

Patterns of Contamination: From Fukushima to COVID-19

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In the spring of 2016, I was invited to witness the work of citizen scientists in Fukushima. These citizen scientists were mostly farmers attempting to revitalize the sociocultural life of their region, which had been heavily affected by residual radioactivity in the aftermath of the 2011 Fukushima nuclear disaster. At 5:30 on a quiet Sunday morning, I was shaken out of bed by Masayuki (pseudonym) to help him take care of some reparations at their center. As we began to move dusty old planks of wood, a fine mist of sawdust propelled itself through the air. The sight got me worried: “What if I breathe those particles? Are they radioactive? Why didn’t I bring a mask, is it dangerous? What’s the radiation level? Where are my gloves, where’s my Geiger counter...” Looking at the dust covering my clothes, I felt edgy and disturbed, becoming a captive of the world of contamination.

In recent months, COVID-19 has engendered deep concerns about the effects of contamination on quotidian and social relations across the world – much like those that I have experienced during my fieldwork in Fukushima. Yet, given that there are few parallels of the global disruption rendered by COVID-19, scholars, analysts, and commentators are struggling to map out possible aftershocks and effects. They often don’t have good comparisons to think through what might happen next, nor to navigate a post-pandemic world.

One key crisis which has hitherto been ignored in contemporary debates is the 2011 Fukushima nuclear disaster, which created similarly disruptive effects on vulnerable communities in Japan. Indeed, this disaster caused the release of harmful radioactive pollutants leading to the forced evacuation of many citizens from the region of Fukushima. Having worked on this nuclear disaster through ethnographic fieldwork, I am reminded of the pressures created by contamination in Japan as I observe the effects of COVID-19 on ordinary and social life. Most certainly, COVID-19 and residual radioactivity imply very different contaminants. However, there are similar patterns between the two crises as to how contamination shapes everyday life. Much like the case of communities surrounding Fukushima, the havoc wrought by COVID-19 can prove pernicious and tiresome.

Given my experience as a social anthropologist, I put forth six key patterns surrounding contamination through the case studies of residual radioactivity which are likely to apply to COVID-19. While I do not claim this list to be exhaustive, I believe that comparative exercises shed light on the broader forms and structure that contamination takes in our societies, hereby helping us to better understand, explain, and manage these problems.

Contamination reorganizes everyday life

Contamination often reorganizes simple things that we took for granted, making the minutiae of everyday life particularly challenging. After Fukushima, I interviewed mothers that were baffled by the ubiquity of

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residual radioactivity, which brought a set of questions that one usually never thinks about, such as “How do I wash my children’s clothes, will the washer become contaminated?”

COVID-19 is hitting at the heart of our most essential quotidian activities. For one, COVID-19 has made grocery shopping a challenge for all people, but especially so for those who have underlying health conditions and risk being more affected by the virus. One of my friends who has lupus, a systemic autoimmune disease, restrain herself from going to the grocery store and has to resort to the good will of her partner to get access to food.

Contamination spreads beyond the limit of human control

In Fukushima, the Japanese state installed barricades to block access to highly radioactive areas, where radiation levels still pose a serious threat. These gates, often three meters in length, separate passersby from an environment that is considered too contaminated to live in. Yet, residual radioactivity does not adhere to human boundaries and weather factors such as wind, rain, and snow have transported radioactive contamination far beyond the vicinity of these barricades.

Similarly, the long incubation periods of COVID-19 make the propagation of the virus difficult to contain, as individuals can be contagious without displaying symptoms. Self-isolation and social-distancing, which are measures put in place to lower the number of cases, do not impede the occurrence of contamination, but simply “flatten the curve,” so that infections do not happen at the same time, putting stress on medical facilities. In both cases, there is still no successful technical fix to get rid of the contamination.

Contamination heightens social class divides

Issues of contamination are inseparable from social classes. And while contamination affects everybody, its effects are not homogeneously distributed. In my fieldwork with mothers that had evacuated from Fukushima, I realized that many experienced the threat of contamination as a form of financial precarity, particularly in light of the costs associated with evacuation. As one mother argued to me: “All the rich have left Fukushima. It’s easy to do so if you have money, but for the poor it’s not the same.” Here, long-term evacuation from contaminated areas is something that poor citizens cannot necessarily afford.

COVID-19’s impacts equally reinforced pre-existing social inequalities, widening the chasm between social and economic classes. The pandemic has aggravated the income stress of most vulnerable people; those who live pay check to pay check, homeless population, those with no families, or small business with few resources to cope and survive weeks-long shutdowns.

Contamination implies generational clashes

In Fukushima, radioactive contamination led to generational clashes, as different family members can no longer live under the same household, something that is common in rural Japan. Due to the concerns of radiation, many worried parents and their children have started their life elsewhere, while older generation

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sometimes refused to leave Fukushima, possessing a long and strong attachment to their region. In that context, some elderly people are afraid of being a nuisance to their children, and prefer to live alone than resettling with their family in a new location. Others do not understand the decision to evacuate and are angry toward their children, as they no longer get to see their grandchildren.

Under COVID-19, many young people have also ignored social distancing recommendations so as to gather for house and beach parties. This is a behavior that contributes to putting older generation at risk of contracting the virus and demonstrates the difficulty of establishing the same social rules within different generations.

Contamination exacerbates discrimination

In Japan, many evacuees have been reluctant to talk about the fact that they were coming from Fukushima. "Their children often faced discrimination (*ijime*) when other kids learn that they are from Fukushima," told me an evacuee mother. Indeed, through my fieldwork I've heard incidents of *ijime*, where children from Fukushima were called *baikin*, meaning "something harmful," like a "germ, bacteria, or mold" by other children afraid of contamination.

The COVID-19 pandemic, which originated from the Chinese city of Wuhan, also unofficially became known as the "Chinese Virus." This derogatory term has already led to discrimination toward the Asian-American population of the U.S., with its members facing threats, harassments, or prejudices.

Contamination creates new form of sociality

While contamination create social fractures, it can also lead to new ways of connecting. To deal with the imperceptibility of radiation hazards, many citizens in post-Fukushima Japan have begun to monitor and track radioactive contamination by themselves. These grassroots movements have led to the creation of citizen science networks where people attempt to manage life within irradiated environments. In many cases, these practices have sustained new relationships amidst a community that was highly fragmented because of the disaster. Now, many citizens work together in an attempt to revitalize the life of their region.

The shutdown and social-distancing order associated with the COVID-19 pandemic has also resulted in the temporary closure of non-essential venues, forcing people to interact in new and innovative ways. This has led to a rise of virtual interactions through platforms like zoom and skype ranging from virtual drinking hours to novel ways of teaching university classes. These forms of sociality may persist once the crisis ends.

Concluding Thoughts: Beyond Specificities

Contamination, be it under the form of microscopic infectious agents or radioactive elements, causes discomforts, challenges, and uncertainties within our modern societies. While radioactive contamination and coronaviruses represent wholly different problems, both hazards still share striking similarities as to how

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they affect the lives of people. As an anthropologist trained in a post-modernist school of thought, I was instructed to be wary of any grand schemes surrounding structures, patterns, or bird-eye views. And indeed, leveraging the specificities of each contaminant and lived experiences is essential so as to provide a better management of public health issues during times of crisis. Hazardous contaminants do not exist in isolation from specific aspects of social experience, and by recording the complexities of citizen responses ethnographers have long highlighted the factors that contribute to the local rejection – and sometimes acceptance – of contamination.

Yet, a stronger emphasis on comparative works can help scientists and policy makers inform new audiences and re-center debates on issues of contamination that merit greater attention. More importantly, theorizing the broader patterns that contamination take within different societies and crises will help scholars reach the broadest audience possible, while providing preemptive guidelines for future outbreaks.

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