an important deterrent to monopoly capitalism. In the 1950s, Taketani took back his words and pointed to various obstacles to nuclear power in Japan. Moreover, in 1975 he established a grassroots Nuclear Information Center (Genshiryoku shiryō jōhōshitsu), which facilitated the activities of Japanese anti-nuclear power movements. I am grateful to the independent scholar Onitsuka Hiroshi for sharing these observations. Taketani Mitsuo, Kagaku tetsugaku geijutsu (Tokyo: Soryusha,1949), 24-5.

[29] Morris Low, Science and the Building of a New Japan (New York: Palgrave Macmillan, 2005),

155.

[30] The full text of the speech can be found at the official website of the International Atomic Energy Agency. link (http://www.iaea.org/About/history_speech.html)(accessed September 11, 2011).

[31] David Fischer, History of the International Atomic Energy Agency: The First Forty Years (Vienna: The Agency, 1997).

[32] Ryūkichi Imai, "Japan and the Nuclear Age," Bulletin of Atomic Scientists (June 1970), 37.

[33] In February 1955 Shōriki was elected to the Lower House of the Japanese Diet and subsequently became the minister who oversaw nuclear energy in the Hatoyama cabinet. The following year he became the founding director of a new organization, the Science and Technology Agency (which vigorously promoted nuclear energy) and worked closely with other pro-nuclear politicians including Nakasone Yasuhiro. Tanaka and Kuznick, "Japan, the Atomic bomb, and the 'Peaceful Uses of Nuclear Power."

[34] Yuki Tanaka and Peter Kuznick, "Japan, the Atomic Bomb, and the "Peaceful Uses of Nuclear Power"," The Asia-Pacific Journal. Available here (http://www.japanfocus.org/-Yuki-TANAKA/3521). [Accessed September 01, 2011].

[35] Taketani Mitsuo, "Nihon no genshiryoku kenkyū no hōkō," Kaizo 11 zokan (1952), 70-72.

[36] Martin Dusenberre and Daniel Aldrich, "Hatoko Comes Home: Civil Society and Nuclear Power in Japan," Journal of Asian Studies 70:3 (2011), 6.

[37] The Atomic Energy Basic Law of 1955 strictly limited the use of nuclear technology for peaceful purposes under those three principles. Industry-government collusion, however, prevented principles of openness from being observed in the nuclear development program. In 1959, for instance, the Science and Technology Agency (Kagaku gijutsu-chō) concealed a report which found that the costs of an accident at the first nuclear power plant in Japan (in Tokai Village, Ibaraki Prefecture) would be more than double the national budget for that year. Onitsuka Hiroshi, "X-Rayed from Fukushima Daiichi: Japanese Nuclear Power Plants and Local Governments," unpublished paper.

[38] Beazley, "Politics and Power."

[39] Dower, "The Bombed," 283-4.