<TI>Teach 3/11: Participatory Educational Project Puts the Kanto-Tōhoku Disaster into Historical Context

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Received: 29 May 2011 / Accepted: 29 May 2011

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<A>1 From the Here and Now

My first visit to the countryside of Fukushima Prefecture took place in the early autumn of 2008. The occasion was a notable "return" to a historic center of premodern Japanese silkworm egg production for two busloads of members of the silk and sericulture

industy, en route to the annual Silk Summit held at the Fukushima Agricultural Technology Center. Someone tapped me on the shoulder and said, "Onaga-san, look there." I looked out the window and saw in the distance a large, white, rectangular building tucked in amid the greenery. "That's a nuclear power plant," the retired scientist told me. "If that explodes, we'll die." At the time, I was unsure what to make of this jolt of information. Wrapped up in my own thoughts about fieldwork and research, I had certainly forgotten that moment until now.

Place-names such as Fukushima and Tōhoku need little introduction today. Following the disasters that unfolded in Japan on 11 March 2011, people around the world have flocked to social media and news outlets, bearing witness to viral videos of the Kanto-Tōhoku earthquake's devastation and the horrifying tsunami that followed it. The tense play-by-plays of the nuclear reactors in Fukushima and speculations about health risks associated with their failure have focused intensely on the here and now, with good reason. As the hours melted together in those very raw early days of the triple disaster, a number of things seemed to become apparent to many of us Japan-watchers: a consternation with the media's reproduction of facile if not circular explanations of how Japanese stoicism and civility stem from "Japanese culture," which seemed to perpetuate a myth of homogeneity; a gulf in the quality of reportage between those with and without Japanese language skills or access to technological or scientific expertise; the use of ambiguous metaphoric language in the foreign press; and, perhaps

most important, an overall challenge in ascertaining the lay of the land.

In times of crisis and disaster, can an individual realistically grasp a panoramic state of the field? As people desperately struggled with the scientific and technical details of the Fukushima Daiichi nuclear power plant, one challenge that seemed to emerge from the catastrophic coalescence of the natural and man-made disasters appeared to touch on the ability to collectively consider, as a public if not as analysts, matters of temporality and historicity to appreciate why events unfolded as they had. What is happening as the chaos of the present proffers a deluge of information that intensifies the resolution of a digital archival grain? Laudatory media accounts of Japanese disaster preparedness call into question the degree of preparedness of the academic community, especially in the humanistic studies of contemporary and historical science and technology, to lend some voices of analytical calm in stormy times to bring the past to light, if not to participate in the discomfiting divination practice that many in the world also demand, that is, to bet on the future. The multilingual educational project Teach 3/11 (teach311.wordpress.com), conceived little over a week after the earthquake struck at 2:46 p.m. on that ill-fated day, serves, at very least, to help make it easier for people to learn about the history of science and technology related to the three disasters.

<A>2 Launching Teach 3/11

Teach 3/11 officially launched efforts to build a participant-powered, digital educational resource in partnership with the Forum for the History of Science in Asia, a special interest group of the History of Science Society, on 2 April. Although the three cofounders—Honghong Tinn, Tyson Vaughan, and myself—were all graduate students at Cornell University at the time, the idea to operate Teach 3/11 as an institutionally independent website has been important from the start, given our second goal: to encourage the collective wisdom of scholars working at the intersections of history of science and technology and Asia.

The project's modus operandi came from conversations that occurred simultaneously about three things: learning, collaborating, and doing. From just my own perspective, several factors made the need for something like Teach 3/11 obvious: I wanted to learn more about the history of nuclear power in Japan (even though it had little direct connection with my own research); I was helping non-Japanese colleagues locate suitable Japanese collaborators in light of the emergency-extended submission deadline for the 2011 Society for the Social Studies of Science meeting in Cleveland; and I had been conversing with other junior scholars located away from Japan (some of us having come into friction with the Kobe earthquake in 1995) who wanted to do something beyond sending donations for relief efforts.

After an initial planning and development phase, Teach 3/11 began posting a daily stream of annotated citations of readings and digitized media on 14 April at 2:46

p.m. Japan standard time to remember the event. Now the project publishes on average twice a week, and participants share annotated citations and other reading or audiovisual suggestions in Asian and European languages through the website. Multilingual editors work with contributors to prepare annotations and any translations, highlighting reading accessibility, language, and topical focus. Twitter facilitates the process of sharing this educational resource with broader audiences (@Teach_311).

<A>3 Learning: Outlining a State of the Field

Given its remit of providing historical context for teaching, understanding, and learning about the Kanto-Tōhoku disasters, Teach 3/11 has published annotations of a fairly wide range of videos, books, and articles on topics including earthquakes, seismology, tsunamis, and nuclear power. For example, Takashi Nishiyama annotated Boumsoung Kim's 2007 book Beyond Local Science, which tells the story of how Japan became the world's preeminent nation for seismology during the Meiji period and how it later lost this position. Kenji Ito annotated Hitoshi Yoshioka's Social History of Nuclear Power (1999), which gives an overview and analysis of the development of nuclear power in Japan from wartime to the late 1990s. Other posts have included an excerpt of Craig Nelson's essay on Japan's relationship to nuclear power from Hiroshima to Fukushima, "'The Energy of a Bright Tomorrow': The Rise of Nuclear Power in Japan." Kristina

Buhrman's annotation of Gregory Smits's "Danger in the Lowground: Historical Context for the March 11, 2011 Tōhoku Earthquake and Tsunami" points at the historical unreliability of institutional and collective memory of disasters.

Teach 3/11's multimedia editor Christian Dimmer has been curating an eye-opening set of digitized films and animated shorts for the project: "Born and raised in Germany, I grew up with a healthy skepticism of nuclear energy. . . . In my travels through Japan and in many conversations, I learned that my unease about this technology was not shared by most people here." Indeed, the pros and cons of nuclear power have come into greater relief through Teach 3/11 for Dimmer and others who wonder why Japan promoted peaceful atomic energy. This question is explored in his annotations of the films Tale of Two Cities (US War Department, 1946) and Cold War Scenarios for Introducing Nuclear Energy to Japan (NHK, 1995). The latter suggests a US Cold War strategy in collaboration with the powerful president of the Yomiuri newspaper company that successfully overturned public antinuclear sentiment through the skillful use of public relations. In his annotation of Nicholas Röhl's Nuclear Ginza (1995), Dimmer notes how the media in Japan avoided the topic of accidents in nuclear power plants due to close sponsorship ties. A journey through the multimedia presented on Teach 3/11 makes it clearer why this high-risk technology turned out to be less controversial than perhaps would have been expected in one of the most disaster-prone countries in the world.

Buhrman, a Teach 3/11 editor who has studied the political and religious history of earthquakes and disasters, commented in personal conversation with the author, "For me, the most valuable outcome from studying this material from a science and technology studies or history of science perspective is the awareness of how the potential risk of these disasters changes over time." She explains of the trap of hindsight bias: "I think you can see traces of it in the media coverage, particularly when the history of tsunami disasters on the Sanriku coast is brought up. It is very easy to say that these are cases where leaders and experts 'should have known.' While the past has indeed been used to gauge the present, the historical record of these disasters depends greatly not only on the archival practices of the past, but also on how these events were understood and perceived. Warns Buhrman, "Simply mining the historical record without understanding these points can result in a skewed model." Teach 3/11 helps illustrate how decisions about the future based too heavily on the precise mechanics of the 2011 disaster may result in complacency that will likely fail in the next disaster because the next "big one" will be different.

Not all of Teach 3/11's posts focus on Japan. On the contrary, fully understanding the historical context of the triple disaster in Japan requires engaging the East Asian region as well as broader knowledge of disasters more generally. Fumitaka Wakamatsu provided one of our bilingual annotations, of an article by Adriana Petryna on the long-term testing and suffering of post-Chernobyl radiation victims in the Ukraine—a

sobering cautionary tale for residents in the area around Fukushima. As part of Teach 3/11's interest in supporting the creation of science, technology, and disaster-related classroom exercises, Angie Boyce (2011) designed a teaching module aimed at helping instructors and students of undergraduate courses to think critically about the creation and uses of standardized risk scales.

<A>4 Collaborating: Partnerships with Classrooms and Beyond

In addition to the Forum for the History of Science in Asia, Teach 3/11 attempts to maximize its reach and educational impact by building collaborative relationships with valuable partners such as the Asia-Pacific Journal (japanfocus.org) and Dissertation Reviews (dissertationreviews.wordpress.com).

Different college classrooms around the world are also finding ways to use Teach 3/11. At the University of California in Berkeley, the instructor of Science in the U.S. (History 138 and 138T), Mary Sunderland, plans to pilot a class project that will contribute new educational content for the project in addition to helping draw out the comparative histories of nuclear power between the United States and East Asia. At Sophia University in Tokyo, Japan, we have been working with anthropologist Tak Watanabe, whose students in his Disaster Studies and Global Culture of Nature and Technology classes (ANT352 and AG525, nuclearsakura.takwatanabe.net) use social media to engage with Teach 3/11. Some students have developed projects that will

produce content for the growing pool of collective wisdom on the topics at hand. Master's student Kuda Mutenda had at the time of this writing embarked on a project to investigate the production of a historical promotional TEPCO video depicting the construction of Fukushima Daiichi nuclear power plant and to produce English subtitles that can reach broader networks of students and scholars.

<A>5 Doing: Identifying New Research Opportunities

The catastrophes in Japan and the launching of Teach 3/11 have helped identify fertile opportunities for future research that scholars may wish to examine. The project's Korean editor, Chihyung Jeon, stresses the need for more historical and social studies of the earth sciences (including meteorology, seismology, and oceanography), natural disasters, and relevant government policies in Korea. "Given the geographical and historical connections between Korea and Japan, more studies of Korean experiences of disasters and technoscientific responses to them would help us recognize the current events in Japan as a common concern for all East Asia within our shared historical and cultural contexts," he explains. Recent scholarly works, including those featured in a special 2009 issue of Historia Scientiarum on nuclear histories in Japan, Korea, and the United States, have produced a promising set of studies on nuclear power in Korea whose histories closely relate to those of Japanese colonialism, the Korean War, and the Cold War (DiMoia 2009, 2010; Jasanoff and Kim 2010; Kim Dong-Won 2009a; Kim

Seong-Jun 2009b). "In the aftermath of 3/11, Korean society will witness more debates on nuclear power, which will surely take Fukushima as a reference. The future paths of nuclear energy in the two countries are likely to be intertwined. Teach 3/11 will serve as a useful resource and preparation for such discussion," Jeon says.

Honghong Tinn, the project's Chinese-language editor, expects to see more material related to the historical development of nuclear energy research and controversies over the safety of Taiwanese nuclear power plants, including annotations of a recent study of Taiwan's first graduate program in nuclear physics and home of the majority of Taiwanese nuclear engineers since 1957; Shiang-ling Hu's book Nuclear Engineering Experts vs. Antinuclear Experts (1995); and Shu-hsin Tsui's 2004 documentary, Gong-Liau, How Are You? Given that Taiwanese nuclear power plants are in underprivileged fishing villages, Tinn anticipates adding Mei-Fang Fan's 2009 article on the Orchid Island nuclear waste repository, which discusses the marginalization of the indigenous population. Notes Tinn, "As strong earthquakes hit Taiwan frequently, too, we hope to locate more videos or other types of teaching materials about the history of earthquakes in Taiwan."

Teach 3/11 can certainly do more to help educate about how people experience disasters such as earthquakes and build collective memories about them. This could be useful given how the past is used in forming perceptions concerning disaster risk and the political decisions. Buhrman hopes to introduce more material relevant to how

earthquakes and tsunamis were understood in pre-Edo times, including in China. She also plans to explore historical seismology, or how the ways people have studied historic earthquakes have changed over time. For now, "our" historic earthquake is the Kanto-Tōhoku that Teach 3/11 and its participants study.

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