Making it Intelligible: The Art and Violence in the Nuclear Age in Postwar Japan

Optical perception does not coincide with what you see – this apparently obvious fact is a source of dilemma and curiosity that has been engendering humanity's age-old activities, from philosophy to science. Between optical sensation and image formation, eyes as a biological material and looking as social phenomenon, between zoe and bios, human beings incessantly endeavor to make things intelligible and tangible, around which the scientific method of measuring and the symbolic method of visual and literary narrating have revolved. This space of observation and narration, since the modern era that gave birth to various technologies concerning life, has particularly drawn attention as an issue of art and science, society and technology, or, I would rather rephrase it as the relation between curiosity and violence, between observation and destruction. As we crack open rocks in order to analyse the minerals, dissect bodies to study organs, destruction and alteration are the essential parts of observation of the invisible world. We cannot observe and describe invisible things without altering them. We might describe this alteration as violence, or maybe representation.

Radioactivity is one of the most intangible phenomena on earth, and the issue of nuclear energy takes us straight to the heart of the long-lasting question; what does it mean to make the world intelligible beyond our perceptual and cognitive constraint? How do we manage to imagine and give credibility to the world that transcends our own intelligibility? There is a sheer disconnection between the tangible world oriented by our sensory organs and the phenomenon of radioactivity. We cannot see, hear, smell and touch it, what we detect is merely an outcome or effect of radiation. Radioactivity goes far beyond our perception; the human body is not able to sense any hint of its existence at first hand, yet certainly it does great harm to us. This fact leaves us with a sense of mystery about this phenomenon that causes violence simultaneously symbolic and physical. As The Large Hadron Collider indicates, the world's largest and most powerful particle collider, in order to recognise and observe the nuclear activity, we need to collide particles and capture the moment of explosion. Nuclear energy is one of the most radical examples of the process of observation that incorporates destruction, and one of the most violent and unintelligible phenomenon that requires not only a

scientific method of measuring, but also a symbolic and metaphorical representation and narration. Then, what is the significance of eyes and looking in the discussion of intangible radioactivity as an artistic and philosophical issue if any?

In this paper, I will examine several artistic approaches to nuclear power, exploring the relation between art and science, both of which work out a medium of giving intelligibility to the unknown. I will discuss several artists from postwar Japanese context, whose works refer to the atomic bomb catastrophe, Fukushima or post-3.11 Japanese society, and wrap it up with an American artist James Acord who works with radioactive materials for his sculptural piece. Before delving into these artworks, I will briefly recapitulate about the cultural representation of nuclear power in postwar world.

Around technology, there is always an apocalyptic mindset and nuclear technology is one of the most powerful sources for the collective conception of the end of the world. The apocalyptic landscape that we used to depict in the imaginative world of myth and religion from the ancient times has been partly actualised by the atomic bomb. Finally we are living the time that remains until the entire planet will be blown away in a flash. There is a red button somewhere hidden in this world, and our fate depends on an uncontrolable and inhuman ruthless hand, monstrously crystalised in nuclear technology and driven by a self-destructive urge to press it. After a few decades of sharing this fearful image of the absolute moment of annihilation of the planet earth, fortunately, we are still here, alive yet afraid. The reality seems much more complicated than the single red button to be pressed. Since Hiroshima and Nagasaki oozed out the first symbolic figure of the nuclear age; the mushroom cloud, the cultural and artistic representation of nuclear power has elaborated significantly, through the Cold War, Chernobyl and most recently Fukushima. As cultural historian Robert Jacobs discusses, a historian at the Hiroshima Peace Institute working on the history of nuclear narratives in Japanese and American culture, the cultural representation of the nuclear power has evolved together with the conception of the planet earth as a united entity. (Jacobs, 2010, ed). When the atomic bomb was dropped on Hiroshima on 6th August 1945, what appeared in the New York Times on the following weekend was not only the victorious relief from the horrific warfare, but the satiric cartoons that described the fear of entering the atomic age. In these images, we were identified with one earth that is

destined to struggle for the control of the tyranny of nuclear power. Prior to the age of satellite and space travel when the actual graphic image of our blue earth became available in 1960s mass media, the horror of the atomic bomb initiated the conception of earth as a unified planet. In face of the destructive potentiality of nuclear weapons, the scale of our perception of reality on earth has changed. Now that we are not individuals isolated from the rest of humanity, creature and environment; the earth is one ecosystem in which one action in a particular area could affect the entire world. As Jacobs precisely phrases it, 'the threat of nuclear war created a narrative of global death, of collective death, of a death that would encircle the globe, ignorant of the political borders we humans had imagined as so real, had in fact, fought and died for (Jacobs, 2010, ed: 203)'.

As is usual with any catastrophe, there appeared something like 'a nuclear sublime' as we have experienced with 'a holocaust sublime' around the representation of Auschwitz. The fear and fascination towards the total power that goes beyond the humanity has fueled the representational cliché in postwar mass culture. One of the archetypes of such disastrous images is the diorama with wax figures that reproduced the aftermath of the atomic explosion at Hiroshima Peace Memorial Museum. In the debris, people hunched and covered in blood are wandering around with their hair scorched and their skin hideously burned and hanging from their limbs like rags. This imagery became one of the prototypes of the representation of catastrophe in postwar world. Predominantly in science fictions and fantasies, we see everywhere those images of ruined devastated landscapes, hunched zombie like people wandering around, and various metaphorical characterisations of something inhuman attacking earth most typically seen in the science fiction symbolism of aliens and monsters; Godzilla for instance in Japanese context. Here, we can detect our age-old conception of time heading to the apocalyptic future; one day, at one moment, an absolute power will come to annihilate the present world. It is this conception of total power and its decisive moment of destruction that Hiroshima and Nagasaki has reinforced. Since then, the cultural narrative of nuclear power has been fostered around our familiar dichotomy; dystopian or utopian, hell or paradise, warning or praising. If we mishandle this evil power, we will all die. If we manipulate it well conquering the evil with the good, we

will live in an affluent world with new modes of life with mutated vegetations and creatures hand in hand.

This 'nuclear sublime' was further nurtured through the Cold War era, however, when Chernobyl happened in 1986, there was a major shift in the conception of nuclear power from the explicit, visible destruction of an atomic weapon to the implicit, invisible disaster of a nuclear accident. Chernobyl fostered the new conceptual and visual model for the nuclear power – invisibility and mobility. Radioactivity flows invisibly and silently with wind and in water, sneaking into what we breathe, drink and eat, circulating in the ecosystem which can potentially bring it to everywhere in the world. The radioactive leak in one region could affect the other side of the earth over a course of time. In this case, except people who directly worked at the plant, the victims were mostly those who were indirectly exposed to the radioactive contamination whose symptoms were later on brought out as a cancer or birth defect. Chernobyl did not generate an immediate fierce image of mass death like Hiroshima and Nagasaki. Instead it showed another conception of nuclear death in which our bodies are slowly deteriorating, contaminated by the radioactive pollutant lurking in our everyday life. As Spencer Weart discusses, a historian of science and an author of *Nuclear Fear: A* History of Images published in 1988 and its extended edition recapitulated Fukushima in 2012, now contamination, rather than explosion, has a particularly powerful impact in imaging the nuclear power (Weart, 2012). Weart connects radioactive contamination to issues of pollution in the wider sense, including social stigmatisation as well as psychological problems rooted in infantile fantasies and anxieties. We can find the complex of post-Cold War associations of contamination with fear and disgust from nuclear poisons, to 'monstrous cultists, renegade scientists, magical weapons, evil tyrants, suicidal terrorists, and all the rest (Jacobs, 2010, ed: 261)'.

Followed by the accident at Fukushima in 2011, the hellish landscape of the immediate aftermath of the atomic bomb is updated with the idea of contamination without the visible decisive moment of mass death – the slow and invisible process of damage by radioactivity. The conception of the nuclear technology as total, absolute annihilation is now dispersed into the associations with anonymous antisocial entities, and into our everyday life; from centralised explosion to contamination without borders; from total destruction to everyday deterioration. This inhuman power of atomic energy

and radioactivity are invisible, diffused and ubiquitous, exercised in our everyday life, moving around everywhere. Here I would see a blatant yet ominous affinity in conceiving the nature of power between biopolitics and radioactivity. As in Michel Foucault's thought on biopolitics, a modern power functions less as a system of punishment or prohibition than as techniques of normalisation and control that go well beyond the state as such (Foucault, 1976, trans. en. 1978). Such power is exercised in everyday life through the disciplining and normalising of bodies, perceptions and discourses, the aim of which is to create manageable, productive subjects and fashion them as objects of use. Here power is diffused, its substance is masked, and its violent intervention in human life becomes too transparent to identify. As power becomes omnipresent and invisible, the place of violence also becomes ubiquitous, and more and more difficult to detect, since it takes shape as the many and varied shapes of the norm.

The omnipotence of violence in the shape of the norm is one of the characteristics of contemporary life. The transformation of sovereign power into biopower, the shift of the place of power and violence from the extreme states of warfare and death to the normality of everyday life, these are the issues at stake in the contemporary Western intellectual, cultural and artistic context since the Second World War. To put it another way, and in the particular context of the increasing need to cite Hiroshima, Chernobyl or Fukushima, in assessing contemporary politics, the invisible nature of nuclear power coincides with the biopolitical nature of modern power, both of which maintains its power by narrating the myth of everyday life in neoliberal capitalist societies. In a sense, it is obvious that Japan and United States are two of the most technologically developed and biopolitically manipulated countries in the world, precisely because we are at the top of the list in consuming the nuclear energy. This fact informs artistic practices in post-Fukushima Japan, and in this context, I delve into discussion on the works of art.

The collaborative husband and wife artists Iri and Toshi Maruki's series of drawings *The Hiroshima Panels* (1950-1982) is one of the most epic and earliest works that depict the aftermath of the atomic bomb in Hiroshima. The series is consisted of fifteen folding panels drawn in ink on Japanese paper. The first three panels titled 'Ghost', 'Fire' and 'Water' were completed in 1950, which continued to 1982. Iri Maruki, who was from Hiroshima but living in Tokyo back then, went to the devastated

city with Toshi to see his family a few days after the nuclear blast. The series came out of their experience of witnessing the disaster and helping the victims in bombed Hiroshima. These views were what they actually saw; thousands of wandering people with their peeled skin hanging from their arms, people writhing in fire, piles and piles of burnt faceless bodies. Images depict swollen corpses floating in the river, a dead mother holding her baby, decaying corpses being consumed by crows or maggots. Man, women, old, young, babies, families, lovers, Japanese, non-Japanese, all were engulfed, deteriorating in the chaotic of mass violence. While the human figures are rather caricatured, Maruki's personal intensity in representing a grotesque physical reality of life in the nuclear bombing disaster, which is directly drawn from their experience, vividly expresses the inhuman nature of nuclear power, literally illustrating their powerful condemnation of violence in general.

Taro Okamoto's wall painting titled Myth of Tomorrow (1968-69) is a work that marks the transit period in postwar Japan from the defeated nation to the technologically advanced country. Okamoto (1911-1996) is one of the most well-known avant-garde artists in Japan especially known for his totem-like sculptor, Tower of the Sun, made for a world's exposition held in Osaka in 1970. This tower, underpinned by his interest to shamanism and Jyomon culture, one of the prehistoric cultures in Japan, became a symbol of the advent of the high economic growth in postwar Japan. In this gigantic work, Myth of Tomorrow, he represented the moment of atomic explosion and the aftermath of nuclear disaster in a highly symbolic, expressionist and cartoonish manner. In the middle is the mushroom cloud, the centre of which is a skeleton figure with a halo of fire, and underneath is a group of matchstick-like figures on fire. On the farther right and left are a group of people and creatures running away from ground zero, and in the lower right underneath the mushroom cloud is the Lucky Dragon Five, a Japanese tuna fishing boat which was exposed to and contaminated by nuclear fallout from the United States' nuclear test on Bikini Atoll in 1954. Here the atomic disaster is highly stylised and turned into a visual code, emphasising the symbolic significance of the disaster at the advent of the country in 1970's, now technologically advanced; hand in hand with the nuclear energy.

In his work *Time-Bokan* (2001), Takashi Murakami (1962-), another artist who represents the contemporary Japanese art, also engages with the cultural representation

of nuclear-dominated postwar Japanese society. In 2005, Murakami curated an exhibition held in New York titled Little Boy: The Arts of Japan's Exploding Subculture, which demonstrated how the national experience of nuclear disaster has affected a graphic subculture in postwar Japan. In Little Boy, the codename for the atomic bomb dropped on Hiroshima, Murakami explored the 'otaku' subculture, or pop culture, featuring objects, toys, commodities, drawings and cells by manga artists as well as paintings, sculpture, and installations by contemporary Japanese artists (Murakami, ed, 2005). Otaku culture emerged in 1980's concerns a tendency of autistic retreat into a fantasy world, including science fiction, video games, comic books and animation that often have apocalyptic references to atomic explosion that annihilates the present world with a promise of future salvation. Murakami claims that postwar Japanese culture revolves around the 'post nuclear sublime', traumatised by the devastation of the atomic bomb, the defeat in the warfare and the subsequent American political intervention to Japan. The rise of the economic growth and a consumer culture in 1970's accelerated the infantalisation of the Japanese culture and mindset, which brought out the 'apolitical state', the ground for otaku culture since 1980's onwards.

On another note, there are artists whose works challenge the traumatised psyche with the visual reenactment of the memory of the atomic explosion in Hiroshima. Cai Guo-Qiang (1954-), a New York based Chinese artist whose work is famous for the use of gunpowder in public space and the natural environment, did an explosion event, Black Fireworks (2008), next to the ground-zero. The firework was intended to reproduce the mushroom cloud shaped in the sky, commemorating the moment of disaster. A similar attempt was made by a contemporary artist collective Chim†Pom (2005-), Making the Sky of Hiroshima PIK A! (2008). Hiring an aircraft for the sky drawing, they drew a word pika, a jargon for atomic bomb used by the victims which refers to the onomatopoeic expression of the lighting moment of explosion. While Cai's work was mostly received as an artistic interpretation of the atomic disaster, Chim†Pom's work confronted a severe criticism by the public including organisations of atomic bomb survivors who denounced their attempt as an imprudent childish play without compassion to those who actually suffered. In response to the criticism, Chim†Pom initiated a dialogue with the group of survivors and turned it into an art project that amounted to a publication Naze Hiroshima No Sora Wo PIKA! To Saseteha

Ikenainoka (Why Can't We Make the Sky of Hiroshima "*PIKA*!"), exploring the controversial relation between art and society (Chim↑Pom and Kenichi, Abe, 2000, ed.).

Moving onto the artworks made in response to Fukushima, particularly working on intruder to daily life, Tadasu Takamine (1968-), one of Japan's preeminent contemporary artists and theater directors. He has been making a body of works that expose the systems of oppression and control embedded within contemporary society through performative intervention with a sense of humor. In his projects Japan Syndrome (2011-), Takamine directed a series of performance and theatrical installation in response to Fukushima based on his research and dialogues with the local residents across Japan. The interviews he conducted ranged from the victims displaced by the Fukushima nuclear disaster, a student participant of anti-nuclear protests in Tokyo, to housewives shopping for foods in a local market in Yamaguchi, a city in west Japan far away from the disaster area. Based on these encounters, Takamine made a theatrical work in which the performers reenacted the part of the dialogue and phrases that they heard in the interviews. The work aimed to give substantial form to the obscure doubts and misgivings intertwined with fear and anxiety lurking in everyday life after Fukushima, and all over Japan. Takamine sheds a light on how the discourse has been created around Fukushima, through words, slogans and images, the way in which the Japanese have been unknowingly manipulated, from the postwar era to the present.

An artist collective Chim↑Pom whom I mentioned above, is also keen on working on Fukushima in their Dadaistic and Situationist practices. They are notorious for their controversial works and performances that overturn canons, morals and taboos prevailing in everyday life, thereby challenging Japanese society with a fierce and dark sense of humour and criticality. They play with the 'apolitical state' and infantalised nature of Japanese culture and society that Murakami examined in *Little Boy*, mocking and praising it in a self-referential manner, which results in illuminating contradictions in the social systems and politics that invented the apolitical nation. In the project *Real Time* (2011), they went to the no-go zone in Fukushima one month after the disaster, and made a series of guerilla performances as well as volunteering for the victims. Two Chim↑Pom members in radiation suits visited a tourist overlook built on TEPCO premise only a few hundred yards from the Fukushima Daiichi nuclear plant. There they took out a white banner, first spray-painted on it with a red circle turning it into

Japanese flag, then adding three wings that transformed it into the universal symbol for radiation. There they picked up radioactive flowers and plants near the reactors, and made an ikebana arrangement. They also made a guerilla art on Okamoto's *Myth of Tomorrow* now installed on a wall at Shibuya station in Tokyo, adding a panel of the smoking remains of the exploded reactors in Fukushima, updating the original 'myth'.

In these artists' attempts of response to Fukushima, the target is the seamlessness of everyday life, the myth of a life of comfort, i.e. the normative life that has been cultivated in postwar Japan, heavily reliant on nuclear energy. They demonstrate how this myth has been neatly constructed psychologically, socially and politically and thereby turning whole the nuclear business and politics into something invisible. Here, to make it visible is to cut off the affinity between the intangible nuclear energy and the invisible power of biopolitics that draws upon the creation of normative life through disciplinary and technical interventions to our body and psyche. All in all, these artistic attempts I have discussed deal with the social and cultural outcome of the nuclear related disaster, the aim of which is to promote our awareness towards the danger of this technology. Here art plays on the negative imagery and iconography of the nuclear age, caring about a violent nature of our own that makes possible the destructive use of the technology.

Last but not least, at the opposite end of the scale from above mentioned artists, I would like to draw attention to an American artist James Acord (1944-2011), who immediately worked on the question of art and science in the nuclear age. Acord was the only private individual in the world licensed to own and handle radioactive materials, and directly worked with the uranium as an artistic material for his sculpture. Beginning with granite as his material in the 1970's, a natural source of radiation containing a higher percentage of uranium than other stones, Acord moved onto making an effort to obtain spent nuclear fuel for the uranium. He moved to Richland near the remote Hanford nuclear reservation to learn about radioactive materials, communicating with the engineering circles. Although he spent an incredible amount of energy for fighting against bureaucracy there and eventually acquired a license to handle radioactive material, he couldn't obtain the uranium itself. Then he turned to Fiesta tableware, the luminous, uranium glazed dishes introduced in the 1930's, succeeding in separating uranium from the glaze. For his sculpture, *Monstrance for a Grey Horse* (1986), Acord

spent more than ten years carving the piece out of a one-ton block of Vermont granite, so that it would last at least 30,000 years – the same as the half-life of radioactive materials such as plutonium. Acord originally wanted to put a canister of live nuclear material in the sculpture that he transmuted, but was unable to make it. Instead, the sculpture has an opening at the bottom of the column where a stainless steel canister containing crushed Fiestaware – symbolic of real nuclear material – can be placed.

For Acord, 'art and science were the two ways in which we tried to find out who we were and what we were doing and what this world was about (Sinco, 2002: 52)'. In our present time, we have quantum theory on one hand, avant-garde art on the other, but they are essentially the same. He thinks that 'the art of sculpture deals with the technology of our society at any given time – from Ice Age, Stone Age times all the way to the present (Sinco, 2002: 54)'. Thus in our age, the art of sculpture is able to address nuclear technology. In his definition, the nature of nuclear power, transmutation through neutron capture itself becomes a sculpture. However the quantity of production would be so minuscule that the actual material itself, hundredths of a gram particle, becomes a metaphor and a symbol, which should be given a tangible container, which he calls reliquary. This gives us an intriguing example of the material coinciding with the medium of representation. The process of locating the substance becomes a matter of representation, of making it intelligible.

Obviously he was exposed to criticism from both science and art. For scientists, his use of the uranium for the sake of art is something frivolous, and gives undeserved credibility to nuclear technology. For artists, Acord, as an artist, scarcely left actual works of art since most of his efforts were dedicated to the fight against the bureaucracy, elitism and secrecy prevailed among science intertwined with politics. He even did not turn this whole process of institutional negotiation into the activist project and present it as a politically concerned artistic practice, as it is typical of the recent tendency in contemporary art that willingly employs an activist form. On the other hand, his almost naïve but persistent fascination towards nuclear power, especially towards the process of transmutation, embodies an age-old dream of mankind from the ancient Greeks to the medieval alchemists. His artistic ambition to employ radioactive materials for his sculpture seems to indicate an interesting place where the world of matter is interwoven with imagination. It is a place of the human's aseptic curiosity, disinterested in its

subsequent politics or the economics or the complexities of its effect on the society. In this aseptic curiosity, the intuition for capturing the unintelligible world, art and science share the task of offering the way in which we imagine, shape and look at the world, through the contradictory nature of eyes and looks in its dual roles of ruthless receptor and caring subject. This contradiction continues to render us threatened and fascinated by the most terrifying technology in the human history, offering a touchstone for countless representations and narrations, driven by our attempts to yield something intelligible in this play between life and death.

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