Radiation in Japanese Culture During and After Fukushima: a Research Proposal

Mark “Aaron” Miller

Anth 2 – 11am section

29 July 2013

**Abstract:** The 2011 Tohoku earthquake and tsunami had devastating effects on north-eastern Japan; one consequence of the tsunami, the release of radioactive isotopes from nuclear reactors at the Fukushima Daiichi power plant, caused the evacuation of tens of thousands of households, the spread into the atmosphere, soil, and water of an insidious poison undetectable by human senses, and the loss of the livelihoods of farmers and fishermen. While central and local governments have undoubtedly handled this disaster better than the Soviet authorities handled the Chernobyl incident, many segments of Japanese society have grievances against said governments and against TEPCO, the electric company that owned and operated the reactors. In this article, I propose anthropological research into the negative effects on Japanese culture of this radioactivity release.

In March 2011, the Fukushima Daiichi nuclear reactors released large amounts of radioactive isotopes into the environment of eastern Japan, as a consequence of the devastating Tohoku earthquake and tsunami; the amount of radioactive isotopes released was approximately one-tenth of that released by the Chernobyl event in 1986, and the contaminated area is also approximately one-tenth as large (von Hippel 2011). This environmental contamination has caused a cultural climate of fear and anxiety, as well as mistrust and anger directed at the state and the owners of the nuclear reactors, who seem to be viewed as mismanaging the disaster and failing to keep the public informed. In search of information, many people turned to social media websites, such as Twitter and Facebook; in some cases, this provided timely and useful information on the disaster, but in other cases, false rumors were quickly spread and then only later overtaken by truthful and accurate information (Kaigo 2012:32).

One of the economic consequences of the nuclear accident was contamination of produce and livestock in areas downwind of the radioactive isotope release. The state prevented their sale to protect the public, however the farmers were not compensated for their losses until several months later. In April 2011, farmers protested in Tokyo with their cattle present to increase visibility of the protest, demanding compensation from TEPCO, the electric utility company that owned and operated the Fukushima Daiichi nuclear reactors (Yoshihiko 2011).

Stratification plays a significant role in the cultural effects of the Fukushima accident. For example, radiation cannot be detected with human senses; instead, a Geiger counter is needed to detect radioactive contamination on or in oneself or one's food or water—this is a significant expense for a working class person, such as a farmer. Geiger counters were found to be necessary, and so they were obtained despite the costs (Ikegami 2012:155). Ikegami also notes that bureaucrats in the central and local governments discouraged lay persons from taking measurements with Geiger counters, ostensibly because of the unreliability; he draws comparison between this discouragement and the Soviet ban on personal usage of dosimeters around the Chernobyl accident, speculating that the true reason for this discouragement is to maintain the balance of power between the state and the public by controlling knowledge of contamination (Ikegami 2012:155).

**Research Proposal**

Statement of Purpose

I propose to perform anthropological research into the various negative effects on Japanese culture of the Fukushima Daiichi nuclear disaster, with the ultimate goal of counteracting these negative effects as much as possible. There are several questions I hope to answer by this research: how did cultural factors influence the public reaction to the threat of radioactive contamination, and how did this threat in turn influence culture; what are the commonly held beliefs about the hazards of radiation, and how do these beliefs differ from the scientific understanding of radiation's effects on organisms; to what extent is knowledge of radioactive contamination controlled by those with power in Japanese society, and to what extent is this knowledge withheld from the general public; and how effectively did Japanese authorities handle the disaster in terms of preventing injury, death, and loss of livelihood. My research will necessarily be interdisciplinary, requiring collaboration with specialists in health physics and environmental science.

Methods and Data

I will collect data over a six-month period using participant-observation fieldwork with farmers whose crops or livestock have been contaminated by radioactive isotopes from the Fukushima accident, and with involuntary evacuees from the 20 kilometer radius around the Fukushima nuclear reactors. The six-month period is shorter than the one year period traditionally used for anthropological fieldwork in order to strike a balance between accuracy of results and the length of time before the fieldwork results can be used to form a plan of action for helping the affected persons.

During the fieldwork, I will live in the communities in which affected farmers and evacuees currently reside, and attempt to establish a rapport with as many of them as possible. I will buy food at the same places that they buy food, and (as much as possible), I will ask them how they choose what they buy and do not buy, and how the possibility of radioactive contamination informs their choices. I will also conduct interviews in the Japanese language with persons who seem to have been particularly affected by the Fukushima disaster.

Certain ethical procedures will be in place during the proposed research. All participants will be informed beforehand of the goals and methods of my research, and notified that they will be able to opt-out at any time up until the publication of my results—if they choose to opt-out, I will not make use of any data collected from them. In the published research results, participant names will be replaced with pseudonyms and any other identifying information will be omitted. An additional ethical concern is the ongoing pursuit of compensation from the government for evacuation, loss of livelihood, potential health effects of the radioactive isotopes, and impacts to psychological well-being: I must be careful not to inadvertently release any information that would cause the government to reduce or eliminate compensation to the individuals or communities I am researching.

Significance

The insights gained from this research will not only enable better assistance to the Japanese population, but also shed light on the role of communications technology in spreading information (and misinformation) during times of crisis. Additionally, it is not unreasonable to anticipate a similar nuclear disaster happening within the United States in coming decades, considering the similarity in nuclear reactor design and oversight (or lack thereof), and their vulnerability and proximity to human populations. While there are obvious differences between the cultures of Japan and the United States, there are also similarities, and so populations in the United States are likely to experience similar fear, anxiety, despair, and mistrust. The anthropological knowledge obtained from this research could be adapted to support future populations afflicted by release of nuclear isotopes into the environment.

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