Contemplating COVID in Japan

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Abstract: The Tohoku disasters of March 11, 2011 were unique in human history: a 9.0 earthquake (the largest ever recorded in Japan), a tsunami that peaked at 40 meters, devastating the coastline of northeastern Japan, and 3 nuclear reactors in meltdown. The unlikely convergence of these 3 events seemed to represent the ultimate Black Swan, a disaster whose scope and complexity was beyond imagining. Nearly a decade after the 3.11 Tohoku disasters, the COVID-19 pandemic emerged to stand alongside Fukushima as the most significant crises of the modern era. This paper compares the Fukushima nuclear crisis to the viral pandemic, discussing how political dysfunction has contributed to the ambiguity associated with perceived risk in these culture transforming events.

Throughout its history, Japan, being a string of volcanic islands, has been beset by a series of disasters that have defined its existence and shaped its identity. Its vulnerability to natural disaster was never more evident than in the Tōhoku disasters of 2011, when the largest earthquake ever measured in Japan (9.0 magnitude, the 4th largest in world history), was quickly followed by a tsunami that inundated 400 km of Japan's northeastern seaboard, killing 20,000 people and leaving half a million homeless and scattered across shelters throughout the region.

The 15 meter tsunami that inundated the Daiichi nuclear power plant in Fukushima caused the first total station blackout in the

history of nuclear energy. Within hours, the nuclear reactors began melting down, and over the next few days, 3 of the 6 buildings that housed the reactors were blown apart by hydrogen explosions. As the reactor cores melted down and the situation at the plant spiraled out of control, Prime Minister Kan Naoto referred to the event as the most significant crisis facing Japan since WWII. It was not known until much later that as this cascading series of events amplified, Kan, in consultation with Japan's Atomic Energy Commission, contemplated the evacuation of Tokyo and its surroundings, a sprawling metropolis of over 30 million people.

Scarcely a decade later, as Japan was preparing to start the Olympic torch relay from Koriyama, the largest city near the Daiichi nuclear plant, under the guise of it being "the reconstruction Olympics," (an exquisitely tonedeaf commemoration of death, destruction, and institutional malfeasance), the COVID-19 crisis struck.

If the symbolically resonate site of the Fukushima disaster was the Daiichi nuclear plant, now in ruins and undergoing a decommissioning process that will take decades, then ground zero for the COVID-19 pandemic in Japan was the Diamond Princess cruise ship which, while ported in Yokohama, became the first significant outbreak outside of China (Rich & Yamamitsu, 2020).

I live in Yokohama about 4 kilometers from where the Diamond Princess languished at port for over 3 weeks of quarantine while the outbreak spread to 712 of its 3,711 passengers. Watching the situation deteriorate at a near distance was eerily reminiscent of the nuclear crisis. Media coverage of the unfolding events futilely attempted to convey a sense of what really was going on inside the ship, and when independent medical experts finally gained access, it was revealed that the situation was far worse than the cruise company and the government were initially willing to concede. Kenataro Iwata, an epidemiologist from Kobe University who had worked on the Ebola crisis and has extensive experience with infectious diseases, was granted access to the ship. What he discovered was a chaotic environment, with no proper barriers to prevent crosscontamination, and a staff that lacked personal protective equipment and were not themselves following protective action protocols while mingling with passengers (Iwata, 2020). When the American passengers on board the ship were finally evacuated out of Japan, an interagency dispute arose between the U.S. State Department and the Centers of Disease Control, who refused to sign off and add their name to the State Department's press release. Rather than evacuate infected passengers on a separate flight, the State Department abruptly decided to put all the American evacuees together on one flight, separated merely by a thin plastic sheet (Lena, et al., 2020). Shortly thereafter, Japanese passengers disembarked and returned to their homes, mostly by public transport. COVID had reached Japan's shores.

I had seen this movie before: it didn't end well. During the Fukushima nuclear crisis, every major organization involved in the disaster assessment came to markedly different conclusions, even though they were looking at essentially the same data. TEPCO dissembled and downplayed the crisis, coming into heated conflict with Prime Minister Kan over when and how to mitigate the nuclear disaster. The operational staff at the Daiichi plant were at bitter odds with their corporate headquarters in Tokyo, and local and prefectural authorities were abandoned by the national government and left to their own devices during the nuclear evacuation. Furthermore, U.S. federal agencies, which had deeply rooted military and political interests in maintaining a nuclear presence in Japan – namely the Nuclear Regulatory Commission, the U.S. State Department, and the U.S. military (especially the Navy) – were internally divided in their assessment of the magnitude of the nuclear disaster, what protective measures were necessary, and how to address the crisis.

It has been much the same with COVID-19. The World Health Organization is embattled, the U.S. Centers of Disease Control, once the premier agency for infectious disease mitigation, has been sidelined, and in Japan, there is no particular central organization to guide the crisis management and containment policies. Japan and the U.S. fell on opposite ends of the continuum in the early phase of the crisis, with Japan having an implausibly low case count and the U.S. leading the world in the COVID sweepstakes, a model of dysfunction and political ineptitude. Neither country has prioritized testing and both have seemed satisfied to flail in the dark as the virus silently spread. Without a metric to gauge the parameters of the epidemic, it is, as Hegel said: "the night in which all cows are black."

Just as in the Fukushima crisis, where nonexperts found the highly technical world of nuclear experts impenetrable and obtuse, we now grope blindly in the dark with the COVID-19 virus, the domain of infectious disease epidemiologists, in ongoing efforts to make sense of this complex catastrophe and improve pandemic countermeasures. Both the Fukushima nuclear crisis (especially in Tohoku in the early phases) and the ongoing COVID pandemic are all-encompassing and affect every aspect of our lives. How do we start, and where do we focus with these historic crises, which are in their own ways technically complex and beyond the comfort zone of nonexperts? Without a nuanced understanding of the scientific aspects of these issues we are left

to calibrate the echo, as the impact of the crises ripple outward to reach every institution, every relation, and our very psyches.

Both the looming threat of radiation exposure and the possibility of infection are invisible, amorphous threats that are at once immediate and abstract. Outside of the immediate proximity of the nuclear evacuation zone, the health impact of radiation may not be felt for a generation (the half-life of some radiological isotopes extent far into the future, and the latency period for some health impacts may be decades), but the COVID-19 virus is imminently present - a touch, a breath away.



In the first few weeks after COVID-19 was recognized as having a presence in Japan and was silently spreading, stores were overrun with anxious shoppers, who were stockpiling supplies. At this supermarket in Yokohama, people queued up for an hour before the store opened, to buy toilet paper. With all alcohol-based products emptied from the shelves, a store staff provided a dollop of disinfectant to each shopper. Photo by Kyle Cleveland. How do we live inside this environment, cope with the anxiety of an ever-present contagion, and deal with the ambiguity and uncertainty of being unable to know if we are infected unless the symptoms rapidly amplify to a lifethreatening state? What will this mean for our lives, our families, and our careers (Cerulo, 2008)?

The sense of confusion, uncertainty, and lingering dread brought on by this viral pandemic shares much in common with the nature of radiation and the sense of foreboding it engenders. Examining how the Three Mile Island accident unleashed radiation upon a civilian population, Kai Erikson called this a new "species of trouble:"

[Events that] involve radiation... contaminate rather than merely damage; they pollute, befoul, taint, rather than just create wreckage; they can penetrate human tissue indirectly rather than wound the surfaces by assaults of a more straightforward kind. And the evidence is growing that they scare human beings in new and special ways...radiation and most other toxic substances are without body. One cannot taste them, touch them, smell them, or see them, and for that reason they seem especially ghost-like and terrifying. Moreover, they invert the process by which disasters normally do harm. They do not charge in from outside and batter like a gust of wind or a wall of water. They slink in without warning, do no immediate damage so far as one can tell, and then begin their deadly work from within, the very embodiment of stealth and treachery.

All of this suggests that people may not so easily become "unscared" of radiation and other forms of toxicity over time. And that raises a new set of questions: What happens to people who experience that kind of dread over long stretches of time? What will be the consequence if it finds a lasting place in the human imagination? People exposed to disasters are apt to develop a sense of being out of control, of being caught up in forces that capture them and take them over. Feelings of helplessness and vulnerability are so common in moments of crisis that they are one of the identifying psychological symptoms of "trauma" and a prominent feature of what is widely called "the disaster syndrome." ... Those insecurities, however, can broaden into something a good deal more ominous: a feeling of having lost a certain immunity to misfortune, a feeling that something terrible is almost bound to happen. One of the crucial jobs of culture is to help people camouflage the actual risks of the world around them - to edit reality in such a way that it seems manageable, to edit it in such a way that the perils pressing in on all sides are screened out of one's line of vision as one pursues one's everyday rounds. This kind of emotional insulation is stripped away, at least for the moment, in most severe disasters, but with a special sharpness in events like those considered here exactly because one can never assume that they are over (Erikson, 1991, 34 - 35).



Yoshizawa Masami is a cattle farmer whose property was hit by the radioactive plume that drifted to the northwest of the Daiichi nuclear plant as reactor unit #1 was vented, and later as the outer containment structures of the melting reactors exploded. He was among the first activists to confront TEPCO officials, demanding compensation for the impact the radiation had upon his cattle, and later participated in protests in Tokyo as an outspoken critic of TEPCO on behalf of the citizens of Namie (SUPLEXch, 2013). Other farmers in the region donated cattle to his sanctuary as they fled the area, and Yoshizawa-san was left to care for over 350 head of cattle on his own. As his livestock's health began to deteriorate from radiation exposure (developing lesions and dying), he offered to donate them for scientific research purposes, only to be pointedly rebuffed by the Japanese health ministries. Photo by Kyle Cleveland.



Yoshizawa's farm sits on a ridge only a few kilometers from the Daiichi plant in Fukushima. The proximity to the epicenter of the 3011 earthquake is evident in this crevice, which transverses the entire length of his property, and beyond. The electric lines on the horizon run directly from the Daiichi plant southward to Tokyo. Photo by Kyle Cleveland.



Yoshizawa's "ranch of hope" is conjoined to Namie village, an evacuated town to which people were denied entrance due to high radiation levels (Yoshizawa himself defied evacuation orders and remained). Throughout his property he has displayed protest signs, including those that say, "in solidarity, be resolute to save the cattle" and "don't kill them or let them starve." Photo by Kyle Cleveland.

A distinguishing characteristic of radiological events, according to Erikson, is that they are unbounded: they violate all the principles of plot, having no definitive beginning, middle and end, thus his title "Radiation's Lingering Dread," (Erikson, 1991, 35). The illustrative rhetoric employed by Prime Minister Kan during the Fukushima nuclear disaster, when he referred to it as the most significant event in Japan since WWII, is also being used for COVID-19, with it being described as a battle waged on a scale only seen in war. But what is this war against? War needs enemies. This is revealing symbolism, given US President Donald Trump's racist alliteration of COVID-19 being the "Kung Flu," the China virus, the embodiment of foreign threat, a biological weapon that visits silent death upon its victims, an attack upon the homeland that resonates in a country divided by partisan politics, racism and fear of the other. However, there is a basic flaw in drawing comparisons between the threat of nuclear contamination and viral contagion to a war: wars end.

As the immediate threat of radiation is quelled by decontamination efforts to scoop the toxic topsoil of Fukushima to be transported to another locale (radiation is never truly removed, it is merely displaced), and a vaccine or treatment regime for COVID-19 offers the hope of a cure, what is being offered is a temporary relief and a sense of closure. But these short-term solutions are cold comfort that provide more psychological reassurance than genuine relief from the conditions that allowed for their emergence in the first place. Note that the technical name for COVID-19 is "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)," based upon the fact that this seemingly novel virus is genetically related to the coronavirus responsible for the SARS outbreak of 2003. And at the time of this writing, a newly identified pathogen known as G4 EA H1N1 has been identified among workers on pig farms in China, a newer strain of the H1N1 "Swine Flu" that broke out in 2009, killing about 285,000 people and morphing into a seasonal flu (Cohn, 2020). These pandemics are only the most vivid tip of the iceberg: between 2011 and 2018, while attempting to identify potential influenza strains, a team of researchers from the China Agricultural University analyzed 30,000 nasal swabs of pigs in their labs with respiratory symptoms, and found 179 swine influenza viruses that have the same genetic markers as the G4 variants, which may have potential as future pandemic strains (Sun, et al., 2020).

What is novel about these viruses is not merely their genetic makeup but rather that they have risen to our attention and now are being taken more seriously (Olsterholm & Olshaker, 2017). Pandemics have always been with us, but like earthquakes, their urgency wanes as human memory outstrips their relatively infrequent occurrence. Natural disasters - be they earthquakes, tsunamis, or meteor strikes happen on a geological timeframe that is so vast that we can barely take in the scale (Smits, 2014), but nuclear disasters and pandemics are ever-present in the modern age. Even though they are seemingly rare one-off generational events or "black swan" disasters that shock with their sudden catastrophic arrival (Aven, 2014), in fact the precursors are readily evident for those with the vision to see beyond the immediately obvious to the underlying structures that allowed them to happen.

Episodic events are deceptive, because they are all too easily dismissed as being exceptional rather than representative of pre-existing conditions that are inscribed into institutional and political foundations that, after the fact, are so often ineffectual in cleaning up the mess that they have created. And if the massive efforts to mitigate a nuclear disaster and wage a full-on assault upon this pandemic have an easy analogy with war, it is war by proxy. Ultimately, the process through which these biological hazards wreak havoc on the human body and psyche are well studied and manageable in theory, but in practice the government response has been unnecessarily chaotic and dysfunctional due to political ineptitude and hubris. As a result, the two most significant existential threats to human survival in the modern age are conveniently attributed to forces beyond our control, an absolution that provides no relief or hope.

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Readers of this special may be also interested in another COVID-19 special, **Vulnerable Populations Under COVID-19 in Japan**, edited by David H. Slater.

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