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Bio-Politics over Radiation From Hiroshima, Chernobyl to Fukushima

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Abstract ‘Bio-politics’, according to Foucault, concerns natural environment and bodies, which are both ‘ungovernable.’ Problems regarding radiation risk are typical problems of governability; radiation can contaminate the whole environment and can eventually damage genes and destroy the self-reproductive capacity of biological bodies. Since radiation can be neither seen nor sensed, problems relating to the so-called ‘radiation exposure safety level’ become political problems concerning the scientific construction of invisible reality and the definition of its meanings for human health. We shed light on the concrete ways bio-politics operates in the nuclear age, running through from Hiroshima, Chernobyl to Fukushima, with an eye to justice as the security of biological bodies.

Summary 1 Introduction. – 2 Historical Re-examination. “Atoms for Peace” and the Astro Boy. – 3 ‘Nuclear Power Village’. – 4 Economic and Geographical Disparities. – 5 Bio-Politics over Radiation Risk. – 6 The Post-Hiroshima Age as an Institution. – 7 Denial of ‘Internal Radiation’ Risk in Hiroshima. – 8 WHO/IAEA Agreement of 1959. – 9 For a New Concept of Human Right in the Nuclear Age.

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1 Introduction

As the nightmare of a truly catastrophic scenario was barely overcome after the Fukushima nuclear disaster, heated debates over radiation issues have erupted in Japan.¹ In this paper we shall first overview some of the central questions and problems coming out of these debates; that is, historical re-examinations, the collusion structure and econo-geographical disparities. Then, we will bring into focus the risk of ‘internal radiation’, which is placing natality itself in peril. In the name of natality, Arendt extolled the human capacity to begin. However, in order to protect the ‘miracle of natality’, we would have to come face to face with the reality of the bio-politics over radiation risk.

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2 Historical Re-examination. “Atoms for Peace” and the Astro Boy

Following the well-known “Atoms for Peace” speech given by President Eisenhower at the UN General Assembly in December 1953, the US government initiated, as a global publicity campaign, a series of exhibitions for a “Peaceful Use of Atomic Energy”. These were held in Europe, South America and Asia. Japan was a critical and natural target for this campaign; all the more so because Japanese people’s ‘nuclear allergy’ had been intensified by the exposure of Japanese tuna fishing boats to the hydrogen bomb tests conducted near the Bikini Atoll in the Southern Pacific in March 1954.

Beginning in Tokyo in November 1955, the “Peaceful Use of Atomic Energy” exhibition was held in 11 major cities and attracted 2,6 million visitors in total. It was held in Hiroshima as well, which apparently had a strategically decisive significance: the exhibition in Hiroshima was held at the Hiroshima Peace Memorial Museum, or the A-Bomb Museum, which had been built only one year earlier. Its sponsors included the American Culture Center, Hiroshima City, Hiroshima University, and The Chugoku Shimbun, a Hiroshima-based newspaper. It has been pointed out that most of the visitors, including *hibakusha* (A-bomb survivors), were rather impressed by the overall image of the ‘rosy future’ to be opened by nuclear power, and that those who cast doubt on it were few. Ichiro Moritaki, a professor of philosophy who led the anti-nuclear movement in post-war Japan, was exceptional in pointing out the need to solve the problem of radioactive fallout (Tashiro 2010). In a word, the publicity campaign was a success.

It should be noted, however, that the popular cartoon hero *Astro Boy* (or *The Mighty Atom*), a nuclear-powered robot character, had been created by Osamu Tezuka as early as in 1951, before the US-initiated publicity campaign. The fact that the initial title Tezuka had in mind for his new cartoon series was *Atom Continent*, signifying a continent where people could flourish thanks to atomic energy, is very symbolic. Thus, even before the US-initiated publicity campaign, the image of the ‘peaceful use of atomic energy’ had been entertained in Japan and further signalled Japan’s fatal ambivalence toward the nuclear question.

3 ‘Nuclear Power Village’

The ‘nuclear power *mura* (village)’ is a Japanese byword referring to the network of collusive relationships among the nuclear power industry, the government bureaucracy, politicians, scientists, and the mainstream media. It is often called the ‘nuclear power pentagon’ as well. This *mura* is a small, closed group in control of the nuclear power establishment.

Indeed, it was none other than the dominant hegemony of this ‘nuclear power village’ that the public witnessed with the pro-industry comments uttered by many of the so-called ‘specialists’ who appeared on TV immediately after the nuclear disaster at Fukushima Daiichi. The established community of scientists has been working closely with and for the sake of the nuclear power industry, receiving enormous research funds from it (cf. *Sapio* 2011).²

Gradually, however, the voices of more critical scientists and scholars have begun to appear in the media, and they are now playing roles as “organic intellectuals”, to use Antonio Gramsci’s definition in the struggle over scientific ‘hegemony’ regarding nuclear power issues.

4 Economic and Geographical Disparities

To make the situation more complicated, such scientific struggles are entangled with conflicts emerging from economic and geographical disparities between local communities and big cities, farmers and consumers, nuclear power companies and subcontract workers on site, etc. First, all of Japan’s nuclear plants are located in local areas away from major cities although, inasmuch as Japan is a small country, nothing in Japan is too far away. A well-known anti-nuclear book, provocatively titled *Tokyo-ni Genpatsu o!* (Build a Nuclear Plant in Tokyo!), criticises the “myth of nuclear power safety” by pointing out the fact that nuclear plants have been built away from big cities (Hirose 1986).

In the case of the Hamaoka plants in Shizuoka Prefecture in central Japan, the economic implications of geographical differences in the local areas themselves have stood out in a most typical way. The Hamaoka plants were stopped, two months after the Fukushima accident, at the request of former Prime Minister Naoto Kan, who felt it too risky to let them continue operating because they are located just above the active fault zone.³ Although pressure to restart these plants has been mounting, the council of Makinohara city has adopted a resolution to request the permanent closing

2 Based on what they obtained under the information-disclosure law, *Sapio* revealed that during the last 5 years the pro-nuclear-power scientists, who often appeared as commentators on TV after the accident, had received about 800 million Yen as research fund from nuclear power companies, nuclear reactor makers and the government.

3 As of November 2011, only 6 out of 54 nuclear plants were in operation; some of them were undergoing a periodic inspection or stopped automatically at the moment of the earthquake, and some others were forced to stop either by a governmental decree or due to accidents. As of August 2014, there were no nuclear plants in operation, but 17 reactors at 10 plants started planning to restart despite strong oppositions, and on 11 August 2015, the Sendai plant, located in southern Japan, resumed operating as the very first plant to do so after the Fukushima disaster.

of the Hamaoka plants. Omaezai city, where the plants are actually located, has been receiving enormous governmental subsidies amounting to 40% of the city's annual revenue. Makinohara city, which is adjacent to Omaezai city and within a 10-kilometre radius of the plants, has received very little as for subsidies, amounting to less than 1% of its revenue. Furthermore, Makinohara city is heavily dependent on *Suzuki* and other major companies whose factories are located there. Suzuki has announced that it will relocate its factories if the Hamaoka plants are restarted.

5 Bio-Politics over Radiation Risk

The concept of 'bio-power' propounded by Michel Foucault in his analysis of institutions such as prisons, hospitals and schools, which came into being with the advent of modernity, was focused on the arrangement, discipline, and management of visible bodies in social space. However, the notion of 'bio-politics' presented by the later Foucault was meant to call into question not individual bodies, but the 'governability' of various problems inseparably linked to the movements of the population, such as natality, mortality, and morbidity, which can be objectified only in terms of statistics. Thus, bio-politics brings into light, as the substance of the 'raison d'État' distinct from legal dominance and disciplinary power, various 'technologies of governance' that aim to ensure security as much as possible while taking into consideration the statistical risks biological bodies face as groups existing in the midst of natural environment. Most noteworthy is the fact that such 'technologies of governance' are understood to be dealing with the fundamentally unpredictable nature, that is, what is 'ungovernable' at bottom, and, therefore, is incapable of complete success.

The notion of 'bio-politics' clearly anticipates the shift of awareness expressed by the motto 'from disaster prevention to disaster reduction', which came to the fore after the Fukushima disaster, as well as the problems related to the declining birth rate and an aging population. Bio-politics concerns natural environment and bodies, which are both 'ungovernable'. Problems regarding radiation risk are typical problems of 'governability'; radiation can contaminate the whole environment consisting of water, air, and, eventually, can damage genes and destroy the self-reproductive capacity of biological bodies.

Radiation can be neither seen nor sensed, and especially problems relating to the so-called 'radiation exposure safety level' are problems concerning scientific construction of invisible reality and definition of its meanings for human health. Ulrich Beck, who brought to the fore the concept of 'risk' in a way closely related to the Foucauldian concept of bio-politics, reflected upon the situation immediately after the Chernobyl accident as follows:

[After the accident at Chernobyl,] [o]ur five senses failed us and there was not sixth! I think it was this experience of cultural blindness that was the kernel of our initial shock. We were suddenly exposed to a danger that was physically imperceptible and which could only be experienced through mediation, through the media, which meant through the contradictory statements of experts. (Beck, Willms 2004, 117)

What you get at the height of a risk conflict is competing theories (many of which previously existed and warned of the danger but were ignored). Then a struggle ensues over defining the risk, for example, what the chain of causality is, what the affected population is, etc. (124).

This is exactly what has been happening in Japan after the disaster in Fukushima; Beck's comment could equally describe the current situation in Japan. With the transition of the gravity centre in values induced by the advent of risk society, it becomes indispensable to reconsider and translate social justice in terms of the security of biological bodies; this means the necessity to comprehend anew the structure of reality while focusing on the experience of the invisible or hard-to-see suffering characteristic of radiation risk. Furthermore, it means that, as Beck points out, civil society cannot help getting involved in political and scientific struggles over the definition of radiation risk.

6 The Post-Hiroshima Age as an Institution

To use the concepts of 'institution' and 'pivot' that play central roles in the philosophy of the later Merleau-Ponty, the historical events of the dropping of the A-bomb on Hiroshima and Nagasaki can be considered to be functioning as a pivot (Merleau-Ponty 1969, 205-6) for the Post-Hiroshima Age as an institution, since the following events and, by extension, the post-war-life world itself makes sense, even if unconsciously, only in relation to these events. However, the whole spectrum of historical sense issuing from these base events is not so easy to recognise. It is not only because the reality of the A-bomb explosion is 'beyond representation' as an event, but also because it caused long-term damage due to residual radiation and internal radiation, on top of the instantaneous massacre and destruction by the horrendous external radiation and searing blasts, widely spoken of as '*Pika-Don*', an onomatopoeia for 'White Flash-Boom' (cf. Kazashi 2011, 2012).

7 Denial of 'Internal Radiation' Risk in Hiroshima

Radioactive contamination can be caused not only through external radiation but also through 'internal radiation'; that is, when humans inhale radioactive particles or ingest contaminated foods, some of those radioactive particles remain inside bodies and can irradiate themselves from inside. Unfortunately, the impact of internal radiation has been grossly underestimated, or in many cases largely ignored, in assessing the damage caused by radioactive contamination.

Thus, the 'pivot' for the Post-Hiroshima Age has a dual structure: while the devastating and visible effects of external radiation accompanying the immediate impact of the nuclear explosions are self-evident and indeed have provided strong impetus towards abolishing nuclear weapons, the insidious low-level internal radiation caused by the intrusion of residual and radioactive materials into human bodies has not been generally recognised until recently. Even in Japan, it was only several years ago that internal radiation came to be taken into consideration legally in the so-called 'A-bomb disease class action lawsuits'.

According to the *Hibakusha* (A-bomb Survivor) Assistance Law, even if a *hibakusha* is suffering from a serious disease such as cancer, in order to receive special medical assistance, he or she must be officially recognised as indeed suffering from an 'A-bomb disease' by the Ministry of Health and Welfare. Until 2003, the number of such people was only about 2,200.⁴ This small number was a direct consequence of the standards used for the recognition, which were based on an estimate of external radiation exposure done immediately after the dropping of the A-bombs. Thus, in 2003 the *hibakusha* who had been denied recognition initiated class action lawsuits against the Japanese Government. The number of plaintiffs in the cases totalled 306 *hibakusha* living in 17 cities. The Japanese Government lost in all of the cases concluded before May 2009, and 197 *hibakusha* won recognition as suffering from A-bomb disease. Furthermore, the government was forced to revise the standards in such a way as to take into consideration factors of residual and internal radiation as well; that is, the possibility for recognition was opened to those who were within a 3-kilometre radius of the epicentre, as well as those who entered the areas within a 2-kilometre radius within 100 hours after the bombings.

Apparently these were great steps forward to alleviate *hibakusha*'s suffering, but the revision of the recognition standards has not done much to bring about the expected consequences. According to recent news reports, the percentage of recognition actually conferred declined after the

⁴ General *hibakusha* are entitled to a basic monthly aid and can be exempted from the self-pay burden for medical expenses. The number of people carrying the designation of *hibakusha* amounts to about 250,000.

revision. It was reported that, at a recent hearing of a lawsuit initiated by seven *hibakusha* after the revision, the government argued that the effects of internal radiation on *hibakusha* could not be considered to be grave enough to be taken into consideration. The angered plaintiffs rebutted by referring to the judgment, given by the Tokyo High Court in 2009, to the effect that an A-bomb disease evaluation that ignored the effects of internal radiation could not be considered legitimate. They posed the question as follows: “The government persists in their old argument regarding internal radiation, but isn’t it because they are anxious to minimize the compensations for the workers and residents in Fukushima?” (Sawamoto 2011)

8 WHO/IAEA Agreement of 1959

Regarding the Chernobyl accident as well, the damage caused by low-level and internal radiation was grossly underestimated by WHO and IAEA. Their joint report of 2005 attributed only 43 deaths and 4,000 fatal cancers directly to the Chernobyl disaster (WHO 2005). Obviously such underestimation derives from the need to keep the radiation risk ‘invisible’ in order to promote the ‘peaceful’ use of nuclear power. As pointed out by Helen Caldicott and others, for a time WHO used to voice straightforward warnings about the harmful effects of radiation. This ended in 1959, when WHO entered into an agreement with IAEA that virtually deprived WHO of its right to engage autonomously in the research on nuclear-related issues and report about them without the IAEA’s consent. IAEA was established in 1957 as a means to implement Eisenhower’s “Atoms for Peace” initiative.⁵

In the light of these problems, a number of NGOs in Europe came to form a coalition named *Independent WHO*, which, in May 2011, held a meeting with WHO’s Secretary-General, Margaret Chan. According to the coalition’s press release, Secretary-General Chan did not concede that WHO had been shackled by the 1959 agreement, but did acknowledge that “she did not believe that the total direct death toll from the Chernobyl accident was only 50, as the disputed WHO/IAEA report claimed” (*The Mainichi* 2011). It was also revealed that WHO’s section in charge of radiation effects on human health had been abolished two years before, when a monetary scandal involving its chief came to light and that, for financial reasons, there was no plan to restore the section. Even before the abolition of the section, however, there were only several radiation-related specialists at WHO. These facts themselves are simply appalling. But it is said

5 On its homepage the IAEA proclaims itself as “the world’s center of cooperation in the nuclear field. It was set up in 1957 as the world’s ‘Atoms for Peace’ organization within the United Nations family” and posts Eisenhower’s “Atoms for Peace” speech, too. URL <https://www.iaea.org/about/history/atoms-for-peace-speech> (2016-02-07).

that about 30% of 2,300 people working at IAEA are scientists of various fields. Considering the number of nuclear specialists working for IAEA, they are all the more emblematic of the nature of the nuclear system in which we are living; we are made to live in a world that is institutionally very poorly equipped regarding radiation protection, even though it has been intent on promoting nuclear power generation.

9 For a New Concept of Human Right in the Nuclear Age

In the name of natality, Hannah Arendt extolled human capacity to begin, that is, the capacity to introduce what is totally unexpected into the world; new freedom comes into being together with each new life that is born into this world. However, life in the nuclear age is exposed to the invisible threat of radiation risk at the very source of natality; fetuses and small children are more sensitive and vulnerable to radiation than adults because their young cells divide at much higher rates. In order to protect the miracle of natality that Arendt recognised as the inexhaustible source of freedom, we have to come face to face with the reality of ‘the bio-politics over radiation risk’.

After 11 March 2011, many of those involved in the anti-nuclear movements felt obliged to re-examine their stance on nuclear weapons problems and came to realise the need to call into question the whole process of the ‘nuclear chain’ from uranium mining to nuclear wastes. As a consequence of such self-critical reflection from the ground up, the World Nuclear Victims Forum was held in Hiroshima in November 2015 on the 70th anniversary of the A-bombing of Hiroshima. This was an international conference organised wholly by an association of NGOs and citizens, who managed to collect enough donation to invite about 50 people, including nuclear victims, scientists, legal specialists and campaigners from around the world and Japan to share information about the damages accompanying the whole ‘nuclear chain’ as well as the up-to-date scientific knowledge about the effects of radiation. Participants amounted to 1,000 people in total, and at the close of the 3-day conference, the Forum adopted the Hiroshima Declaration containing the Draft Elements for a Charter of World Nuclear Victims’ Rights,⁶ which advocated a new concept, i.e. the human right to live without unnecessary exposure to nuclear radiation. However, 26 April 2016 and 11 March 2017 already marked the 30th anniversary of Chernobyl and the 6th anniversary of the Fukushima disaster respectively; when will the world come to look upon such an advocacy as a belated but natural development of the concept of human right?

6 Available at URL <http://www.fwrs.info/> (2016-02-07).

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