

■ 論文 ■

Nuclear Images and National Self-Portraits: Japanese Illustrated Magazine *Asahi Graph*, 1945-1965¹

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1. Embracing Hiroshima and Nagasaki

Although discourses on Japan tend to focus on her ‘uniqueness’ or ‘peculiarity’, Hiroshima and Nagasaki are exceptions. Outside Japan, these are not just the names of two Japanese cities, but they represent the Nuclear Age, in which countless nuclear weapons were spread all over the world. Hiroshima and Nagasaki are deep-rooted and widespread symbols of the evils of war and the dangers of science. In S. Terkel’s famous collection of oral histories, *The Good War*, for example, many Americans talking about the Nuclear Age refer to Hiroshima and Nagasaki (Terkel 1984: 505-557). In a conversation with B. Latour, the French philosopher M. Serres said that the dawn of the Nuclear Age symbolized by the atomic bombings of Hiroshima and Nagasaki led him to a wide-ranging project on the philosophy of science (Serres 1995: 87). Many people in the world, even those with only superficial knowledge of Japan, can easily think of a universal, didactic, and moralistic meaning when they hear the names of Hiroshima and Nagasaki, more or less in the way that ‘Auschwitz’ has become a symbol of totalitarianism, racism, and religious prejudice in the world.

In Japan too, Hiroshima and Nagasaki are symbols conveying a universal meaning concerning the Nuclear Age. At the same time however, they refer to real cities, whose destruction was a turning point in the nation’s history, as is clearly expressed in many books, photograph collections and textbooks on Japanese history. In these works, featuring pictures of huge mushroom-shaped clouds and devastated cities, the atomic bombings of Hiroshima and Nagasaki are presented as events that divide Japan’s modern national history into an old period and the dawn of a new one. The universal meaning and the national-historical, epoch-making meaning are put together in the phrase ‘the only A-bombed country’, an expression that is very popular in Japan. It has been repeated in public statements by the prime minister at the Hiroshima and Nagasaki peace ceremonies, ever since the prime ministers started to attend the ceremony in 1971. For example, Prime Minister Junichiro Koizumi said in 2005: ‘As the only nation in human history to be bombed with atomic weapons, Japan will con-

¹ The present study is a part of the research project called ‘the nuclear age in popular media: a transnational history’, focusing on the transnational history of images related to nuclear energy in the first two post-war decades. The results of the project will be published in the near future. First and foremost, I express my gratitude for making comments and permitting the publication of this article to the project leader, Dick van Lente (Erasmus University), and to all concerned in this project. I also would like to thank Rajkai Zsombor, Dick van Lente, Toshio Miyake and Yura Okamoto for their great support for the language correction and for their comments.

tinue 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' (August 6 and 9, 2005)².

The development and weaving together of these universal and national meanings since 1945 was not, of course, a smoothly or natural process. Most of the victims of the bombings completely lacked a sense of context, because they could not ever know that the clouds they were looking at were caused by atomic bombs. Those who survived tried retrospectively to discover contexts, explanations and meanings of their experiences. This was also true for the majority of the Japanese people, as became clear in August 1952, when the illustrated magazine *Asahi Graph* published, for the first time, photographs of the damage of the atomic bombs in Hiroshima and Nagasaki. 'Even in Japan, it is due to this volume that many people came to know the fear of atomic bombs for the first time' (Asahi Shimbun Hyakunenshi Henshu Iinkai, 1995b: 155, Asahi Shimbun Shuppankyoku 1969: 271-273). The publication clearly showed that there was an overwhelming 'confusing absence of context' related with Hiroshima and Nagasaki, not only for the victims, but for almost everybody in Japan (Suzuki 2005: 8-36). So how was the above-mentioned self-portrait of 'the only A-bombed country' constructed from this 'absence of context' during the first post-war years and after? One way to understand Japan's post-war history is by showing how this process of discovering a context led to collectively embracing Hiroshima and Nagasaki.

This article analyses the transformation of Japanese popular images of nuclear power between 1945 and 1965. The analysis has - at least - two features. First, it discusses nuclear power in all its facets. Although there are many studies on nuclear power in Japan, they tend to limit themselves to consideration of either the nuclear bombings, or nuclear reactors for electric power generation. They also tend to take sides as to the pros and cons of these nuclear technologies. In this paper however, I will deal with nuclear power more comprehensively, including military and peaceful uses. Secondly, this article will relate images of nuclear power to national self-images. In many studies on nuclear power in Japan, the concept of nation has been regarded as a self-evident framework for research. Though nuclear power has been more or less connected with the national concept, the depth of this connection, which is characteristic of nuclear images in Japan, has not been sufficiently studied.

The main material for the analysis was the above-mentioned Japanese weekly illustrated magazine, *Asahi Graph*. This magazine was chosen not only because it was 'one of the representative illustrated magazines in Japan' (Nagano 1999: 39), it was also the first mass medium that published visual images of the damage caused by the atomic bombs, and, perhaps for that reason, *also* continued to spread them during the following years. It is therefore one of the most valuable sources for understanding the development of Japanese popular images

2 In 1965 the twentieth anniversary of the atomic bombings in Hiroshima, the then mayor of Hiroshima, Shinzo Hamai, asked the Prime Minister, Eisaku Sato, to attend the Hiroshima Peace Memorial Ceremony and read the Peace Declaration. The government sent the Chief Cabinet Secretary to the ceremony on behalf of the prime minister. It was the first time that a member of the Japanese government formally attended the ceremony. The prime minister formally attended the ceremony for the first time in 1971, one year after the Japanese emperor went to pray at the atomic bomb victim memorial monument in the Hiroshima Peace Memorial Park in 1970. As will be mentioned in the last section again, the speech by the Prime Minister Sato during the ceremony held in 1971 also contained an expression similar to 'the only A-Bombed Country'.

concerning nuclear power. In addition, I will use popular mangas, animations and films related to nuclear power in Japan, especially the film *Godzilla* and the manga *Tetsuwan Atom* by Osamu Tezuka, and also the television anime based on it³. Not only was *Tetsuwan Atom* a masterpiece created by the ‘father of manga’, it also was a work that laid foundations for modern manga and anime in Japan. These popular fictional media have played an important role in diffusing popular images of nuclear power, and are therefore important complementary sources to more realistic media like *Asahi Graph*.

2. *Asahi Graph* and Images of Nuclear Power

2.1. A Brief History of *Asahi Graph*

The illustrated magazine *Asahi Graph* has a special status in Japan. In the history of modern Japanese magazines, which started in 1867, ‘*Asahi Graph* was the pioneer of illustrated magazines and established the foundation of modern illustrated journalism in Japan’ (Asahi Shimbun Hyakunenshi Henshu Inkaï 1995a: 198, Kamei 1985: 266, Tucker 2003: 187)⁴. In the 1920s, at the dawn of ‘mass society’, Japanese magazines entered a period of efflorescence (Sato 2002: 15, Tucker 2003: 186-207). For example, the pioneers of weekly magazines, *Shukan (Shunkan) Asahi* and *Sunday Mainich*, were issued in 1922, and the magazine to sell more than a million copies in Japan, *King*, was launched in 1925 (Shiozawa 1994: 45-79, Sato 2002). *Asahi Graph*, the first illustrated magazine, was published by the Asahi Shimbun Company in January 1923. The general enthusiasm about photography and the development of gravure printing at the time also contributed to the publication of illustrated magazines (Asahi Shimbun Shasi Henshushitsu 1962: 1-70, Nagano 1999: 44-45, Gravure Gijutsu Hatatsushi Kanko Inkaï, 1979: 7-15, Asahi Shimbun Shuppanyoku 1969: 62-78).

When it was launched in 1923, *Asahi Graph* was a daily ‘newspaper for reading and looking’ that included many photographs and illustrations (Asahi Shimbun Hyakunenshi Henshu Inkaï 1995a: 197, Asahi Shimbun Shasi Henshushitsu 1962: 68). After a temporary suspension caused by the Great Kanto Earthquake during the same year, *Asahi Graph* was restarted as a weekly illustrated magazine in November 1923. In the 1920s and 1930s, it ‘set a trend of modernism’ (Asahi Shimbun Shuppanyoku 1969: 77). An overseas monthly edition named *Japan in Picture* or *Pictorial Orient* was also published at that time. The beginning of the Second Sino-Japanese War in 1937 boosted *Asahi Graph*’s role as a news reporting medium. Responding to an increasing public interest in the war and using an increasing number of correspondents, *Asahi Graph* was able to publish more pictures than newspapers did (Asahi Shimbun Shasi Henshushitsu 1962: 120, Asahi Shimbun Shuppanyoku, 1969 : 114-116; 159). Due to a high popular appeal and profit rate, *Asahi Graph* became one of the most important print media for the Asahi Shimbun Company during the war. It gradually turned into a propaganda journal and a ‘poster promoting the holy war’ (Asahi Shimbun Hyakunenshi Henshu Inkaï 1995a: 614, Kuwahara 2007: 110). While many print media disappeared in the course of the war, *Asahi Graph*, as a

3 In English-speaking countries, *Tetsuwan Atom* is known as *Astro Boy*. A CGI film called *Astro Boy*, for example, was released in 2009 by Imagi Animation Studios.

4 In the pre-war days, *Asahi Graph* used to have an English subtitle, *The Asahi Picture News*. Although the English title dropped during World War II, it was restored shortly after the end of the war in 1946.

‘fighting illustrated magazine’ kept up publication until the end.

After the war, *Asahi Graph* again changed dramatically (Asahi Shimbun Hyakunenshi Henshu Iinkai 1995b: 102, Kuwahara 2007: 113). Distancing itself from its propagandistic wartime performance, it made a fresh start under slogans such as ‘criticism and entertainment’, or ‘satire, aphorism, irony, parody, and humor’ (Asahi Shimbun Shuppanyoku 1969: 265-270)⁵. The 1952 special volume with pictures of the atomic bombings mentioned above may be regarded as an attempt made by the journal to clearly distinguish itself from its previous role as a medium of war propaganda by showing Japan in utter defeat (Asahi Shimbun Hyakunenshi Henshu Iinkai 1995b: 155, Asahi Shimbun Shuppanyoku 1969: 271). In the 1950s, *Asahi Graph* became ‘the champion of periodical magazines’ (Asahi Shimbun Shasi Henshushitsu 1962: 167-8). By introducing multi-colored printing, increasing the number of pages, and also publishing materials about events happening outside Japan, *Asahi Graph* survived through the ‘weekly magazine boom’ of in the 1950s, in which there was a cut-throat competition of various magazines, as well as through the ‘age of television’ that dawned in the late 1950s (Asahi Shimbun Shuppanyoku 1969: 432). At its peak in the nineteen seventies, it had a circulation of over a hundred thousand⁶. The special issue on the Tokyo Olympic in 1964 even reached an extraordinary print run of one and a half million⁷.

Although it is difficult to specify the readership of *Asahi Graph*, ‘the B4 size weekly illustrated magazine was a standard in the waiting rooms of banks and dentists’, thus it seems that the journal that had B4 size from at first was not only read by individuals in private, but often read by people who were in public places including waiting rooms of banks, hospitals, government office and dentists (Kuwahara 2007: 112). It means that *Asahi Graph* was not read by a specific social stratum. The size also affected the contents of the magazine in the meaning that ‘eroticism and scandal was tabooed’. That is, it contained articles that would be acceptable to as many people as possible, and the readers did not expect extreme images and stories, but rather to serve as a common denominator for the general public.

2.2. Chronology of Nuclear power in *Asahi Graph* 1945-1965

From the end of WWII in 1945 to the end of 1965, 1041 issues of *Asahi Graph* appeared, containing 187 issues

- 5 Most representative of the change was a series of articles labeled ‘modernologic’ (using Japanese term ‘kogengaku’ coined by Wajiro Kon in the 1920s and meaning the study of modern social phenomena and mores). These articles were sharply contrasting with the war-time coverage, and the usage of the term here obviously was an expression of the editors’ intention to reveal the modern modes in Japan, including a fashion of women, instead of the fictional propagandist portrayal of the society during the war. This quick adaptation to post-war circumstances was not unique to *Asahi Graph*. According to Sodei (1985), quite a large number of Japanese people during the occupation wrote letters of admiration to Douglas MacArthur, the Supreme Commander of the Allied Powers (SCAP) in Japan.
- 6 As of now, I do not have any definite data regarding the circulation of *Asahi Graph*. Nonetheless, it can be said that it may not have been as large in the case of other illustrated and non-illustrated weekly magazine as well. For instance *Shukan Shasin*, which was an illustrated magazine published by the government between 1938 and 1945 for war propaganda, had a circulation of over three hundred thousand copies, whereas that of *Asahi Graph* was only about fifty to sixty thousands. This gap in the circulations was partly caused by the price difference, since *Asahi Graph* was priced almost ten times higher than *Shukan Shasin*. Even so, *Asahi Graph* had been the most read weekly illustrated magazine until the appearance of *Shukan Shasin*, and it kept its position of the most famous illustrated magazine after WWII, because, on the one hand, it was the illustrated magazine with the longest tradition published by an influential newspaper company and, on the other hand, because it was often purchased to be read in public places (see also the next paragraph).
- 7 *Asahi Graph* was discontinued in October, 2000. The total number of the issues reached 4105.

and 284 items related to nuclear power, including reports, photos, and cartoons. On average, almost 27 percent of the issues included at least one item related to nuclear power⁸.

Table 1 indicates the change over time of the number of items in *Asahi Graph* on four basic themes and others: Hiroshima and Nagasaki (80 articles), the military use of nuclear power (114 articles), non-military use of nuclear power (58 articles), protests against nuclear power (30 articles), and others (3 articles).

As the graph indicates, the number of items increased dramatically after the special 1952 issue covering the bombing of Hiroshima and Nagasaki. The issue appeared after the effectuation of the San Francisco Peace Treaty on August 6, 1952, which restored Japan to full national sovereignty. With respect to the themes mentioned above, roughly there are four discernable tendencies here:

- (a) Articles and images related to Hiroshima/Nagasaki often included criticism of nuclear weapons and bomb tests. This tendency became conspicuous after the Lucky Dragon Incident in 1954.
- (b) During the whole period analyzed here, no articles viewing the military use of nuclear power in the affirmative light appeared, except for a few ones during the occupation. As will become apparent further on, this can only partly be explained by the atomic bombings of the two cities.
- (c) At the same time, there were no articles with a negative attitude toward the peaceful uses of nuclear power during this period. For example, there were no articles about accidents with nuclear reactors in Chalk River, Canada, in 1952 and the Windscale, England in 1957. Protest against nuclear power in the magazine was thus always directed against the military uses.
- (d) The category ‘others’ refers to articles that do not deal with nuclear power per se, but that contain figurative used of words related to it, such as ‘pikadon’ (a popular word describing atomic explosion; ‘Pika’ is ‘blinding flash of light’ and ‘don’ means ‘deafening sound’), or ‘Geiger counter’.

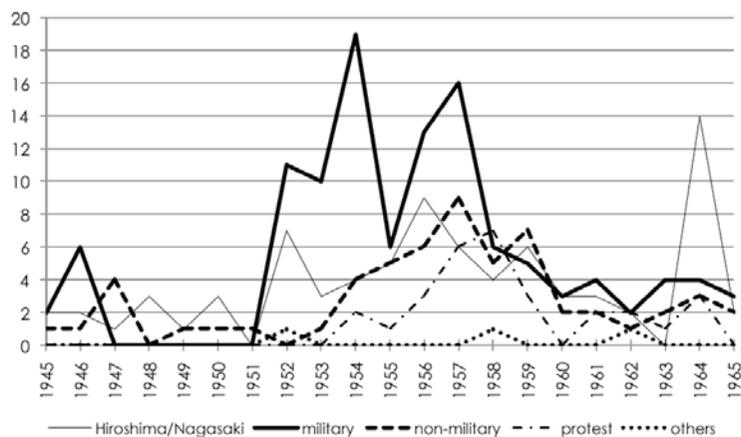


Table1 The number of items concerning nuclear power in *Asahi Graph* between 1945 and 1960

⁸ I could not yet get hold of only two issues of *Asahi Graph* related to the subject of this paper: issues published on August 15, 1945 and on December 25, 1946.

With the graph above as a reference, in the following sections I shall analyze the transformation of popular images of nuclear power that appeared in *Asahi Graph*.

3. A Victimized Nation in the Nuclear Age

The atomic bombings of Hiroshima and Nagasaki were reported by Japanese newspapers right after they occurred (Odagiri 1987)⁹. Since the use of the word ‘Genshi Bakudan’ (atomic bomb) was prohibited by Japanese government during the war, many newspapers used the expression ‘new type of bomb’. These articles all refer to the power of the bombings that killed many ‘innocent people’ and destroyed cities in a second, and criticized the cruelty of the ‘new bombs’. On August 25, *Asahi Graph* also reported briefly about the atomic bombings, with a photograph of the devastated city of Hiroshima. By that time the Pacific War had ended, and the use of the word was no longer prohibited, the article was entitled ‘What is an atomic bomb?’

After the occupation by the U.S. began, the number of newspaper reports on nuclear weapons decreased because of the press code imposed by General Headquarters, the Supreme Commander for the Allied Powers (GHQ/ SCAP), though there also was certain self-censorship by the Japanese press itself (Nakayama 1995a: 286-307, Okai 2006: 185-190, Horiba 1995, NHK Shuppan 2003: 295-296). Nevertheless, even during the occupation, some information about the bombings of Hiroshima and Nagasaki became available (Mizuta 1997: 13-95). In its first post-war issue, the Hiroshima newspaper *Chugoku Shimbun* gave a detailed report on the situation in the city at the time, entitled ‘Three months later (Hiroshima after the atomic bombing)’. In 1945, the first publication of photos on the damages by the atomic bombs was in the *Asahi Shimbun* in Osaka on 4th September (Asahi Shimbun Hyakunenshi Henshu Iinkai, 1995b: 155). In July 1946, several photographs of Hiroshima taken right after the bombing by Yoshito Matsushige, who worked for Chugoku Shimbun, also appeared in the newspaper (Chugoku Shimbunsha, 1995: 298-307)¹⁰. Poets, literary writers, journalists, specialists in education and religions also published important documents on the atomic bombings: *Shikabane no Machi* (*The City of Corpses*) by Yoko Ota (1948), *Zetsugo no Kiroku* (*Letters from the End of the World*) by Toyofumi Ogura (1948), *Nagasaki no Kane* (*The Bells of Nagasaki*) by Takashi Nagai (1949), *Kono Ko wo Nokoshite* (*Leaving These Children Behind*) by Takashi Nagai (1949), *Hiroshima* by the American journalist John Hersey (1949), which was translated into Japanese, as was *Zero no Akatsuki* (*Dawn over Zero*) by another American journalist, William L. Laurence (1950), *Genbaku no Ko* (*Children of Hiroshima*) edited by Arata Osada (1951), *Atomic Bomb Poems* (*Genbaku Shishu*) by Sankichi Toge (1951) and many other. In Hiroshima and Nagasaki, in addition to such publications, some forerunners of the *hibakusha* movements (movements by victims of the atomic bombs) also emerged (Chugoku Shimbunsha 1995: 1932-1943, Nihon Gensuibaku Higaisha Dantai Kyogikai, Nihon Hidankyoshi Henshu Iinkai 2009: 38-68). At the time of release of the Stockholm Appeal by the World Peace Council in 1950, there were signature-collecting campaigns de-

9 On the images of the atomic bomb in Japan before Hiroshima, see Nakao (2009).

10 After the publication, the staff of *Chugoku Shimbun* was asked to go to the GHQ office, and Matsushige in person went there. However, there was no severe punishment waiting for him there, which shows that in the early stages, censorship under the GHQ’s press cord was not yet very strict (NHK Shuppan 2003: 305-307). See also footnote 11.

manding a ban of atomic bombs, and exhibitions of paintings and poetry depicting the damage caused by the atomic bombs. *Genbaku no Zu (The Hiroshima Panels)* by Iri Maruki and Toshi Maruki (Toshiko Akamatsu) was also published in 1950¹¹. The news about the possible use of atomic bombs in the Korean War also provoked discussion.

Authors of all this material were mainly none other than the victims of the bombings. One of the reasons why they were allowed to publish under the press restrictions was that their writings were not necessarily incompatible with the American censorship regulations, and in some cases the occupiers could even regard them as supporting their policies. Fukuma (2006) points out that Nagai's *Nagasaki no Kane*, that became a bestseller and was turned into a movie in 1950, avoided to refer to the cruelty of the atomic bombings and suggested their justification as bringing an end to the World War (Fukuma 2006: 202-213). The press regulations that was also brought by self-censorship of the Japanese press was another reason (Chugoku Shimbun 1995: 1946). As a result, even though the atomic bomb victims who published their experiences often felt as if they were risking their lives, their stories, although with numerous cuts and amendments, were unexpectedly published, at least till the first half of the occupation¹².

During the period of occupation, these publications and activities did not result in setting the public against nuclear weapons however. An editor of *Asahi Graph* who took part in the publication of the first special issue looked back on the period in the following way. 'Borrowing Yoko Ota's words, the majority of Japanese people "regarded the damages brought by the atomic bombs as if it was akin to natural disaster, similarly to the damage from storms and floods" until the special issue of *Asahi Graph* was published. The overwhelming majority of the people thought that the post-war situation was a kind of "Mei fa zi" (no way out), which was a buzzword at the time, and they had to accept everything because of their defeat in the war' (Niinobe 1959: 15)¹³. The defeat in World War II put the Japanese into an unprecedented situation. The International Military Tribunal for the Far East (the Tokyo Tribunal) from 1946 to 1948 criminalized the actions of Japan by labeling it 'crimes against peace'. The political and economical democratization led by the GHQ/ SCAP made the Japanese fully realize that they were a loser and an occupied nation. The resulting self-image held by the majority of the Japanese people that painted Japan as an aggressor, now defeated and the occupied, left those who had

11 During the occupation and prior to the publication of the special issue of *Asahi Graph* on the atomic bombings, some exhibitions on the atomic bombings were held. The representative examples are the exhibition tour *Genbaku no Zu (A-bomb Panels)* by Iri and Toshi Maruki that commenced in 1950, and an exhibition *Genbaku Sogoten* that was held in 1951 in Kyoto and also displayed the drawing of the Maruki family (Obata 1995, Okamura 2009). The latter was the first comprehensive exhibition that addressed the theory and creation of atomic bombs, the effect on the human body, and the literary works depicting atomic bombings. The exhibition had more than a hundred thousand visitors and incorporated a large number of smaller exhibitions around Japan. Obata (1995) recalled that Japanese police forces often made a watching on the exhibitions, and an intervention occasionally. This throws lights upon the atmosphere at the later stage of the GHQ's press cord that is so-called 'reverse course', which started from about 1950.

12 The First Hiroshima Peace Memorial Ceremony in 1947, which was called the Hiroshima Peace Festival, was independently planned and managed with careful deliberation, and finally held by the then mayor of Hiroshima, Shinzo Hamai, together with the staffs of the local government (NHK Shuppan 2003: 307-312). Douglas MacArthur sent their messages to the ceremony post factum. Kiriya (2006) describes the gap between politically-led reconstruction of Hiroshima including the changing of peace ceremony and experiences of *hibakusha*.

13 'Mei fa zi' is a Chinese expression that first came to be used in Japanese among the soldiers during the war, and later, in the post-war era, was often used together with borrowed English words (usually in distorted forms) in ordinary conversations.

no direct experience of the atomic attacks feeling that the atom bombs were the inevitable consequence of Japan's wartime behavior, which made it difficult to condemn them. This attitude was reinforced by the indifference shown towards the atom bomb victims by the Japanese government (Shiina 1985). The Japan Confederation of A- and H-Bomb Sufferers Organizations (Nihon Hidankyo), established in 1956, characterizes the situation of the atomic bomb victims at that time as being 'concealed' from general public by the U.S. government and 'abandonment' by the Japanese government (Nihon Gensuibaku Higaisha Dantai Kyogikai, Nihon Hidankyoushi Henshu Iinkai 2009: 58)¹⁴.

Under these circumstances, the majority of people in Japan who had not experienced the atomic bombings themselves and had to work hard to build up their lives and reconstruct their devastated country, would at best have an image of the atrocity of the atomic bomb 'through an abstract description and a picture of a huge mushroom cloud' (August 6, 1952). An article in *Asahi Graph* on the atomic bomb test at the Bikini Atoll in July 1946 (Operation Crossroads) is a typical illustration of this abstract type of description (July 25, 1946). *Asahi Graph's* reports on post-war Hiroshima and Nagasaki focused mainly on the rapid reconstruction of these cities, although some of the expressions used, such as 'Genshi Sabaku' (that means 'atomic desert' was a Japanese translation of 'atomic blight') (August 15, 1946) suggested the terror of the nuclear weapon¹⁵.

The situation changed dramatically in August 1952, when *Asahi Graph* published photographs showing the damage inflicted by the atomic bombs. This special issue, entitled 'The first publication of the damages by atomic bombs' created a sensation, as can be clearly seen by the rapid sale of about seven hundred thousand copies (that required four additional printings, with a monochrome rather than full color cover) and by some unintended consequences (Niinobe 1959: 15, Kuwahara 2007: 111). Innumerable readers wrote letters to the editors voicing their support, and newspapers started a campaign under such slogans as 'Say no to atomic bombs, keep the peace!' The junior Chamber of Commerce and Industry, the Japan P.E.N. Club, and the National Federation of UNESCO Associations in Japan sent the special issue to various organizations overseas.

It was probably the fact that the majority of the Japanese people saw the photographs showing the very real and physical damage of the bombings simultaneously, that caused the national shock. *Asahi Graph* devoted twenty-two pages, almost the entire issue, to the atomic bombings. There was a large number of all kind of photographs: severe burns, necrosis, keloid scars, a clock stopped at the time of the bombing, a collapsed concrete building and bridge, numberless burned bodies of the dead on a dried-up riverbed, a shadow of a body imprinted on the ground, the destroyed Urakami Tenshudo (a Catholic Church in Nagasaki) and so on¹⁶. The

14 A typical example is the work by the Atomic Bomb Casualty Commission (ABCC) established by the United States in Hiroshima and Nagasaki (Kokuritsu Yobo Eisei Kenkyujo and America Genbaku Shogai Chosa Iinkai 1966, Nihon Gensuibaku Higaisha Dantai Kyogikai, Nihon Hidankyoshi Henshu Iinkai 2009:55-57, Sawada 1999: 211-215). According to the critique, the Commission concentrated on the epidemiological investigation, in which *hibakusha* played the role of 'guinea pigs' and received no treatment. To aggravate the situation further, the Japanese government at the time did seemingly not concern itself with the situation and offered no aid to the victims at all.

15 Just after the bombings, it was said that, no creature should be able to live in Hiroshima and Nagasaki for seventy years. It is said that this rumor originated from a comment about so-called 'atomic blight' by a scientist of the Manhattan Project (Hiroshima Ken 1972: 676). Although on August 8, 1945 issue of *The Washington Post*, Robert Oppenheimer denied the comment and that scientist also withdrew his comment too, the rumor persisted for a long time in Japan.

16 The word 'Keloid' is popular in Japan even today and is widely used to describe a symptom of A-bomb disease. Recently, it is said that scars caused by an atomic bomb are not 'Keloid' but 'hypertrophic'.

pictures had been taken right after the bombings by Eichi Matsumoto and other photographers of *Asahi Shimbun*, who had hidden them until the end of the occupation (Niinobe 1959: 20-31, Okai 2006: 191-198). These pictures, especially those of physical injuries, visualized the destructiveness of the atomic bombs much more clearly than the ‘mushroom cloud’ had done. The editor of *Asahi Graph* cited above remembered that the editorial staff was very hesitant about publishing them. ‘The pictures were bloodcurdling. Hundreds of thousands of people were seriously injured, more dead than alive in a flash. We couldn’t recognize the will to fight in them, or even a glimpse of desire to escape from danger. What we could see in these pictures was only misery’ (Niinobe 1959: 12-13)¹⁷.

In addition to the visual power of the pictures, the wide circulation of the weekly magazine may have amplified the impression they made. The pictures were seen all over the country, turning the atomic bombings of Hiroshima and Nagasaki into an event of national importance. A physicist recalled the day he first saw the issue of *Asahi Graph*: ‘One day in 1952, when I was a sixth-year elementary school pupil, a teacher in my class showed us an illustrated magazine named *Asahi Graph*. The “Special Issue featuring the Atomic Bombings” was the first publication I saw with those grisly photographs of the atomic bomb victims. (.....) At that time, although I had heard about the atomic bombs that fell on Hiroshima and Nagasaki, I had only a vague image of them, merely thinking they were some sort of bombs that are stronger than the other. My image of the atomic bombs changed entirely when I looked at the magazine’ (Yamada 1996: 15). In the same year, a book of photographs in paperback entitled *Hiroshima* and showing the damage of atomic bombings was published by *Iwanami Shoten* and became a bestseller.

The publication of the special issue definitively turned the nuclear bombings of Hiroshima and Nagasaki into national events representing the atrocity of war in the Nuclear Age. However, the revulsion aroused by the publication did not develop into an active movement against nuclear weapons and did not result in anger against the United States. The prevailing self-portrait of the defeated former aggressor blocked such a reaction. But the publication did result in the bombings of Hiroshima and Nagasaki gaining a universal meaning in Japan. Henceforth they represented the Nuclear Age and the atrocity of war in general.

The Daigo Fukuryu Maru (Lucky Dragon) incident on March 1, 1954 caused the next great shock setting off a massive reaction against nuclear weapons. The Lucky Dragon 5, a Japanese deep-sea tuna fishing boat, was contaminated by fallout from the American Castle Bravo test on Bikini Atoll, near the Marshall Islands. The first of *Asahi Graph*’s articles on the incident, which appeared just after the Lucky Dragon returned to

17 A famous dramatist, novelist and director Iizawa Tadasu was the chief editor of *Asahi Graph* when the special issue was published. To commemorate the 70th anniversary, in July 1992, *Asahi Graph* devoted a special section to the connection between the journal and wars that included an interview with Iizawa about the publication of the special issue. Iizawa stated that he had been nourishing the plan to address the atomic bombings for a long time, and that his motive was a ‘grudge’ he held against those who dropped bombs of such horrific effect. At the same time, he intended to avoid sensationalism and instead of overemphasizing the misery of war, calmly report the facts. As he said in the interview, he believed that since the bombings were historical facts, it was a historic mission to make the matter public. The preface to the 1952 special issue indeed stated that ‘it is not a quest for the bizarre that made us put together a special issue of pictures of Hiroshima and Nagasaki – we were compelled to do so by stern reality that cannot be swayed by neither editor’s personal taste nor disposition: by history itself’ (August 6, 1952). These words by Iizawa are a glimpse into the early 1950s, when the image of atomic bombs was linked to the universal perspective more than to the national identity.

Yaizu port (March 31, 1954), was entitled ‘The Third Atomic Bomb Disaster’. More than ten articles were published during the following months. The tragic tone of the articles reached a climax when Aikichi Kuboyama, the ship’s radiotelegraph operator, died in September 1954. The obituary in *Asahi Graph* said that ‘Mr. Aikichi Kuboyama died, even though eighty million people were praying for him. His death as a menacing shadow fell not only on the remaining twenty-two crew members of the Lucky Dragon, but on all people across the world’ (October 6, 1954). After the incident, organizations arguing against nuclear weapons such as women’s associations, reading circles, parent-teacher associations, and labor unions, collected more than thirty million signatures. The first World Conference against A & H Bombs in Hiroshima was held in 1955, and the committee became the Gensuikyo (Japan Council against A & H Bombs) that was originally a nonpartisan organization against nuclear weapons at the national level and later split into several factions in the mid 1960s. The Hidankyo (Japan Confederation of A- and H-Bomb Sufferers Organizations) that is the only national organization by atomic bomb survivors was also established in 1956.

Lucky Dragon incident caused a response of such magnitude for two reasons. Firstly, a great deal of attention was attracted by radiation. After the bombings of Hiroshima and Nagasaki, the Japanese people became familiar with the word ‘genbaku sho’ (radiation sickness) and ‘genbaku burabura byo’ (a feeling of fatigue of the atomic-bomb survivors). Very few people understood the meaning of these words, however, and not many worried about them much. The Lucky Dragon Incident changed this. The image of the nuclear bomb transformed into something bigger than a mere ‘huge blast’ of the explosion itself. It now included radiation, which could bring death to anyone, anywhere in the world, even to those far from the actual explosion. The news about ‘genbaku maguro’ (atomic tuna) which had to be destroyed, and the pollution of vegetables ‘caused a sort of panic in Japanese society’ (Ikeyama 1978: 8). In various ways *Asahi Graph* also visualized the objects of fear, covering difficulties fish store had to go through, measurements of radioactive fallout, the radiation burns, loss of hair, and other symptoms of which the fishermen and the victims of Hiroshima and Nagasaki suffered, the doctors caring for them, a rubber radiation suit, a documentary film on a hydrogen bomb test, investigations on radiation on the Bikini Atoll by the Japanese Fisheries Agency, examination of fish for radioactivity conducted by the Ministry of Welfare, and so on.

The second reason why the Lucky Dragon incident invited such strong emotions among the public was the fact that these fishermen were entirely innocent. As we saw, in the case of Hiroshima and Nagasaki, most Japanese people regarded themselves as the defeated aggressor. But the Lucky Dragon crew became victim of a nuclear weapon without having committed any sin. This completely justified criticism against nuclear weapons and their users. The sense of injustice being done to the Japanese was reinforced by a series of statements by high American officials in newspapers to the effect that the Japanese were allergic for everything nuclear, that the Lucky Dragon fishermen were spies, and that the cause of their illness was not radiation sickness but serum hepatitis. *Asahi Graph* quoted an angry fisherman who had lost his fish because they were presumably polluted with radioactivity: ‘I wish I could dump these fish near America’ and ‘force the Americans to eat them’. In other words, the Lucky Dragon incident gave the Japanese an opportunity to reconfigure their self-portrait as a nation. Instead of ‘the aggressor’ and ‘the defeated’, they now became ‘innocent victims’ in the Nuclear Age,

in which people all over the world were threatened by nuclear bombs and radioactive pollution. The nation that had been opposed to the world now came to represent the world. From this point on, many Japanese started to actively criticize the nuclear weapons and tests. This remaking of Japan's self-portrait is reflected in the increasing number of articles in the *Asahi Graph* in the late 1950s which criticized nuclear weapons and reported on anti-nuclear movements.

This also explains why, after the Lucky Dragon incident, the number of articles about Hiroshima and Nagasaki in *Asahi Graph* also increased. Frequently in the late fifties, articles on bomb tests were accompanied by articles about the present situation of victims of the atomic bombings. For example, the August 4, 1954 issue of *Asahi Graph* reported not only the grave physical condition of the Lucky Dragon crew, but also on the terrible living conditions of the so-called 'genbaku otome' (Hiroshima maidens, young female victims of the atomic bombings), and the August 11, 1954 issue, together with reports about the Lucky Dragon incident, carried an interview with the crew of the Enola Gay under the title 'We dropped an atomic bomb on Hiroshima'¹⁸. The June 1, 1956 issue contained articles about the second World Conference against A & H Bombs at Nagasaki, the present situation of the *hibakusha* (victims of nuclear bombings) at Nagasaki, a *hibakusha* who committed suicide after being rejected by a possible marriage partner, the establishment of the Nihon Hidankyo, as well as photographs of the nuclear test on Bikini Atoll and a report on the nuclear arms race between the United States and the Soviet Union. The August 24, 1958 issue contained articles about six couples of 'genbaku fufu' (married *hibakusha* couples) who suffered from radiation illness, a new remedy for this disease, a research about the relationship between radiation illness and myelocyte, the participation of *hibakusha* in a World Conference, Hiroshima and Nagasaki on the anniversary of the atomic bombings, survey vessels of the Japanese Coast Guard checking on radiation, as well as the radiation exposure of two ships, Satsuma and Takuyo.

Articles on Hiroshima and Nagasaki were therefore placed side by side with those on nuclear tests, with the effect of giving a concrete form to the nuclear attack of August 1945. Thus, in the late 1950s Hiroshima and Nagasaki became a metonymy for the world in the Nuclear Age and Japan as a victimized nation.

The first Godzilla movie, which appeared in 1954, and Ken Domon's book of photographs, *HIROSHIMA*, coming out in 1958, further document the change of atmosphere around nuclear weapons in the late fifties.

Godzilla was made just after the Lucky Dragon incident. It was a much more complex film than its sequels (the Godzilla series has continued up to now) (Tsutsui 2004, Ito 2005, Yoshii 2007, Jacobs 2010). In the film, the monstrous hero Godzilla has been exposed to radiation by a nuclear test. One of the ironies in the film was that the Japanese, who had been victims of nuclear attack, were now attacked by another victim of nuclear weapons. Another irony was that Godzilla could only be killed by advanced weapon, which being powerful than nuclear weapons. The scientist-hero who invented that weapon killed Godzilla with hesitation and subsequently committed suicide, in the hope of prohibiting the military use of this terrible technology. One of the most interesting features of the film was that it described not only the fear of nuclear weapons, but also the atmosphere of 'Mei fa zi' (no way out) which I referred to earlier. For example, in a famous scene of conversation

¹⁸ *Asahi Graph* asked the Associated Press to interview the crew of Enola Gay (*Asahi Shimbun Shuppankyoku* 1969: 275).

between a man and a woman on the Yamanote railway line, the words ‘atomic tuna’, ‘radioactive rain’, and ‘Nagasaki’ were used in connection with Godzilla’s attack. However, the conversation also hints at the waning of nuclear fears, as people became absorbed in their everyday lives. Yoshii (2007) analyzes Godzilla as follows: ‘The A- and the H-bomb were really feared. But, at the same time, their presence became an ordinary experience, an evil that could not be resisted. Godzilla ruthlessly destroys Tokyo and is then ruthlessly killed in order to counteract this resignation to evil in our everyday experiences. Godzilla acts violently at the risk of his life in order to prevent us, at any cost, from stopping to think about nuclear weapons’ (Yoshii 2007: 60).

HIROSHIMA, Domon’s well-known book of photographs, criticized the nuclear tests more directly. In the style of social realism, Domon documented the ‘forgotten’ or ‘hidden’ Hiroshima by focusing on the *hibakusha*, atomic orphans and other victims of the nuclear attacks. The book’s success is an important step in the process whereby Hiroshima/Nagasaki came to be concretely envisaged in the late 1950s, documenting the change in the attitude of majority of Japanese people, who now felt free to criticize nuclear weapons without the former inhibition of ‘the defeated’ and ‘the aggressor’. Suzuki (2005) analyses the shift as follows. ‘The book of photographs made a strong impression on many Japanese showing the scale of the calamity caused by the atomic bombings, which they came to regard as a “crime against humanity”. It was not only a process whereby war survivors began to give words to ineffable experiences, but also, and rather, an opportunity to start banishing the trauma altogether through the construction of a narrative. The book was welcomed at the time not because it presented the problems that Japanese people need to face, but because it gave a powerful explanation of ineffable experiences’ (Suzuki 2005: 46-47). Together, Godzilla, which raised the question about nuclear weapons, and *HIROSHIMA*, which gave an answer, show the transformation of popular images of nuclear weapons in the late 1950s.

4. A Technological Nation in the Scientific Age

Wartime attempts by the Imperial Japanese Navy and Army to develop atomic bombs had failed because of a shortage of uranium, experts and nuclear know-how, as well as passive resistance of scientists (Yoshioka 1999: 39-48). During the occupation, the Americans prohibited Japanese to conduct nuclear research, except for cooperation in American-led studies on the effects of the nuclear attacks (Sasamoto 1995). Even after independence, in 1952, the Japanese Science Council, established in 1949 to represent the Japanese scientific community, could not reach a consensus on the development of nuclear technology. Some scientists hoped to resume nuclear research, while others, worried about possible military uses, opposed it. A strong sense of guilt about their role in the Second World War made Japanese scientists reluctant to take up the development of nuclear power (Fushimi 2000: 217-227).

A national policy promoting development of nuclear technology was suddenly adopted in 1954, accidentally almost simultaneously with the Lucky Dragon incident (Fushimi 2000: 228-230, Miyake 1972; 1984). The so-called Nuclear Budget Bill allocating budget for purpose of building of nuclear reactors, investigation of Uranium resources, and purchasing materials related to nuclear development was all of the sudden introduced in March in the Diet (Nihon Genshiryoku Sangyo Kaigi 1986: 3). The central figure behind the proposal

was Yasuhiro Nakasone, a young member of the Diet, who later became the prime minister. According to Nakasone, the proposal was connected with president Eisenhower's 'Atoms for Peace' speech at the plenary meeting of the United Nations General Assembly in 1953, and the president's 'special message' in 1954, which offered nuclear technology and materials on the basis of a bilateral agreement (Nakasone 2007: 113, Sano 1994: 495-576)¹⁹. Nakasone insisted that the development of nuclear technology was a 'historical inevitability' (Genshiryoku Kaihatsu Junenshi Henshu Iinkai 1965: 50) in line with 'international trend and national desire' (Genshiryoku Kaihatsu Junenshi Henshu Iinkai 1965: 27). The Diet accepted the Nuclear Budget Bill in April 1954, in spite of a 'roaring objection' by scientists and the mass media (Genshiryoku Kaihatsu Junenshi Henshu Iinkai 1965: 26; 32; 50). According to the official history of Nihon Genshiryoku Sangyo Kaigi (Japan Atomic Industrial Forum, Inc) 'almost no one in the political and economic worlds related to the nuclear budget at that time really understood nuclear technology' (Nihon Genshiryoku Sangyo Kaigi 1971: 9; 1986 : 9).

In December 1955, the Atomic Energy Basic Law, and the Act for the Establishment of the Japanese Atomic Energy Commission and the Nuclear Safety Commission were also 'proposed and approved in no time' (Genshiryoku Kaihatsu Junenshi Henshu Iinkai 1965: 48). These laws were also initiated by members of the Diet, including Nakasone. Some of them, who had participated in the first International Conference on the Peaceful Uses of Atomic Energy in Geneva during the same year, had reported 'the fact that the progress of the peaceful use of nuclear energy in the principal nations surpassed our estimate, and we are facing a Nuclear Age'. They issued a joint statement that Japan should establish a nonpartisan long-term national policy for the development of nuclear technology 'in order not to lag behind in the world'. As in the case of the Nuclear Budget Bill, politicians established these nuclear laws by referring to the 'current international situation', labeling them a 'historical inevitability'. 'Although at that time nuclear power was controversial both in the government and among the public, the ongoing development of nuclear technology elsewhere in the world that was revealed at the Geneva Conference deeply impressed the whole nation.' (Genshiryoku Kaihatsu Junenshi Henshu Iinkai 1965: 48-49)²⁰. During the following years, institutions with role to develop of nuclear technology were created in rapid succession: the Atomic Energy Commission of Japan (AEC), the Japan Atomic Energy Research Institute (JAERI), the Science and Technology Agency (STA), the Atomic Fuel Corporation (AFC),

19 In 1953, Nakasone went to the U.S. for an International Summer Seminar held by Henry Kissinger, who was then an associate professor at Harvard University (Solingen 1994: 11-112). During his stay, he also met with Ryokichi Sagane, who was a leading Japanese nuclear physicist. Prior to the war, Sagane had worked in Ernest Lawrence's laboratory at the University of California, and went to the U.S. again after war. After the atomic bombing at Nagasaki, Luis Alvarez and other colleagues at Lawrence's Laboratory sent a letter to Sagane to tell him about the power of atomic bombing and suggest that Japan needs to surrender. Not only for Nakasone, but also for many other important figures in the Japanese economic circles, Sagane was a prominent intermediary who conveyed information about the peaceful usage of nuclear power (Nihon Genshiryoku Sangyo Kaigi 1986: 6-7). That aside, it was during this visit in 1953 that Nakasone first learned about the development of nuclear power and recognized its significance.

20 At the time of deliberations on the Nuclear Budget Bill and the Atomic Energy Basic Laws, the Science Council of Japan, which was established in 1949, expressed its regret about the unexpected politically driven promotion of nuclear development conducted without any consultations with the Science Council, and demanded to include the principles of 'independency, democracy, and publicity' in the development of nuclear technology (Fushimi 2000: 228-238). The three principles were chosen as a result of the discussions, which had been continuing since the end of the war among the scientists – both those who wanted to promote the development of nuclear power and those who wanted to prevent it. After lengthy negotiations between politicians and the scientists, the three principles eventually were included in the Atomic Energy Basic Laws.

and the Japan Atomic Industrial Forum (JAIF) were all established in 1956, the Atomic Power Industry Groups, the Japan Atomic Power Company (JAPC) in 1957, the Atomic Energy Society of Japan (AESJ) in 1959. Chairs for nuclear physics were created at universities (Yoshioka 1999: 74-80).

Asahi Graph reflected these developments. Although articles presenting positive images of the peaceful nuclear technology had appeared since the beginning of the occupation period, article of this kind appeared more frequently from 1954. Shortly after the Nuclear Budget Bill was approved in the Diet, an article entitled ‘New energy source “atomic energy”’ reported about the ‘current state’ of nuclear technology in the United Kingdom. The number of articles on nuclear technology peaked in the late 1950s, when the political and economic institutions for nuclear technology were created. I will discuss three articles, which were published at the beginning of 1957, 1958 and 1959, apparently in order to announce the direction of nuclear development for the respective years.

The 1957 article, ‘Nuclear power in the world’, discussed the situation in eight advanced countries: the Soviet Union, the United States, Britain, France, Belgium, India, Sweden, and Canada. The author argued that, although nuclear power reminds us of the ‘tragedy of Hiroshima’, ‘the atmosphere for the peaceful use of nuclear power has been promoted throughout the world’ after the first International Conference at Geneva. An article published in 1958, ‘The map of the Japanese nuclear power: In search of the task of this year’, focused on Japan’s own development of nuclear technology. The article discussed Tokaimura site in North-Eastern Japan approximately 120 km north of Tokyo, where the JAERI, the JAPC and the Atomic Fuel Corporation (AFC) were located, and gave descriptions of the nuclear research reactor, the power generating reactor, nuclear fuel, and the use of graphite. A 1959 article, which also focused on Tokaimura reported the ‘rapid progress’ of the JAERI and work at the Japan Research Reactor No.1 (JRR-1), the AFC that built the facility for uranium refining, and the JAPC that had imported the Calder Hall type power reactor from Britain, the first building Japanese commercial nuclear power plant. The report concluded saying that ‘a mammoth of a nuclear power center is throwing off its mask at last’²¹.

These articles had five common features. First, they contained no trace of fear of radiation. Not only did they state the great usefulness of radiation for medical treatment, for agricultural improvements and other applications, they also claimed that protection against radiation was possible by using special suits, Geiger counters, and taking preparations against accidents. This optimism was in remarkable contrast with articles which appeared during the same period about the Lucky Dragon incident and nuclear bomb tests, which repeatedly emphasized the dangers of the invisible rays. Pictures of peaceful nuclear facilities looked completely different from those of nuclear tests.

Secondly, in these articles *human beings* and *technology* are shown in harmonious relation with each other. Whereas texts and images depicting nuclear weapons show technology as harmful to human beings, the nuclear reactors, power plants and research centers in these articles are shown as splendid accomplishments

21 In this issue, there was also another article entitled ‘Young talented ladies in academics’. The issue introduced, for example, a famous social anthropologist, Chie Nakane, who was the first female lecturer to work at Tokyo University. The same article also referred to Eiko Takegoshi, a researcher at the Japan Atomic Energy Agency. The truly uncommon article of *Asahi Graph* provides a connection between woman and the development of nuclear power at that time.

created to support us human. A good example of the characteristic triumphant portrayal of nuclear technology is a color photograph of a bluish light of Cherenkov radiation on the last page of the 1959 issue.

Thirdly, in the development of peaceful nuclear technologies Japan and the rest of the world were viewing the matter in the same direction. Whereas in the case of Hiroshima/Nagasaki and nuclear weapons, Japan was the diametric opposite of the world, in the development of peaceful nuclear technology Japan and the rest of the world worked in the same direction. In the competition between nations in the field of nuclear technology, Japan was making an effort to catch up with the advanced countries.

Fourthly, these articles had a special temporality. Articles about nuclear weapons appeared in the present tense. Those on Hiroshima/Nagasaki first used the past tense, and gradually, as we saw, changed to the present tense, as the bombings were related to the recent disaster with the Lucky Dragon. The articles on peaceful nuclear technology, however, were mainly concerned with the present and with the prospects for the future. Pictures showing nuclear technology under construction, showing people developing it, referred not only the present situation, but also to Japan's brilliant near future.

Fifthly, these articles focused on the technological aspect and ignored everything else. *Asahi Graph* paid no attention whatsoever to the dependence of the development of nuclear technology on large-scale complex political, economic, and scientific institutions, nor did it report on the resistance to the introduction of nuclear facilities on the national and local levels. Strong criticisms the Nuclear Budget Bill invited in 1954, for example, were not covered in *Asahi Graph* at all. The introduction of the Calder Hall type power reactor by JAPC in the late 1950s caused anxiety among the scientists and the local residents about the safety of the reactor, the building site and the way the project was to be carried out. But the scientists, engineers, executives, and politicians responsible for the introduction of this reactor tried to counteract these fears by inviting foreign experts to authorize the project, establishing a 'Working Group Reviewing Safety' which was fully comprised of people who were in favor of the reactor, by arbitrary deregulation of building criteria, and publishing statements which stigmatized inhabitants and students who loudly opposed the construction as 'reds' and their protest as 'anachronistic' (Kawai 1961: 102-172). *Asahi Graph*, however, paid no attention at all to this controversy.

These five features of *Asahi Graph*'s reporting raise the question whether the magazine was a vehicle for manipulating public opinion. Certainly, there were examples of such propaganda by other media. For example, in the year following the Lucky Dragon incident, the *Yomiuri Shimbun* and the *Nippon Television Network Corporation* paid a lot of attention to an exhibition on peaceful nuclear technology organized by the United States Information Agency (Yomiuri Shimbun Hyakunenshi Henshu Iinkai 1976: 655-658). Matsutaro Shoriki, former owner of the *Yomiuri Shimbun* and founder of the *Nippon Television Network Corporation*, the first commercial television station in Japan, was also the first chairperson of the AEC and the STA, the main agencies for developing nuclear technology²².

However, we may also explain the lack of reporting on the organizational complex created for built up the purpose of development of nuclear technology by, on the one hand, indifference toward the controversial aspects on nuclear technology, and, on the other hand, the positive impact of nuclear symbols on the population.

22 On the relationship between Nakasone and Shoriki, see Sano (1994).

When, for example, the research center JAERI was looking for a suitable location to establish itself in 1955 and 1956, several towns were aggressively competing for the honor, employing, and other things, with carrying banners saying ‘Welcome, Nuclear Power Research Center’. The contest was to a large extent politically manipulated, because the proposed sites were also constituencies of politicians who were pushing the development of nuclear technology. At the same time, it is also certain that many people had an affirmative attitude on the peaceful usage of nuclear power opposite of the military usage of it (Honda 2005: 78). While most people and politicians had little knowledge on the nuclear power, the fact that nuclear technology was the latest technology in the advanced countries probably was a sufficient reason for promoting and welcoming it. The politically-led start of nuclear development in post-war Japan was supported by a positive public image of science and technology²³.

A boom of popular scientific journals in the late 1940s and an increasing number of articles on science and technology in newspapers in the 1950s illustrate the interest of the public in scientific and technological development, including nuclear technology (Nakayama 1995a: 338-348; Nakayama 1995b: 122-132; Nakayama 1995c: 336-375; 396-406). More than anything else, the popularity of *Tetsuwan Atom*, a manga and anime by Osamu Tezuka (1928-1989), illustrates the positive popular image of nuclear technology in post-war Japan.

Tetsuwan Atom was a manga which was published as a series in a magazine of comics for young boys, *Shonen*, from April 1952 to March 1968. Its hero was a robot in a boyish shape, called Atom, who operated at first by nuclear fission, later by nuclear fusion. The first volume appeared right after the effectuation of the San Francisco Peace Treaty in April 1952. It is the most famous not only among Tezuka’s numerous works, but among Japanese manga in general. An animation based on this manga was broadcast from 1963 to 1966. The audience rating for this television series was almost thirty percent on average, sometimes even exceeding forty percent, which shows its great popularity. Because *Tetsuwan Atom* was the first Japanese television animation, Tezuka may also be considered a founder of the anime.

As is well-known, in Japan manga and anime have reached unparalleled levels of production, popularization, and sales in the late 20th century. They have become cornerstones of popular culture and the national imagination in the post-war Japan, especially after the 1970s. Tezuka, often called the ‘God of manga’, and *Tetsuwan Atom*, his creation, are the most important author and work of the genre. As Otsuka (2003) says, ‘talking about Osamu Tezuka or *Tetsuwan Atom* was equal to talking about how this country accepted the post-war situation’ (Otsuka 2003: 7). Therefore, to the social imagination on nuclear power too, the manga *Tetsuwan Atom* deeply effected. Takeda (2006) asserts that ‘the word “atom” has had a special position in the Japanese language. This was because all people in Japan were fascinated by *Tetsuwan Atom*’ (Takeda 2006: 76).²⁴ In this

23 ‘Atom’ is often used even today as an icon in the nuclear industry and the field of robotics (ex. Tajika 2001). ‘The researchers of robotics who blindly believe in the benefit of science and technology set the Atom up as an idealized hero, and the promoters of nuclear power are trying hard, although in vain, to misuse his “Halo”’ (Takeda 2006:104) .

24 Besides ‘Atom’, there were other heroes in manga and anime at that time using nuclear reactor as a power source. For example, *Giant Robo*, a hero of well-known manga series published from 1967 to 1968 in *Shukan Shonen Sunday* that was later remade as anime also operated on nuclear power. *Doraemon*, one of the most famous robots in Japanese manga, was also driven by a small-sized nuclear reactor, and *Kamen Rider*, a very famous cyborg hero, rides a motorbike also powered by nuclear reactor. Each of these characters first appeared in manga, but later was remade as anime, or TV drama from around 1970s. These characters clearly show the popularity of nuclear power in juvenile fictions.

context, Yomota (1995) describes the transformation of the boy-hero as follows: ‘Because everyone (in Japan) associated Atom’s name with atomic bombs, at first the pathetic hero always was humiliated and had to bear it with self-sacrificing attitude. Gradually however, the tone of the story became dominated by a monotonous ideology of progress propelled by science’ (Yomota 1995: 240-241). According to Yomota, when the manga started to appear in *Shonen*, Atom helped human beings in spite of being discriminated by them. There, early Atom was caught in a dilemma like Pinocchio that he was not a human being in spite of his strong desire to become a human being. Gradually, Atom changed into ‘a faultless champion of justice’, especially when he appeared on television in the 1960s. Tezuka himself has said that the anime version of *Tetsuwan Atom* glorified ‘scientific civilization’ and that it made Atom ‘a champion of justice’ more than was the case in the original story (Tezuka 2009: 240-245). Choosing Atom as the name of the hero implied that the author regarded peaceful nuclear technology as the most representative instance of science and technology, and the cuteness of the hero, including his self-sacrificing attitude, may have contributed to the ‘domestication’ of nuclear power in the country. Atom’s development into ‘a faultless champion of justice’ reflects the successful domestication of nuclear power, and an increasing popular admiration for technological superpower, at least from the late 1950s to the early 1960s. The adoration of technology deeply embedded in the popularity of *Tetsuwan Atom* appears to be closely connected with the politically-led development of nuclear technology²⁵.

Although the subject of nuclear technology was more or less avoided during the post-war years by scientists and the public because it reminded most people of the tragedy of Hiroshima and Nagasaki, from the mid-fifties the image of nuclear technology became a metonym representing the world in the Scientific Age, and Japan as a future technological nation. The television series *Tetsuwan Atom* reflected the feeling that emerged in the late 1950s and quickly became widespread, that peaceful nuclear technology represented, along with explorations in the Antarctic and in space, Japan’s rise as a technological superpower (Yonemura 2004: 102). In this process *Asahi Graph*, which after the war made a fresh start with a stance of repentance for its wartime propaganda, again became a kind of ‘poster for carrying out the holy war’, this time to develop nuclear technology. The journal simply showed what the majority of people in Japan wanted to see²⁶.

25 Pronounced negative attitude among the general public towards construction of nuclear power plants and opposition movements emerged only in the late 1960s.

26 The commercial message concerning nuclear power in *Asahi Graph* was also interesting in terms of understanding the popularity of nuclear power and its images of the time. Of a special interest is a 1957 issue, which published shortly after the completion of the JRR-1 reactor at the Japan Atomic Energy Research Institute, which offered a commentary on the peaceful use of nuclear power on two pages. The title is ‘You do not need to be an auto mechanic to drive a car. Read this and you’ll easily understand the power of the atom’ (November 3, 1957). Without the annotation ‘PR Page’, it would be difficult to understand that it is, in fact, an advertisement. By giving examples of nuclear-powered ships and trains, uses of nuclear research for blood circulation diagnosis, destruction of cancer tissues, diagnosis of tumor, treatment of sashimi to prevent putrefaction, manufacture of sterile jars, improvement of rice, eggs, barleycorn and peanuts, so they do not attract insects, improvements of cultivars, industrial use of atom, development of new materials, etc., the advertisement asserts that the modern age is just the beginning of a new age, in which the dreams of alchemists are no longer just dreams. This advertisement abounds with references to Toshiba, taking at length about ‘Toshiba researchers’, the products ‘made by Toshiba’, or the ‘famous’ cooperation between Toshiba and GE, which at the time was ranking top in the research on nuclear power in America. The article expresses high hopes about the future of Toshiba, ‘Japan’s biggest industrial group working in the field of nuclear power’, that is going to be ‘the champion solely bearing on its shoulders energy production in Japan’.

5. Remembering Atomic Bombings of Our Own

The articles in *Asahi Graph* in the late 1950s reveal at least two different world-images connected with nuclear power: the world in the Nuclear Age and the world in the Scientific Age. These corresponded to two self-portraits in Japan: that of a victimized nation in the Nuclear Age, and that of a future technological nation in the Scientific Age. Theoretically speaking, these two worlds and self-portraits contradicted each other, but in practice they coexisted. The apparent contradiction was overcome by the idea of the neutrality of technology: as long as goodness and badness of technologies were thought to depend on their usage by human beings, the rejection of the military use of nuclear power and the approval of the development of peaceful nuclear technology were compatible. Ito (2005) describes the nuclear images peculiar in Japan as ‘*Atom* and *Godzilla* in our mind’, meaning ‘a mind fearing *Godzilla* and dreaming of *Atom*’ (Ito 2005: 1060-1061).

This dichotomous disposition persisted into the early 1960s, although the number of articles on all nuclear-related topics, except Hiroshima and Nagasaki, generally decreased. The images of nuclear power in *Asahi Graph* and the social conditions in the early 1960s can be understood as follows.

First, the number and length of articles on nuclear weapons, nuclear tests and protests against them decreased noticeably in the early 1960. *Asahi Graph* devoted only brief articles even to the Cuban missile crisis in 1962 and the nuclear test conducted by China in 1964. The World Conference against Atomic and Hydrogen Bombs, that in the late 1950s had attracted a lot of attention from the press, ceased to do so after 1960. The conclusion of the Partial Test Ban Treaty (PTBT) in 1963 may have contributed to this tendency. But probably the public also lost its interest because of the complicated schisms in the movements against nuclear weapons. Since around 1960, the World Conference against Atomic and Hydrogen Bombs was split between two positions corresponded to the Cold War regime, one opposing nuclear weapons of all countries, the other one supporting the possession of nuclear weapons by the Soviet Union and China. In a few years, the social activism arguing against nuclear weapons gradually fragmented into several factions (Ikeyama 1978, Nihon Gensuibaku Higaisha Dantai Kyogikai, Nihon Hidankyoushi Henshu Iinkai 2009). It was one reason why the articles on nuclear weapons, nuclear tests and protests against them in *Asahi Graph* decreased in the early 1960s.

This does not mean, however, that public opposition against nuclear weapons decreased, as becomes clear from articles on nuclear submarines in the early 1960s. In 1964 *Asahi Graph* carried several reports about a nuclear submarine of the U.S. Seventh Fleet, Seadragon, calling at Sasebo (July 12, 1963; November 20, 1964; November 27, 1964). This visit became a critical topic because of the sinking, a year earlier, of another nuclear submarine, USS Thresher (reported by *Asahi Graph* in April 1963). Another and more important reason was that it was connected with the debate about the installation of nuclear weapons on Japanese territory. Finally, Seadragon’s visit was related to the problem of Japanese independence from the United States. Movements against nuclear weapons had taken an important part in the campaign against the Japanese-American Security Treaty from 1959 to 1960, which emphasized the need of Japanese independence of the U.S. (Hidaka 1960: 242, Koan Chosa cho 1960: 28-46). Seadragon’s calling at Sasebo was contested not only because it carried nuclear weapons into Japanese territory, but also because this was seen as an infringement of Japan’s independ-

ence. Sakuta (1972) has written in 1962 that not only ‘an orientation towards peace’, but also a ‘new orientation towards independence and democracy’ were important issues in national movements at the time (Sakuta 1972: 409-410). In other words, in the early 1960s the problem of nuclear weapons gradually became not only a problem of peace in the whole world, but also one that was bound up with Japan’s independence.

Secondly, number and size of articles about peaceful nuclear technology also decreased during the early 1960s. Typically, the report on the first production of nuclear power by Japan’s Power Demonstration Reactor (JPDR) in 1963 was very brief, having the same length as the reports on the cooking by the crown prince and princes in a resort and the opening of the national athletic contest.

Again however, the decreasing number of articles on nuclear technology did not mean that interest in the development of science and technology was diminishing. On the contrary, this interest was expanding, as is apparent in a series of articles in 1964, entitled ‘Science 64’, with the subtitle ‘Science is making progress somewhere today.’ The series described various forms of high technology, for example lasers, betatrons, linear accelerators, laser alignment systems, pulse-height analyzers, swimming pool type reactors, and activation analysis. Though references to nuclear technology often appeared in these articles, nuclear technology was not the leading subject. These articles had all the features that we found in articles about nuclear technology in the late 1950s, for example the orientation towards the future, expressed in words like ‘infinite possibilities’ and ‘a new epoch’. They showed that readers’ interest in high technology actually increased, and interest in nuclear technology was a part of it. Because the public was less interested in nuclear energy as a practical utility than as a symbol of Japan as a technological superpower, the interest in nuclear technology was bound to pass sooner or later to another form of high tech.

In short, the rejection of military nuclear power in the early 1960s became a metonym for the sovereign state, and the development of science and technology beyond nuclear technology became the new metonym of a technological nation. These images were basically versions of the national self-portraits and world-images in the late 1950s.

The image that most clearly distinguished the early 1960s from the late 1950s was the new portrayal of Hiroshima and Nagasaki, which can be summed up as a loss of the contemporaneity of the nuclear bombings. The anniversary issues ‘Fifteen years since then’ (August 2, 1959) and ‘Never again’ (August 14, 1960) heralded the transformation. The former issue included an article featuring various memorial towers in Hiroshima and Nagasaki. The latter issue, reflecting on World War II, opened as follows: ‘Long time has passed since those tragic days. But, no matter what awaits us in the future, we shall not forget them’. The articles described the war period as a ‘dark phase’ in the history of the nation and placed the pictures of nuclear destruction at the end of the phase.

The tendency can be seen more clearly in the feature issue ‘We are not atomic-bombed orphans (Genbaku Koji)’ in 1964, and the article ‘The collapsing Atomic Bomb Dome’ in August 7, 1965.

On the cover of the former issue, we see an old *Asahi Graph* issue of 1950 with a picture of Hiroshima orphans²⁷. The twenty-nine page issue reflected on the atomic bombing of Hiroshima by describing the lives

27 In the *Asahi Graph* issue of 1950, however, the children were called not ‘atomic-bombed orphans’ but ‘war orphans’.

and present situation of Hiroshima's 'atomic-bombed orphans'. Group photos taken in the past and in the present were followed by articles presenting oral histories of individual orphans. One had become a company employee, another a housewife, there was also a tailor, a barber, a monk, an official in the self-defense force, a cartoonist and so on. An article based on a round-table discussion with them reported that 'they have only the present and the future, and did not have sentiments for old photographs (of themselves).' Some of them were quoted as saying: 'we are fed up with the story of atomic orphans and atomic bombs', or: 'I don't have time to reflect on the past.'

The 1965 issue had a cover picture of the Atomic Bomb Dome in Hiroshima, which before the war had been the Hiroshima Prefectural Industrial Promotion Hall. The blast of the atomic bomb had hit the building from virtually straight overhead. The article about the Dome began by stating 'The Dome is about to collapse,' and then presented opinions of various people on what was to be done with it. One interviewee talked about it as a symbol of peace, or as a tourist attraction, or a terrible building that made one feel sick. Another one said that keeping the Dome would be bad for the relationship with the United States. Apparently, the memory of the atomic bombing was beginning to fade in the early 1960s, and the question arose whether to preserve or to dismantle the Atomic Bomb Dome²⁸.

These articles show that in the early 1960s the image of Hiroshima/Nagasaki, which in the late 1950s had been used to serve as a critical metonym of a victimized nation in the Nuclear Age, was relegated towards the past again. Public interest in nuclear power shifted focus, from a desire for peace towards emphasizing Japan's independence. This diminished the relevance of representations of Hiroshima and Nagasaki, which had symbolized the terror of the Nuclear Age. The development of high technology other than nuclear technology also tended to diminish the actuality of Hiroshima and Nagasaki. In short, Hiroshima and Nagasaki, which had represented the victimized Japan and the Nuclear Age, gradually became a metonym of a terrible period in Japan's past. In the nation's self-portrait of the early 1960s the dead of Hiroshima and Nagasaki were remembered as deceased of a special kind in a national history what B. Anderson stated (Anderson 2006: 205-206).

The Tokyo Summer Olympic in 1964 supports this changing perspective on Hiroshima and Nagasaki. Yoshi-nori Sakai, the last torchbearer of the sacred fire relay, who in the opening ceremony ran into the national Olympic stadium, was not selected for his achievements as a track athlete, but because he was born on August 6, 1945 in Hiroshima. An announcer in the live television report described him as 'a nineteen-year-old youth who has an infinite future and possibility.' Kon Ichikawa's famous documentary film Tokyo Olympiad also showed the sacred fire departing from Athens, and finally arriving in Tokyo via Hiroshima, although in reality it entered Japan from Kagoshima, Miyazaki and Hokkaido. In the Hiroshima scene the Atomic Bomb Dome was shown at short-range. Ichikawa declared later that he had had a strong wish to start the film with an image of the Atomic Bomb Dome of Hiroshima (JOC online: interview04.html). This special attention to Hiroshima in the film expresses that the deceased of the two Atomic Bombings had become to represent 'a special kind' in Ja-

28 As a result of a campaign to preserve the Dome originating in publication of a diary of a girl, who had died of leukemia due to the atomic bombing, the Hiroshima city council decided in 1966 to preserve the Dome permanently.

pan's past. They had become a metonym representing World War II and the terrible days after the defeat. In the general enthusiasm for the Olympic Games, Hiroshima and Nagasaki had become a past 'of our own' for the Japanese people.

6. Blind Spots in the Nation's Biography

The question of this paper was how Japan's self-portrait as 'the only A-bombed country' was constructed from the 'absence of context' immediately after the end of World War II. As my analysis of *Asahi Graph* and other sources has shown, the first major self-portrait, emerging immediately after the war, was that of the defeated former aggressor, and of the atomic bombings as an inevitable tragedy that happened locally. The publication of the special issue of *Asahi Graph* in 1952 reinforced this image at the national level. After the Lucky Dragon incident, the self-image rapidly changed into that of Japan as the first victim of the Nuclear Age. In this self-portrait images of Hiroshima and Nagasaki were actualized and given a more general meaning by connecting them with images of the contemporary nuclear tests and nuclear weapons, creating a basis for criticizing these tests and the arms race in general. From the late 1950s, this self-image was gradually replaced by a portrait of Japan as a technological nation in the Scientific Age. Nuclear technology, the major representative of advanced science and technology, was presented as a driving force in the post-war reconstruction of Japan. In the early 1960s, a fifth popular image of nuclear power emerged. This image was deeply related with other transformations. Rejection of nuclear weapons became part of the assertion of Japan's independence. Science and technology, meaning all kinds of 'high tech', including nuclear technology, were symbols of Japan's progress. And both of these accomplishments, national independence and technological development, were regarded as proofs of Japan's successful reconstruction. They signified the process of overcoming the tragedy, the defeat, in World War II. This implied that the atomic bombings at Hiroshima and Nagasaki had become, in the collective memory of the Japanese people, a metonym of a past that had been left behind.

This particular way of remembering Hiroshima and Nagasaki constituted a peculiar hybridization of universal and national meanings of the nuclear attacks, which persists until now. In a speech made at the Hiroshima Peace Memorial Ceremony in 1971, Eisaku Sato, the first Japanese prime minister to formally attend this ceremony, said: 'As the only country in the world that has suffered from atomic bombings, the fundamental national policy of post-war Japan has been directed at the extermination of wars and the establishment of peace in the world, which are indispensable if we are to prevent the human race from perishing'. Thus Japan was regarded as a sacred victim of nuclear power, and, at the same time, a civilized country that had overcome this tragedy by rejecting nuclear weapons and developing science and technology. Thus, it became possible to embrace Hiroshima and Nagasaki collectively by creating and assembling three elements: Hiroshima and Nagasaki as past, nuclear power for military purposes as located outside Japan, and nuclear technology as the present and the future of Japan itself. The temporal and spatial configuration of these images of nuclear power based on the above mentioned idea of the neutrality of technology characterized a nationalization of the meanings of the nuclear power in post-war Japan in a connection with the universal meanings of the nuclear attacks.

Every national biography has its blind spots. Some elements of the past were not fully incorporated into the national self-portrait. One of the most deep-rooted attitudes that produced the blind spots in Japan's self-image was the framework of 'the national.' As a consequence of the nuclear attacks of August 1945, the national framework of thinking was much stronger in Japan than the universal level. In the 'absence of context' following the bombings it is understandable that the experience was explained in national terms, but this resulted in specific problems in dealing with nuclear energy. Here I discuss three characteristic blind spots which were manifested themselves in the early 1960s.

First, relegating Hiroshima and Nagasaki to the past made it difficult to see the victims of the attacks (Harootunian 2010: 161-162, Hiroshima Heiwa Kyoiku Kenkyujo 1981, Ito 1975, Jung 2008, Kochiken Bikini Suibaku Jiken Hisai Chosadan 2004, Orr 2001, Oishi 2003, Takahashi and Takemine 2006, Yoneyama 1999). Certainly the creation of a national memory of the atomic bombings of Hiroshima and Nagasaki from about 1952 helped the Japanese to cope with the problem of these victims. But this nationalized memory also concealed them in a way. This concealment has, at least, two aspects. One was the fact that A-bomb victims found it difficult to express their experiences once the nation had consigned those experiences to a past that had been overcome. The government formally started to help the victims after the A-Bomb Medical Law had been adopted in 1957, but for many years thereafter this law was criticized and it was argued that medical problems were not recognized sufficiently. The other aspect was the 'invisibility' of victims who were not Japanese or did not have a place of residence. Of these, there were two categories. On the one hand, when the two cities were bombed, there were many forced laborers in Hiroshima and Nagasaki, especially Koreans. They were deprived of their citizenship in 1952, and according to the Treaty on Basic Relations between Japan and the Republic of Korea in 1965 also lost their right to claim indemnity. Other victims went abroad, for example to North and South America. In other words, the national biography made non-Japanese and overseas A-bomb victims invisible (Ishimure 2004, Sodei 1995) and thereby marginalized them (Kawaguchi 2006, Nakao and Ikeno 2008). On the other hand, not all people who were exposed to radiation were residents in Japan: there were also the victims of nuclear tests in other countries, for example, in the Marshall Islands. The nationalized collective memory of post-war Japan made it difficult to connect the experiences of Japanese victims with those abroad. The proud story in which 'we overcame the tragedy of the atomic bombings' prevented recognition of individual tragedies in Japan and the suffering of non-Japanese people. This problem persists even today²⁹.

Secondly, nuclear technology as part of Japan's bright present and future identity made it difficult to recognize the risks of nuclear technology, and of scientific and technological development in general (Hasegawa 1996, Media Interface 1989, Takagi 1999). Whereas nuclear weapons raised intense worries about safety, such worries did not arise in connection with the risks of radiation in peaceful installations, accidents with nuclear installations, radioactive waste, and decommissioned nuclear reactors. Thus the Thresher accident in 1963, which might have been an occasion for such a discussion, was not discussed in that way. The Seadragon's call at a Japanese harbor in 1964 occasioned a strong controversy about the presence of nuclear weapons on Japa-

²⁹ See also Oishi (2003: 163). The collective memory on the atomic bombings could additionally conceal other aspects of WWII, especially the atrocities caused by Japanese forces (Dower 2000, Yoneyama 1999).

nese territory, as well as about the safety of such a vessel, but the latter problem was not linked with nuclear power reactors. It was the image of the neutrality of technology, and the deep-rooted relationship between the development of nuclear technology and Japan's self-portrait as a technological nation in the Scientific Age that made it difficult to see the risks of this technology. That is, the idea that the consequences of technologies depend on the ways they are used conceals risks that are inherent in a technology, and unrelated to human intentions. Only gradually did many people become aware of the fact that nuclear submarines had the same reactors as nuclear electric power plants, and, therefore, posed the same risks. Some scientists had already made this point. But the risks of nuclear technology could not become a public issue as long as nuclear power was a metonym for a technological nation. This understanding of technology was clearly illustrated in the extremely popular television version of *Tetsuwan Atom*. The nation's self-image of becoming a technological superpower in the near future blocked the recognition of the risks caused by nuclear technology. This problem too is still with us.

Thirdly, the image of military nuclear power as something outside Japan made it difficult to recognize the importance of military power in international relations. In the Article 9 of the Constitution, which came into effect on May 3, 1947, Japan officially 'renounced war'. To accomplish this aim, Japan also renounced 'armed forces with war potential.' In the late 1960s this pacifism was made to include the rejection of nuclear weapons, as formulated in the Three Non-Nuclear Principles (a code already developed by scientists in the early 1950s and subsequently endorsed in the Atomic Energy Basic Law): 'Japan shall neither possess nor manufacture nuclear weapons, nor shall it permit their introduction on Japanese territory.' This stance created a troublesome inconsistency between Japan's rejection of nuclear weapons on the one hand and its dependence on the American nuclear umbrella for her national security on the other. The problem became clear when Okinawa and the Ogasawara Group (Bonin Islands) were returned to Japanese control from the late 1960s to early 1970s. The question arose whether the Three Non-Nuclear Principles also applied to these areas. If they did not, they would become vacuous. But if they did, Japan would lose the protection of America's nuclear umbrella in the middle of the Cold War. Although there was a discussion about whether Japan should possess nuclear weapons, in the end, Okinawa was returned to Japan without nuclear weapons in 1972. The controversy clearly showed the contradiction of holding onto the Three Non-Nuclear Principles, while also belonging to the Western alliance in the Cold War. The idea that Japan, 'as the only A-bombed country and as an independent country' rejected nuclear weapons precluded confronting the problem of armed forces in international relations – another problem that still exists today (Hirayama 2009).

The major obstacle to solving these problems was the peculiar hybridization of universal and national meanings of the images of nuclear power in post-war Japan. While this hybridity made it possible to embrace Hiroshima and Nagasaki, it also prevented expansion of the scope of the problems of the *hibakusha*, discussion of the risks of nuclear technology, and an open debate about national defense.

References³⁰

- Anderson, Benedict, 2006, *Imagined communities: reflections on the origin and spread of nationalism*, Verso Books.
- Asahi Shimbun Hyakunenshi Henshu Iinkai, 1995a, *Asahi Shimbun Shashi: Taisho, Showa Senzen Hen (History of Asahi Shimbun: Taisho era and pre-WWII Showa era)*, Asahi Shimbunsha.
- Asahi Shimbun Hyakunenshi Henshu Iinkai, 1995b, *Asahi Shimbun Shashi: Showa Sengo Hen (History of Asahi Shimbun: post-WWII Showa era)*, Asahi Shimbunsha.
- Asahi Shimbun Shashi Henshushitsu, 1962, *Asahi Shimbun Gurabia Shoushi (Short history of gravure in Asahi Shimbun)*, Asahi Shimbunsha (not for sale).
- Asahi Shimbun Shuppanyoku, 1969, *Asahi Shimbun Shuppanyoku Shi (History of Asahi Shimbun Press)*, Asahi Shimbun Shuppanyoku (not for sale).
- Chugoku Shimbunsha, 1995, *Nenpyo Hiroshima: Kaku Jidai 50 Nen no Kiroku (Chronological table of Hiroshima: documents of Nuclear Age for fifty years)*, Chugoku Shimbunsha.
- Dower, John, W., 2000, *Embracing defeat: Japan in the wake of World War II*, W.W. Norton & Company.
- Fukuma, Yoshiaki, 2006, *'Hansen' no Media-shi: Sengo Nihon ni okeru Yoron to Yoron no Kikko (History of media on 'anti-war': struggle between Yoron and Yoron in post-war period)*, Sekai Shiso Sha.
- Fushimi, Koji, 2000, *Jidai no Shogen: Genshi Kagakusha no Showashi (Testimony on the age: Showa era for a nuclear scientist)*, Dobun Shoin.
- Genshiryoku Kaihatsu 10 Nenshi Henshu Iinkai, 1965, *Genshiryoku Kaihatsu 10 Nenshi (Ten years history of nuclear development)*, Shadan Hojin Nihon Genshiryoku Sangyo Kaigi (not for sale).
- Gurabia Gijutsu Hatatsushi Kanko Iinkai, 1979, *Gurabia Gijutsu Hatatsushi: 60 Nen no Ayumi to Genjo (History of development of gravure technology: sixty years history and present situation)*, Insatsu Gakai Shuppanbu.
- Hamai, Shinzo, 1967, *Genbaku Shicyo (A-bomb mayer)*, Asahi Shimbunsha.
- Harootunian, Harry, 2010, *Rekishi to Kioku no Koso: 'Sengo Nihon' no Genzai (Struggle between history and memory)*, Misuzu Shobo.
- Hasegawa, Koichi, 1996, *Datsu Genshiryoku Shakai no Sentaku: Shin Enerugii Kakumei no Jidai (Choosing post-nuclear society: age of new energy revolution)*, Shinyosha.
- Hidaka, Rokuro, 1960, *1960 nen 5 gatu 19 nichi (May 19, 1960)*, Iwanami Shoten.
- Hirayama, Motoo, 2009, *Beigun Iken: Kenpo jo sono Sonzai wo Yurusubekarazaru Mono (Unconstitutionality of American forces: the things prohibited to exist in constitutional)*, Hon no Izumi Sha.
- Hiroshima Heiwa Bunka Center ed., 1991, *Sintei Heiwa Jiten (New edition, encyclopedia of peace)*, Keiso Shobo.
- Hiroshima Heiwa Kyoiku Kenkyujo ed., 1981, *Heiwa Kyoiku Jisen Jiten (Encyclopedia practice of peace edu-*

30 In this paper I referred to a lot of Japanese literature works. I translated the title of them in Japanese into English in the References except for several ones. The rendering of mine was not necessarily a verbatim but a somewhat free one. I hope the authors of them to forgive my rudeness, and to point out the mistakes of the translation.

- cation), Rodo Shunpo Sha.
- Hiroshima Prefecture, 1972, *Hiroshima Ken Shi: Genbaku Siryo Hen (History of Hiroshima prefecture: volume on materials related to Atomic Bomb)*, Hiroshima Ken.
- Honda, Hiroshi, 2005, *Datsu Genshiryoku no Undo to Seiji: Nihon no Energii Seisaku no Tenkan ha Kano ka (Social movements and politics for post-nuclear: is it possible to change energy policy in Japan?)*, Hokkaido University Press.
- Horiba, Kiyoko, 1995, *Kinjirareta Genbaku Taiken (Forbidden A-bomb experiences)*, Iwanami Shoten.
- Ikeyama, Juro, 1978, *Genbaku, Genpatsu (Nuclear bomb, nuclear electric power generation)*, Gendai no Riron sha.
- Ishimure, Michiko, 2004, *Ishimure Michiko Zenshu: Shiranui vol.1 (The complete works of Ishimure Michiko, vol.1)*, Fujiwara Shoten.
- Ito, Kenji, 2005, Tetsuwan Atomu to Gojira (Astro Boy and Godzilla), *Science journal KAGAKU*, vol. 75, No. 9, Sep: 1055-1061, Iwanami Shoten.
- Ito, Takeshi, 1975, *Hibaku no Shiso to Undo (Thoughts and movements on Hibaku)*, Sinhyoron.
- Jacobs, Robert ed., 2010, *Filling the hole in the nuclear future: art and popular culture respond to the bomb*, Lexington Books.
- Jung Keunsik ed., 2008, *Kankoku Genbaku Higaisha: Kutsu no Rekishi (Korean A-bomb victims: history of pain)*, Akashi Shoten.
- Kamei, Jun, 1985, *Shukanshi no Yomikata (Reading of weekly magazine)*, Hanashi no Tokushu.
- Kawaguchi, Yuko, 2006, Genbaku Higai to Sengo Nihon no Nashonarizumu: 'Shuenka sareta Hibakusha' wo Toshite (Damage of A-bomb and nationalism in post-war Jpan: from 'marginalized hibakusha'), Dojidai-shi Gakai ed., *Nikkanchu Nationalism no Dojidai Shi (Japan-Korea-China, contemporary history on nationalism)*, Nihon Keizai Hyoron Sha.
- Kawai, Takeshi, 1961, *Fushigina Kuni no Gensiryoku: Nihon no Genjho (Nuclear power in a wonder country: present situation of Japan)*, Kadokawa Shoten.
- Kiriya, Taeko, 2006, Sengo Hiroshima Shi no 'Fukko' to Hibakusha no Shiten: 'Chugoku Shimbun' no Kiji wo Siryo to shite (Reconstruction of Hiroshima in post-WWII and perspective of Hibakusha: through articles in Chugoku Shimbun), *Ibunka*, vol.7: 127-148, Hosei University.
- Koan Chosa Cho, 1960, *Anpo Toso no Gaiyo: Toso no Keika to Bunseki (Outline of campaign against the Japan - U.S. Security Treaty: development and analysis)*.
- Kokuritsu Yobo Eisei Kenkyujo and America Genbaku Shogai Chosa Inkai, 1966, *ABCC 20 Nen no Ayumi (ABCC, twenty years history)*, Kokuritsu Yobo Eisei Kenkyujo.
- Kochiken Bikini Suibaku Jiken Hisai Chosadan, 2004, *Mohitotu no Bikini Jiken: 1000 Seki wo Koeru Hisaisen wo Ou (Another Bikini incident: in search of nuclear bombed ships over one thousand)*, Heiwa Bunka.
- Kuwahara, Suzushi, 2007, Saihakken!! Sengo Gurafu Janarizumu (Rediscovery, Graph Journalism in post-war Japan), *Kikan d/SIGN*, no. 15: 110-116, Ohta Shoten.
- Media Interface ed, Jinzaburo Takagi editrial supervision, 1989, *Genpatsu Daijoho (Collection of information*

- related with nuclear electric power generation*), San-Ichi Shobo.
- Miyake, Yasuo, 1972, *Shi no Hai to Tatakau Kagakusha (A scientist struggle with nuclear fallout)*, Iwanami Shoten.
- Mizuta, Kuwajiro, 1997, *Genbaku Bunken wo Yomu: Genbaku Kankei Sho 2176 Satsu (Reading literatures on A-bombings: 2176 books concerning A-Bombings)*, Chuo Koron Sha.
- Nagano, Shigeiti, Iizawa Kotaro, and Kinoshita Naoyuki eds, 1999, *Nihon no Shashinka, Bekan: Nihon Shashin-shi Gaisetsu (Japanese photographers: an outline of history of Japanese photographs)*, Iwanami Shoten.
- Nakao, Kayoko. C. and Ikeno Satoshi, 2008, Aging Japanese American A-bomb survivors : A case study, Kosaka, Kenji and Masahiro Ogino eds., *A quest for alternative sociology*, 105-121, Trans Pacific Press.
- Nakao, Maika, 2009, The Image of the Atomic Bomb in Japan before Hiroshima, *Historia Scientiarum*, vol. 19-2 (2009): 119-131.
- Nakasone, Yasuhiro, 2007, Genshiryoku no Sinwa Jidai (Mythical Age of nuclear power), *ATOMOS*, Vol. 49, No. 2: 112-116, Nuclear Energy Society of Japan.
- Nakayama, Shigeru, Goto Kunio, Yoshioka Hitoshi eds., 1995a, *Tsushi Nihon no Kagakugijutsu: Senryoki, 1945-1952 (The social history of science & technology in contemporary Japan: occupation period, 1945-1952)*, Gakuyo Shobo.
- Nakayama, Shigeru, Goto Kunio, Yoshioka Hitoshi eds., 1995b, *Tsushi Nihon no Kagakugijutsu: Jiritsuki, 1952-1959 (The social history of science & technology in contemporary Japan: independence period, 1952-1959)*, Gakuyo Shobo.
- Nakayama, Shigeru, Goto Kunio, Yoshioka Hitoshi eds., 1995c, *Tsushi Nihon no Kagakugijutsu: Kodo Keizai Seichoki, 1960-1969 (The social history of science & technology in contemporary Japan: rapid economic growth period, 1960-1969)*, Gakuyo Shobo.
- NHK Shuppan ed, 2003, *NHK to Chugoku Shimbun no Genbaku Hodo: Hiroshima ha do Kiroku Saretaka (Reports of A-bomb by NHK and Chugoku Shimbun: how Hiroshima was recorded?)*, NHK Shuppan.
- Nihon Gensuibaku Higaisha Dantai Kyogikai, Nihon Hidankyoshi Henshu Iinkai, 2009, *Nihon Hidankyo 50 Nenshi, 1956-2006, Futatabi Hibakusya wo Tsukuruna (Fifty years history of Japan Confederation of A- and H-Bomb Sufferers Organizations: no more hibakusha, 1956-2006)*, Akebi Shobo.
- Nihon Genshiryoku Sangyo Kaigi, 1971, *Nihon no Genshiryoku: 15 Nen no Ayumi (Japanese nuclear power: fifty years history)*, Nihon Genshiryoku Sangyo Kaigi.
- Nihon Genshiryoku Sangyo Kaigi, 1986, *Genshiryoku ha Ima: Nihon no Heiwa Riyo 30 Nen (Nuclear power today: Japanese peaceful use of nuclear power for thirty years)*, Marunouchi Shuppan.
- Niinobe, Shuzo, 1959, *Gurafu Janarizumu (Graph Journalism)*, Yuki Shobo.
- Obata, Tetsuo, 1995, *Senryoka no 'Genbakuten': Heiwa wo Oimotometa Seishun ('A-bomb exhibition' in occupation period: young days pursued peace)*, Kamogawa Shuppan.
- Odagiri, Hideo, 1987, *Shimbun Shiryo Genbaku (News materials on A-Bombings)*, Nihon Tosho Center.
- Oishi, Matashichi, 2003, *Bikini Jiken no Shinjitsu: Inochi no Kiro de (Truth of Bikini incident: crossroad in life)*, Misuzu Shobo.

- Okai, Teruo, 2006, *Showa Shashin Gekijo (Pictured Showa period)*, Seiko Shobo.
- Okamura, Yukinori, 2009, 'Genbaku no Zu' Zenkoku Junkaiten no Kiseki (Tracks of nationwide exhibition tour of 'The Hiroshima Panels'), *Genbaku Bungaku Kenkyu*, No. 8: 140-168.
- Orr, James J., 2001, *The victim as hero: ideologies of peace and national identity in postwar Japan*, University of Hawai'i Press.
- Otsuka, Eiji, 2003, *Atom no Meidai: Tezuka Osamu to Sengo Manga no Shudai (Proposition of Atom: Osamu Tezuka and theme of post-war manga)*, Tokuma Shoten.
- Sakuta, Keiichi, 1972, *Kachi no Shakaigaku (Sociology of values)*, Iwanami Shoten.
- Sano, Shinichi, 1994, *Kyokai den (Life of Great Mystery)*, Bungei Shunju.
- Sasamoto, Ikuo, 1995, *Beigun Senryo ka no Genbaku Chosa: Genbaku Kagaikoku ni natta Nihon (Atomic investigation in occupation period: Japan as offending country)*, Shinkansha.
- Sato, Takumi, 2002, 'King' no Jidai: Kokumin Taishu Zashi no Kogyosei (Age of King': publicness of national mass-magazine), Iwanami Shoten.
- Sawada, Shoji, 1999, *Kyodo Kenkyu, Hiroshima/Nagasaki Genbaku Higai no Jiso (Joint research, real facts on damages of A-bombs in Hiroshima and Nagasaki)*, Shin Nihon Shuppansha.
- Serres, Michel, 1995, *Conversations on science, culture, and time*, with Bruno Latour, translated by Roxanne Lapidus, University of Michigan Press.
- Shiina, Masae, 1985, *Genbaku Hanzai: Hibakusya ha Naze Hochi Sareta ka (A-bomb crimes: why hibakusha were left?)*, Otsuki Shoten.
- Shiozawa, Minobu, 1994, *Zasshi 100 Nen no Ayumi: Jidai to tomoni Tanjo shi Seisui suru Nagare wo Yomu, 1874-1990 (Centurial history of magazines: on its birth, ups and downs with the times)*, Green Arrow.
- Sodei, Rinjiro, 1985, *Haikai MacArthur Gensui: Senryo ka no Nihonjin no Tegami (Dear General MacArthur: letters from Japanese in occupation period)*, Otsuki Shoten.
- Sodei, Rinjiro, 1995, *Watashitai ha Teki datanoka: Zaibei Hibakusya no Mokushiroku (Were we enemies?: revelation about hibakusha living in America)*, Iwanami Shoten.
- Solingen, Etel, 1994, *Scientists and the state: domestic structures and the international Context*, University of Michigan Press.
- Suzuki, Masafumi, 2005, *Genbaku=Shashinron: 'Momaku no Senso' wo megutte (A-Bomb=photograph: 'war on retinas')*, Mado-sha.
- Tajika, Nobukazu, 2001, *Mirai no Atom (Future Atom)*, ASCII.
- Takagi, Jinzaburo, 1999, *Shimin no Kagaku wo Mezashite (Toward science for people)*, Asahi Shimbunsha.
- Takahashi, Hiroko and Seiichiro Takemine eds, 2006, *Shimin Kouza: Ima ni Tou, Hibakusya to Sengo Hoshō (Open lecture: important issue of the day, hibakusha and post-war compensation)*, Gaifu Sha.
- Takeda, Toru, 2006, 'Kaku' ron: Tetsuwan Atomu to Genpatsu Jiko no aida ('Nuclear': relationship between Astro Boy and incident of nuclear electric power generation), Chuokoron-Shinsha.
- Terkel, Studs, 1984, *The good war: an oral history of World War Two*, New Press.
- Tezuka, Osamu, 2009, *Boku ha Mangaka (I am a Mangaka)*, Mainichi Wanzu.

- Tsutsui, William, 2004, *Godzilla on my mind: fifty years of the king of monsters*, St. Martin's Press.
- Tucker, Anne Wilkes, Dana Friss-Hansen, Kaneko Ryuichi, and Takebe Joe, 2003, *The history of Japanese photography*, Yale University Press in association with The Museum of Fine Arts.
- Yamada, Katsuya, 1996, *Genshi Bakudan: Sono Riron to Rekishi (Nuclear Bombs: theory and history)*, Kodansha.
- Yomiuri Shimbun Hyakunenshi Henshu Iinkai, 1976, *Yomiuri Shimbun Hyakunenshi (Centurial history of Yomiuri Shimbun)*, Yomiuri Shimbunsha.
- Yomota, Inuhiko, 1995, Hanseiki ni Wataru Jidai no Uneri to Kakuto shita 'Tezuka Manga' no Chihei (The place of Tezuka Manga that struggled with undulation of the times for a half century), Tezuka Production and Kazuhiko Murakami eds., *Tezuka Osamu ga Inakunatta Hi (The day Osamu Tezuka disappeared)*, Shiode Supan, 240-241.
- Yonemura, Miyuki, 2004, *Atomu Ideology (Atom Ideology)*, Baba Nobuhiko ed., *Robot no Bunkashi: Kikai wo meguru Sozoryoku (Cultural history of robots: imagination on machines)*, Shinwasha, 74-105.
- Yoneyama, Lisa, 1999, *Hiroshima traces: time, space, and the dialectics of memory*, University of California Press.
- Yoshii, Hiroaki, 2007, *Gojira, Mosura, Gensuibaku: Tokusatsu Eiga no Shakaigaku (Godzilla, Mothra, and A- and H-Bombs: sociology of special effects films)*, Serica Shobo.
- Yoshioka, Hitoshi, 1999, *Genshiryoku no Shakaishi: Sono Nihonteki Tenkai (Social history of Nuclear Power: Japanese development)*, Asahi Shimbunsha.

Website

- Japanese Olympic Committee, Special Interview, Ichikawa Kon Kantoku ga Kataru, Meisaku 'Tokyo Olympic' (telling about the masterpiece 'Tokyo Olympic' by Kon Ichikawa)
http://www.joc.or.jp/past_games/tokyo1964/interview/interview04.html (January 19, 2011)

Abstract

Nuclear Images and National Self-Portraits:
Japanese Illustrated Magazine *Asahi Graph*, 1945-1965

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This article analyses the transformation of Japanese popular images concerning nuclear power between 1945 and 1965. The main material for the analysis was a Japanese weekly illustrated magazine, *Asahi Graph*, which was not only a representative example of Japanese illustrated magazines, but also the mass medium that in 1952 popularized visual images of the damage caused by two atomic bombs. In addition, this article shall use popular manga, anime and films related to nuclear power as complementary sources. From the analysis, I distinguish five consecutive images concerning nuclear power. (1) Hiroshima/Nagasaki as events of local significance before 1952, (2) Hiroshima/Nagasaki as national disasters after 1952, (3) Japan as a victimized nation of the Nuclear Age after 1954 when the Lucky Dragon Incident happened, (4) Japan as an advanced technological nation in the Scientific Age in the late 1950s, and (5) Hiroshima/Nagasaki as the past already surmounted from the early 1960s. I describe the rise and fall of these images concerning nuclear power, linking them to the changes the nation's self-portrait underwent in the post-war period. In the final paragraphs, I point to several blind spots in Japan's self-image that can be discerned from the history of images of nuclear power.

Keywords: nuclear power, popular images, post-war Japan, illustrated magazine