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Citation: Onaga, Lisa, and Hanna Rose Shell. "Digital Histories of Disasters: History of Technology through Social Media." *Technology and Culture* 57.1 (2016): 225–230. © 2016 by the Society for the History of Technology

As Published: <http://dx.doi.org/10.1353/tech.2016.0020>

Publisher: Muse - Johns Hopkins University Press

Persistent URL: <http://hdl.handle.net/1721.1/105220>

Version: Final published version: final published article, as it appeared in a journal, conference proceedings, or other formally published context

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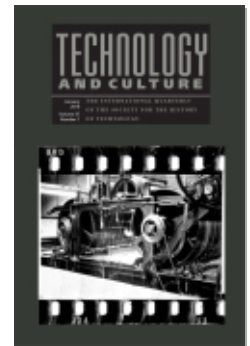
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Technology and Culture, Volume 57, Number 1, January 2016, pp. 225-230
(Article)

Published by Johns Hopkins University Press
DOI: [10.1353/tech.2016.0020](https://doi.org/10.1353/tech.2016.0020)



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Digital Histories of Disasters

History of Technology through Social Media

LISA ONAGA and HANNA ROSE SHELL

On 11 March 2011, a giant earthquake and tsunami off the coast of Japan triggered the Fukushima Daiichi nuclear disaster. Failure of the plant's heating and cooling system and an inability to properly stabilize the reactors post-meltdown led to the displacement of over 150,000 people. In its wake, three historians and sociologists of science and technology with ties to Asia came together to attempt to use social media as a way to create a community in response to the disaster and its aftermath. Together Honghong Tinn and Tyson Vaughan, along with Lisa Onaga, set out to make an online collective bibliography and repository for information and historical context for events surrounding the disaster. The goal was to provide a forum for educators to draw on a range of what might otherwise be overlooked sources.

Teach311.org, the site they launched in April 2011, facilitates a collaboratively written digital annotated bibliography focused on sociohistorical dimensions of disasters. Along with providing access to a particular online resource, contributors summarize it or describe its relevance to understanding the 3.11 disaster or the sociotechnical historical study of disasters more generally. Thus an international network of academics, students, and translators, among others, produce content in Japanese, Chinese, Korean, Bahasa Indonesia, and English. Together they continue to ask the seemingly simple question of "Why did the disaster happen?"

Five years after Teach311.org's launch, it has developed so as to consider the disaster in the context of both science and technology studies (S&TS) themes as well as the longer history of seismic and other disasters in Asia. The site also raises more general questions for the history of technology. It

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0040-165X/16/5701-0008/225-30

prompts us to reflect more generally on new directions in what scholars are referring to alternately as digital history and digital humanities. What, for example, is the role of collectivity in the expanding directions of our field? What is, and what might be, the relationship between scholarship and bibliography with the capabilities of social media and digital journalism in mind?

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These questions were the inspiration for my conversation with Lisa Onaga, one of Teach.311's three cofounders. What follows is an edited version of our conversation conducted over email in May 2015 and then a few months later at the 2015 SHOT meeting in Albuquerque, New Mexico.

HRS: *What led you to create Teach311.org? What about the impulse for collectivity?*

LO: It was the earthquake that occurred off the coast of Tohoku (north-eastern) Japan on 11 March 2011 and the events that followed. I felt that we were bearing virtual witness to the disasters as they unfolded in Japan through broadcast and social media. I started to sense a distinction between the kinds of things people “knew” or how they chose to trust certain sources in order to “know” about the event and radiation effects. I found myself engulfed in a world of translation on social media platforms, in which individual moments of translation—constant and informal—gained significance when viewed in aggregate. That had a lot to do with how Teach311.org came into being.

At the same time, I was especially impressed by the cooperative practices and solidarity that took place among bilingual journalist friends and colleagues as they used social media platforms like Twitter and effectively documented their experiences. I had known that social media technology played a prominent role in community formation and cultural production, but I never quite saw so many people motivated in a single moment like this in a language environment that I identified with. These things convinced me that there is a role to be played by science and technology studies students and scholars. For my peers, including Teach311.org cofounders Honghong Tinn and Tyson Vaughan, as we were conducting science and technology studies (S&TS) field research in East Asia, it began to seem apt to also find a way to respond in this social media environment to do something about the disasters. Technological failure, earth science, the porousness of the marine and terrestrial environments, media and technology, controversy, the history of radiation in Japan, the transnational scope, and struggles to find any language to talk about the disasters were too much, too soon, for a single person to wrap their mind around. Teach 3.11, as I and the other founders dubbed it, aimed to create a space for learning and for reflexivity and was launched on 14 April 2011.

HRS: *In what sense is it a response to the earthquake in Japan? Is there a poetics here?*

LO: The earthquake is fundamental to the beginning of the project and how it runs. The postings are currently scheduled on the 11th of every third month, beginning with 11 March, at 14:46 in order to quietly mark time and counter the forgetting. Beyond commemoration, it's a critical response to the widely circulating idea that this disaster was something *yosōgai*—something completely outside the bounds of reasonable expectations.

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HRS: *Did you have any models, in terms of other comparable digital projects, scholarly or otherwise, in mind when things were starting up?*

LO: There were several sources of inspiration. One phenomenon that impressed me from the start was the crowd-sourcing and the power of Twitter to bring together writers living all over the world to work on a common project. In a previous career, I managed weekly web production of a collection of lay summaries and news releases about scientific research distributed by the journal *Science* to journalists. While Teach-311.org doesn't serve journalists, it has some similarities in making accessible an on-ramp for people who wish to understand complicated information with relative rapidity. An exciting digital project, *2:46: Aftershocks* (<http://quakebook.org>), which launched almost immediately after the quake in March 2011, had managed to publish an anthology of essays and responses to the earthquake in record time and in several languages, so that was also inspiring to us.

HRS: *How has the project evolved over time?*

LO: Over the last few years, we've seen a shift from attempts to mainly interrelate Japan–U.S. disaster studies literature toward opening the conversation to a globally situated Asia, to putting March 11th into a historical perspective and inviting others to think with us historically. A pragmatic goal continues to be breaking the language barriers that stand in the way of sharing knowledge. (As noted, at the moment, the project languages include Japanese, Chinese, Korean, Bahasa Indonesia, and English.) Achieving these goals presents a major challenge, but it's been worth the effort so far.

HRS: *Please talk a little bit about the role of collaboration in the project as it has developed over time, addressing both challenges and rewards.*

LO: One of the challenges in setting up this project continues to be the interdisciplinary demand of bridging history of science and technology, science studies, and Asian/Japan studies. From the outset, we had an experimental, grassroots spirit about this, mainly wanting to ensure that it could function as a space that would reflect the intents and interests of

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volunteers while keeping key guiding questions at the fore. As the project has continued, our opportunities to collaborate with other groups have grown from helping to facilitate two virtual workshops with the Fukushima Forum in 2012 and 2013 to presenting papers and organizing panels at some workshops and conferences. It's been really rewarding to see how new collaborations and community among scholars have arisen through their individual contributions to Teach311.org. On a technical, information-management level, when we realized our data set had gotten much bigger than we could personally handle, we were confronted by the option of moving the data to a university server in Singapore. We did that, with the stipulation that the server be external to the university intranet, in order to facilitate international collaboration.

HRS: *What is an "annotation"? What is its primary function within the project?*

LO: Teach311.org annotations each consist of four hundred English words (or their equivalent in character-based languages). The kind of annotation writing that appears on Teach311.org is more in plain terms than in academic language, and description of a work serves to contextualize its usefulness as a potential resource for teaching, along with any caveats for a student audience. I tend to think of "annotation" as a common "practice" that helps make new, fresh meaning when a work is assessed through the Teach311.org lens. This content depends on identifying people who may or may not have some interests in Japan who are asked to consider how a work in question is relevant to teaching about the long-term reasons as to why a cascade of disasters occurred on 11 March 2011. Some people choose to embed annotation-writing in the design of their student assignments; some tell me that they assign their students the website itself as reading; and we also encounter some students contributing something to the project because they are motivated by personal or professional reasons. With the added emphasis on translation, the project has interestingly helped raise greater awareness about the role of language in the production of scholarship in various disciplines and national contexts, particularly in regards to the history of science and technology. In this sense, the annotations create a community tied together by the project.

HRS: *What kind of effects, if any, do you think Teach.311.org is having on teaching and scholarship?*

LO: Hopefully, it's helping to encourage us to recognize the value of discussing history of disasters and how those may be considered in a global context. The long view toward the study of the history of disasters invites much consideration of disasters' temporality and how recovery processes work. On a fundamental level, Teach311.org plays a two-part con-



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FIG. 1 Coastal area of Ukedo, Namie (2 March 2014). The photo is by Ryuma Shineha, from a Teach311.org photo essay visually documenting the entry-restricted town of Namie, which was seriously damaged by the earthquake and tsunami, and evacuated due to radiation fallout. (Image courtesy of the artist.)

sciousness-raising role that first helps make clearer in Asian studies and related fields how scholarship and teaching cannot afford to ignore how science and technology are part of culture. Second, the project also continues to play a role in de-exotifying the East when talking about such regions in classrooms. Teach311.org also helps raise the visibility of the value of learning Asian languages that is constitutive of good research.

HRS: *Please talk about the responses you've gotten to Teach.311.org.*

LO: For the most part, positive responses have been generated among scholars who use Teach311.org who tell us they come to the site to explore new course material. Some of the earliest feedback we've received commented that people wished that Teach311.org existed before the spring of 2011. Some of the critical feedback we've received has pointed out that this material is too difficult, and they would like for this project to provide lesson plans for much younger children. The thing is, we aren't a comprehensive database, although the work we do does result in a database. The large amount of material to consider is also quite diverse, so matching expectations of what we offer and do with the actual content continues to be up for discussion.

HRS: *What have you learned in working on this project?*

LO: As we kept working on the project, I think the intellectual potential or need for the project became clearer to us. Working on Teach311.org has convinced me that despite how paramount the scene in Tohoku Japan may appear at any given moment, the issue at hand is actually bigger than Japan or even “lessons from Japan.” We are talking about the human condition; I’ve also come to appreciate some of the new planes of understanding and scholarship that can form when someone applies a disaster studies lens to think about existing works. It’s been exciting to see how people have been receptive to our process of annotations-as-practice.

HRS: *Have your goals changed with the project over time?*

LO: I think we’ve slightly heightened our expectations by having contributors consider more broadly how the works they annotate help us understand the human condition that has permitted the confluence of disasters in Japan. We used to have a tighter gaze on Japan in reaction to the immediacy of 2011, but it has since become important to have an approach that is motivated by Japan but is also a global approach, thus widening the kinds of literature that have been included in the project. As the frequency of newspaper and television reports continues to fade, Teach311.org will hopefully continue at a steady and manageable pace and continue to provide a platform for thinking carefully about our past, present, and future.

HRS: *Do you see Teach311.org as an example that could be emulated?*

LO: Actually, the Teach311.org project has already served as a model for the Teach Sewol project, a sister project that one of our editors, Chihyung Jeon, has helped launch. More generally, the disaster studies networking site set up by Kim Fortun and Scott Frickel, among others, has also paid attention to how the project site is organized. Rather than emulation, I would hope that any project that sees Teach311.org as a source of inspiration should improve upon it, and perhaps that will also help us to do better, too.