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Sources of Disaster: A Roundtable Discussion on New Epistemic Perspectives in Post-3.11 Japan

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Abstract On 16 March 2021, the Teach311 + COVID-19 Collective (www.teach311.org) hosted a virtual roundtable discussion entitled “Sources of Disaster: New Epistemic Perspectives in Post-3.11 Japan.” The event brought together scholars and students researching the history and anthropology of Japan to explore how the earthquake, tsunami, and nuclear power plant disaster of 11 March 2011 (3.11) changed our ways of knowing the world. The roundtable focused on the idea of the “source” to get at these epistemic shifts in lived experience and practical knowledge as well as historiography, and to investigate ideas that range from what we can know about acceptable risk and safety to notions of home and belonging. “Source” is a way to think about origins, but also the materials—texts, media, or testimony—that we collect and analyze to give rise to new or better knowledge. Building upon previous Teach311 activities that explored the roots of 3.11 and *genba*, participants in this roundtable expanded upon the significance and meanings of the notion of a “source” relative to the politics of epistemology in their research and studies in order to examine what reconstruction means in history when it is conducted alongside recovery.

Keywords Sources of disaster ▪ Fukushima nuclear emergency ▪ epistemology in Japan ▪ disaster recovery history ▪ March 11 ▪ 2011 Tōhoku Japan Triple disaster

On 16 March 2021, the Teach311 + COVID-19 Collective (www.teach311.org) hosted a virtual roundtable discussion entitled “Sources of Disaster: New Epistemic Perspectives in Post-3.11 Japan.” This brought together scholars and students in history and anthropology of Japan to explore how 11 March 2011 (3.11) changed our ways of knowing—from ideas of acceptable risk and safety, to notions of home and belonging, lived experience and

practical knowledge, and historical knowledge itself. Teach311 formed in April 2011 as a collective of students and scholars, including those directly affected by the triple disaster. Drawing from multiple disciplines, we have asked a series of questions, beginning by tracing the roots of the disaster. This led us to think through the concept of genba to critique the equation of place-names like Fukushima with one discrete crisis, which we argue overshadowed other developments that made it a compound disaster.¹ The roundtable focused on the idea of the “source” to get at these epistemic shifts. The “source” is a way to think about origins, but also the materials—texts, media, or testimony—that we collect and analyze to give rise to new or better knowledge. For us, the notion of “source” in relation to the politics of epistemology is an apt next step after exploring roots and genba to understand what reconstruction means in history when it is conducted alongside recovery. Each panelist gave an opening statement, followed by a discussion. We hope that by sharing this abridged transcript, scholars and students will join us as we continue exploring the significance and meanings of “sources of disaster” in Japan. First to speak was Julia Mariko Jacoby.

— Lisa Onaga (MPIWG, Berlin), Kristina Buhrman (Florida State University, Tallahassee), Chelsea Szendi Schieder (Aoyama Gakuin, Tokyo)

Julia Mariko Jacoby (JMJ): The question, “What can history contribute for future disasters?” has dogged me since the triple disaster of 2011. In my opinion, the main contribution is examining the circumstances behind the generation of historical sources and how they have been used or discarded in the past. I will first present two seemingly similar, but different, sources written by scientific experts in reaction to the Shōwa Sanriku Coast tsunami of 1933. Using these sources, I will develop three ideas on how history can help us reflect on how to deal with sources about disasters, and what history can contribute for future disasters.

The first source is Terada Torahiko’s essay *Tsunami to ningen* (Tsunamis and humans), written in 1933.² Terada was a renowned physicist who wrote numerous essays about physics in an accessible way for popular magazines. His contribution to disaster prevention is often reduced to an aphorism quoted in texts on disasters: *Tensai wa wasureta koro ni yattekuru* (Natural disasters happen just when we have forgotten them). What makes this essay so compelling is how he seems to have anticipated the central issues we are discussing today. Terada observed how the memory of disasters fades, and how nature operates on different timescales than humans, with decades or even centuries of quiescence between large-scale earthquakes and tsunamis. This is too long for us humans, who only live for decades, so memories and disaster prevention knowledge get lost between generations. Terada also pointed out that natural disasters are not disasters of nature but of society, that disasters happen when humans are ignorant about natural phenomena, and that it is

¹ Please see Onaga and Moore (2017) and Onaga and Wu (2018) for additional information.

² Terada’s collected works have since been republished. Please see Terada 2011.

our responsibility to make technology resilient to nature. Therefore, he stressed the importance of studying and teaching knowledge on disasters.

The second source is the first essay in the *Jishin mandan* series (Entertaining talk about earthquakes). These were written by the seismologist Imamura Akitsune, one of the most important pioneers of earthquake and tsunami prevention, mostly for his colleagues in earthquake research. This particular essay is compelling since he reflects on his role as a scientific expert providing proposals for reconstruction following the Shōwa Sanriku tsunami of 1933, and how he used local sources to anchor his disaster prevention recommendations.

Imamura's reconstruction plan was based on relocating villages to higher ground, allegedly after hearing a local legend in Funakoshi that had saved the village from the tsunami, which was attributed to the legendary seventh-century ascetic En no Ozunu, whom Imamura saw as kind of a forerunner expert. But not all local traditions struck him as helpful: he condemned the Japanese custom of "clinging" onto ancestors' land "beyond reason," which hampered relocation. Imamura also advised using memorial culture to convey and fight the erosion of knowledge, so tsunami memorial stones were inscribed with clear prevention instructions.

These two sources bring us to three things that we as historians, but also scholars in general, can do using sources that highlight the importance of looking at history for the future. Firstly, we have to continuously retell and reinterpret disasters for new generations—not only to fight the inevitable erosion of knowledge but also to help society learn lessons. The fact that Terada's ideas are being tossed around now as seemingly new insights reminds us of the importance of keeping these sources alive.

Secondly, we have to be aware of the power and responsibility we have concerning which sources are passed on and which are not. Imamura's essay shows us how seemingly centuries-old traditions were engineered to fit his disaster prevention agenda. His use of tradition was selective but effective and meant that memorial stones were built systematically and tsunami evacuation training was introduced as a part of commemoration days. This tells us that we also need to reflect on why we value some sources over others.

Thirdly, we historians put disasters and their sources into a larger perspective, pointing out that disasters need to be seen in their specific historic and societal contexts. Terada tells us there is a strong link between disasters and a society's relationship with science and technology, which is as true today as it was true in the 1930s. Imamura's essay makes us aware that common tsunami prevention practices are rooted in the technocratic thought of the 1930s which believed that the right amount of planning and technology by scientific experts would solve all of society's problems. Looking into the past helps us to reflect on our current society, and what relationship we want to have with science and technology in the future.

Next, Kohta Juraku gave his opening statement.

Kohta Juraku (KJ): My topic is about the simulation system called SPEEDI. It used to be the key technology for nuclear emergency response in Japan and was expected to play the main role in evacuation decisions. But the new regulator banned the use of SPEEDI in 2016. What I discuss here is a story positioned between this heavy reliance on technology and a total ban of the same technology.

Consider the expected application of this technology before the Fukushima accident happened. For example, in a national nuclear emergency drill co-organized by central government and nuclear hosting local governments, a map charted SPEEDI calculations of the dispersion of radionuclides in a hypothetical emergency at the Kashiwazaki-Kariwa nuclear power station in Niigata. Based on these results, decision-makers could easily determine the zones for evacuation or sheltering inside houses, because they were obvious at a glance. However, this is not what happened in the wake of the Fukushima disaster.

In the 3.11 disaster, the earthquake and subsequent tsunami caused a blackout and network damage at the Fukushima nuclear power station that made it impossible to use ERSS, a computer system that was expected to give the so-called “source term” critical to SPEEDI’s predictive calculations.³ After the nuclear disaster at Fukushima, many people noted that there should be a SPEEDI calculation, and some realized that two charts disclosed by the Japanese government later were very similar: one indicated the results of monitoring the actual contamination, and the other was from SPEEDI. Both showed heavy contamination to the northwest of the plant. This became a big scandal because people began to suspect that the government had hidden the SPEEDI prediction from the public, so they had not known the best directions in which to evacuate.

However, the SPEEDI chart later disclosed by the government had not been predictive but was, rather, a reverse calculation made after the event, lacking any predictive calculations that could have been used for emergency decision-making as planned. So, it was frustrating that many people framed the issue as one in which SPEEDI had created reliable calculations and this was simply a cover-up created by bad people in the government and experts, called the “nuclear village.” This prompted me to think about the concept of the “normalization of deviance,” formulated by Diane Vaughn in relation to the Challenger disaster. Vaughn challenged the popular notion that bad people create bad situations, which can be fixed by punishing or excluding these bad actors. Often, she noted, good people create bad consequences.

My hypothesis in the case of Fukushima and SPEEDI builds on her insight. My study with my collaborator, Dr. Shin-etsu Sugawara, found that SPEEDI couldn’t have worked as planned. SPEEDI created reverse calculations and, if radionuclides were released from damaged plants at differing times, the direction of the radioactive plume could be pretty different. It was very difficult, almost impossible, to predict when such a big release would happen at that damaged power station. This is similar to what a sociologist of history, Donald Mackenzie, suggested—that there is a “certainty trough.” In his study of the intercontinental ballistic missile navigation system, he found that perceptions of uncertainty surrounding advanced technologies differed among people involved in technical and political controversies. While core experts understood the uncertainty of intercontinental ballistic missiles, policy-makers tended to underestimate it, whereas critics tended to overestimate it.

Our study found a similarly large difference in perceptions of uncertainty. In 2016, national regulators banned the use of SPEEDI for nuclear emergency responses. At

³ This refers to the timing, amount, type, and composition of released radionuclides (Sugawara and Juraku 2018).

the same time, the government allowed local municipalities and the prefectures to use it, at their own risk. So, local people had to decide whether to use SPEEDI or not when the next nuclear disaster happens. Alternative plans by the new regulator prescribe concentric-shaped evacuation areas and, depending on the level of the emergency automatically classified by the status of the nuclear plant, moving local people to another area or telling them to shelter in their homes, not using such a simulation system.

I was recently invited on an NHK⁴ program about a nuclear power station in the Shikoku area which collected the voices of ordinary citizens there. Many people said they had no interest or feelings on nuclear power, or even knew the name of the hot nuclear power plant hosted in their prefecture. Some didn't know that nuclear stations were still there. My concern is that we might be creating a new safety myth by perpetuating and privileging the convenient story that bad people who do bad things are punished and excluded, and that is okay because now we have new planning preparedness. But, in my view, that's not actually the case.

Next, the Slater and Wiemann team discussed "Voices from Tohoku: Digital Archive of Disaster Recovery and Mobilization."

David Slater (DS): I would like to offer this opening statement: "voice is what makes so much other data interpretable." We only began recording this archive because all of the people whose houses we were digging debris from asked us to. They had a story, they thought that nobody else was listening to it, so they asked us to record and keep it someplace. We've been trying to do that over the last 10 years, and what we have archived is mostly used by locals. Most of our hits come from Japan as the website is only in Japanese, but it's had 10,000 hits, which is pretty good for a world narrative archive of disaster. The website has more than 1000 shorter clips from seven different communities that people in the areas wanted to share. They wanted to get their own stories out for other people to hear, and they wanted to find a way to listen to each other's stories. Disaster stories are hard to tell to your neighbors who have gone through the same things you have. Our group of researchers were somewhere between close and distant, from Japan and speaking Japanese, but not from the immediate area. This liminal status gave the residents both confidence (that we would understand what they said) and license (to freely tell their story).

But an archive is only as good as the people who use it, even more so than a lot of other data sources. Many scholars have used our material in the past, and when Anna said that she wanted to use this material for her class, I was delighted. Listening to voices is a privileged way to know others who have survived disaster.

Anna Wiemann (AW): I got to know David's narrative archive in 2013 and 2014, when I did fieldwork in Japan. David had presented the archive at a talk at Sophia University. So, when I had the chance to design a graduate class at LMU Munich last fall, I decided to frame it in terms of "Collective Memory in Japan after 3.11" and

⁴ Japan Broadcasting Corporation.

bring students into contact with social science concepts and methodology, but, most importantly, with empirical data from David's archive. He was so generous in supporting this teaching and research project. Alex, Stella, and Jacob are now going to present some more details.

Alexander Dekant (AD): Our class involved three phases. First, we learned about collective memory, which we defined as a social process based on language or voice, which continually constructs and reproduces a shared pool of memories. Second, we familiarized ourselves with qualitative content analysis. Finally, we worked with "Voices from Tohoku," especially with data from Minami-Sanriku. Our goal was to understand the interviewees' individual experiences and sociocultural backgrounds. From there, we tried to understand their collective experience and the emergence of collective memory.

We each transcribed one interview with a Minami-Sanriku resident that had taken place one to two years after the disaster. Based on our research question, "How did the experience of the disaster influence feelings of solidarity in Minami-Sanriku, and how does the community see their relationship to other parts of Japan?" we deduced three main categories: human relationships and interactions (including solidarity and conflict), living conditions before and after the disaster, and relationship patterns to the Japanese government, media, or other regions.

Stella Winter (SW): I will give you an example from the category "human relationships and interactions"—an interview with a Shinto priest and his wife in their 60s. They were living in a temporary housing village with many people from different communities, and mainly spoke about the changing relationships in their hometown. In their opinion, bonds between people had already loosened before the disaster took place. They thought the disaster could have been a reason to help each other again, but it had not really reversed the change, as expressed in the following quote, which might be a slight criticism of the Japanese media's frequent use of the word *kizuna* after 3.11. *Kizuna* means "bonds between people," and was the word of the year in 2011:

It is said that in the past bonds between people really were tight, that these bonds were very strong. But these bonds loosened gradually. Due to the disaster, they are getting stronger again, they say, but I have the feeling the new bonds are different than those meaningful bonds in the past.

Jacob will now discuss the second category, "changing living conditions."

Jacob Herzum (JH): I transcribed an interview with a woman around 60 years old in Minami-Sanriku who had lost both her home and office job because of the tsunami and was living in temporary housing. Listening to her, you get an impression of the situation that she and other members of her community are in. They feel uncertainty about the future and a great sense of distress. You can feel it from the answer she gives when she is asked about future prospects. She speaks about getting a job and a new home and does not look too far into the future. I think that shows that she is in

an early coping stage. This quote additionally shows that she is looking for outside help to deal with the problems she and other people in Minami-Sanriku face:

What do I wish for? Well, how can I say this, now that our lives have been saved from the tsunami, I hope nobody wants to end their own life. And it would be great for everybody to be able to work and get a place built to live in. That's all.

AD: Lastly, some of the themes in the “relationship to government, media, and other regions” category were very present in my interview with a 35-year-old male Shinto priest. He talked extensively about his relationship to the media, mostly in a negative way, expressing feelings that his real experience was not being heard, and a fear of the region being misrepresented:

Well, it is their way to produce footage. When people look at it from the point of view of the media going to different regions, I think it is important that they produce it in a way that people do not get wrong impressions. But when you talk to them, they frequently have a certain goal, and they ask you in a way to get the conversation in the direction they want to . . . I didn't know what they were going to make of what I said.

This quote is interesting given the theme of today's discussion, because the interviewee felt that, in conversations with journalists, his voice was forced to fit a certain storyline. The interviews we carried out were such a great opportunity to gain a deeper view into individuals' lives, by working with their original voices as our source.

The final speaker was Levi McLaughlin.

Levi McLaughlin (LM): Only something like 20% or so of survey respondents will self-identify as religious in Japan. Nonetheless, religious organizations remain a significant presence, and all kinds of activities that an outsider is liable to label “religious” remain components of people's everyday lives. Perhaps, paradoxically, the horrors of 3.11 provided a new way to describe religion in a positive way. A collective of Japanese religious aid providers, in collaboration with well-placed academics and sympathetic journalists, carefully curated this narrative.

There are components of the post-3.11 religion narrative that are significant to us if we're thinking about knowledge production and ways data are collected and presented. The narrative emphasized religious aid provision as an act of individuals instead of sectarian organizations. There was a lot of emphasis on aid-providing clergy “overcoming sectarian affiliation,” or overcoming religion itself, *shūha o koete* or *shūkyō o koete*, even as they ironically used sectarian resources to overcome their sectarian identities. “Religion” as a contributor to post-3.11 reconstruction was consistently depicted as apolitical. This image thus largely precluded the engagement of politically-active so-called “new religions” like Soka Gakkai, Kōfuku no Kagaku and others that bear a strong social stigma in Japan, in part because they engage in electoral politics. Media coverage instead emphasized individuals from safely traditional groups like temple-based Buddhist sects. Shinto and Christianity

get in there, as do a few new religions that have curated their public image in a way that doesn't trigger fears of categorical transgression.⁵

Religion in this narrative is presented as scientific, as a meaningful addition to clinical care. You see this at work in the training of a new category of certified religious professionals known as the *rinshō shūkyōshi* or the “interfaith chaplains,” literally “clinical religion instructors.” Interfaith chaplaincy grew out of initiatives from Buddhist priests working with Christian ministers and others who offered volunteer sutra recitation and prayers over the mass dead, provided suicide prevention hotline assistance, and other aid. These offerings were systematized, expanded, and have resulted in the establishment of a new department at Tohoku University, the Department of Practical Religious Studies. This indicates the success priests and others have had in navigating Japan's constitutional divide between religion and state. If you set up a new religious studies program for the training of religious professionals in a Japanese public university, that's a pretty significant achievement working around Japan's persistent allergy to public avowals of religion.

In terms of thinking about how knowledge is produced, it is important to consider how the people we research engage in their own theory-creation. I'll give you an example from 2014, from an intensive two-day training session for the interfaith chaplaincy in Natori, coastal Miyagi Prefecture. It's a city just outside Sendai which was strongly affected by the tsunami.

There were a lot of moments during that training session that indicated the power of research subjects to determine how scholars should categorize knowledge. Early one morning, a number of trainees had come together to undertake discourse analysis of their interactions at field placements across Japan. One Buddhist priest was wryly reflecting upon the fact that, at his placement at an old folks' home, he had been fundamentally unable to bridge the gap between himself and one of the residents. He worked with his fellow trainees on microlevel analyses of his conversations. They drew on clinical care instruction that is largely inspired by models outside Japanese contexts but elaborated on theories in locally relevant ways. For example, they discussed the idea of *ikigire*, or “depleted energies,” in which both a caregiver and their recipient can enter into a caregiving situation in which they no longer have the capacity to advance, and the notion of *konpon*, or “disarray,” the feeling that things will never get better, a sense of despair that the situation will never improve. I think most relevant for our purposes today was their discussion of *jikansa*, or a “time gap.” Over and over again, you hear declarations that Japan has left the terrible calamity of 3.11 behind and is now moving forward. But those who lived through it, who lost their loved ones that day, are still living in that day. They have not recovered, and they remain temporally in that moment. Meanwhile, those who seek to help them move progressively further away from them in time. How to bridge that gap? These religious practitioners were thinking very seriously about that.

The panel was then asked questions.

Angela Marie Ortiz (AO): Thank you, it has been such an honor to listen to all your research and insights from a practitioner's perspective. My question is looking

⁵ See also McLaughlin (2016).

toward innovation and social impact, both from the nonprofit and corporate sectors. Can you share some ideas or insights about how we can make use of the research and sources, stories and insights you have made in a really practical way? How do we integrate this into our programming and our communication strategies? Where can we find practical, tangible steps forward from this?

LM: Can I ask a follow-up question to Angela—what do practitioners need? If you could lay out a few practical needs I think that would help us get into that conversation.

AO: For example, we build programs based on information from researchers. One thing from the Wiemann and Slater presentation about the changing relations that really hit me was about residents being in agenda-led reporting situations. For us, we're just sort of piecing together, "Okay, how can we support that, especially when they talked about wanting help from the outside?" For example, in your research and what you've understood about the role of religion now or the new role of religion—for an NPO on the ground, how can we make use of that information and that insight in a valuable way?

DS: It's not just an academic question, right? It's like, so what? What are we as academics doing here? What sort of impact do we want our work to have, beyond academia? I think, having worked with a lot of support agencies up in Tohoku, and in Tokyo, not only with disaster but also with homeless or refugees, a lot of times support agencies really don't have the resources to do the kind of research that we all do. It's funny, they spend a lot more time with some of the people for a longer duration than we end up doing, especially if you are not in Japan. The relief organizations don't have enough time to do the kinds of intensive questioning and systematic data collection and analysis of that data that we do.

I think one thing that all of us can and should be able to do is translate findings in a way that speaks beyond the academy and distribute this information not behind paywalls in peer-reviewed journals, written in obscure scholarly languages, but in ways that are accessible to the subject, and that the organizations who are helping them find meaningful. That means writing in Japanese. Those are just the fundamental things that I think cut across all of our research. I think, if we're not doing that, we do have to ask ourselves, "Why not?" and examine our own politics, me included.

We don't always succeed in this. For instance, we've really failed in Tohoku by not translating our data and our findings into a language that policy analysts and decision-makers can use. So I think identifying the failings of your own research is a starting point.

KJ: We can provide something different from the too-convenient popular stories. For example, in my case, it's too convincing to think that bad people just failed to utilize good technology. That kind of story makes people feel like, it's not our problem, it's *their* problem, or it's a problem with politics or bureaucracy, or some advanced technology or something. So then it looks like there's no space for civil society to

engage. What I try to do is illustrate a different story: we have technology, it has its advantages, but at the same time it always comes with uncertainty. We need to discuss this uncertainty and think about the good ways we can utilize it before something happens at our nuclear power stations, so that it creates some space for local residents or the entire Japanese society. To begin, let's have an intensive discussion about such preparedness on nuclear risk. That is my strategy for connecting certain movements of nonprofits, entrepreneurs, our scholarship, and the complex business of 3.11.

AW: For me, at least, I hope that working with young people with concrete or empirical data, guiding them through the research process can help them understand how research functions and where data comes from, what kind of contextual factors there are that we need to interpret sources, and then, how to draw conclusions from that. I hope that my students will be able to interpret research results for practitioners if they work in a practical field at some point later.

I also think it is very important to teach young people today to reflect on the scope of scientific statements: So, what does that really say? What kind of source is it? To really interpret the data and understand the scientific processes that we are confronted with. Every day, new scientific knowledge is presented to us in the media. And then another day, there's a completely different result from certain data. So people in front of their TVs often have trouble understanding what's going on here. These are exactly the processes that we need to make our young people understand, so they can work on their own opinions, but, critically, ask how a certain person has come to a certain conclusion or a certain argument.

JMJ: I think it's very important to engage with the local history of your own community. For example, there is a great anthropologist and museum curator at Musashino Art University called Katō Koji. Since 3.11, he has been actively saving historical materials in the disaster regions and preserving them with his students, to put on local exhibitions, provide a place for conversation, and a wonderful opportunity for locals to rediscover their history (Katō 2021). But I also think there should be a way to engage beyond our own local history, because we are so mobile these days. Connecting experiences from Tohoku to other regions at risk from tsunamis could serve tsunami prevention.

I completely agree with Anna and Juraku-san that it's so important to teach and communicate with communities as academics, especially regarding science and technology. We have to deconstruct popular technological imaginaries: technology is often perceived as a black box, something larger than humans, or magically helpful. But there are so many societal negotiations and decisions involved.

Take, for example, how the height of seawalls was calculated. Seawalls were built all over Japan soon after the 1960 Chilean tsunami had happened, so its height became the reference point for seawalls. But actually, it was an unusual tsunami that came from the other side of the ocean, from Chile, which is a very different mechanism from most Sanriku tsunamis, which are caused by nearby subduction zones, like in 1933 and 2011. These are much higher. There were discussions among

engineers that it's realistic to build seawalls of the Chilean tsunami height (5 meters), but not over 30 meters, like the 1933 tsunami. But nobody knows that. At the time, it was reported in the newspapers that a seawall had successfully protected Tarō against a tsunami, so politicians promoted building seawalls. This started a safety myth that a concrete seawall can protect you from tsunamis. These stories have to be made transparent and communicated to the local communities.

LM: Could I ask a question in regard to data and reliability? I am intrigued by the cynicism of people who are engaging in these processes. Juraku gave us a very nuanced picture of people's take on safety. The presentations from the students from Munich demonstrated their interviewees' cynical approach toward journalists' pre-set objectives and their treatment in the press. I see this also with religious aid providers, who are encountering that cynicism going into aid provision and trying to carefully curate their image in order to make their programs effective. I would be curious to hear from David and Angela about whether they are seeing these kinds of skeptical approaches in their own engagements with survivors. What kind of strategies are working on the ground? How are people overcoming their own cynicism in order to carry out long-term reconstruction efforts? Or are they giving up on them? How are people reacting?

AO: Well, people just get on with it, right? I cycled down the Tohoku coast in October and passed by *kasetsu jūtaku*,⁶ and people are still living there. One of my friends said, "Look, nobody knows this. We're not supposed to admit to this, but I'm a postman, I know. People live in these spaces." They find strength from each other. I interviewed a man who felt like that town has sort of started to rebuild. There's parks, and spaces for relaxation, there's cafés. He said, "Look, when we see our kids smiling, that gives us so much energy." It's these small human interactions they're able to create that I thought of during the students' presentations today, where one woman said people felt they could not talk about their losses with others around them, because everyone had lost people and things. But help from the outside is still very valuable, because it helps fill that gap where they can talk about their stress, and get ideas of how to have more fun, endure the situation, and just get up every day and get on with it, as there's not much you can do about it. That's what I see on the ground all the time, and that is what incentivizes our volunteers to continue being there.

DS: Right from the very beginning, certainly by summer, there was so much cynicism. Our efforts at oral narrative collection actually benefited from that, honestly, because they saw that we clearly didn't have any hidden agenda or pre-set narrative, we were just listening. It was almost like a protest to talk to us, because we were not media.

Local residents' understanding of media is pretty sophisticated, the power relationships are not lost on them. They remember being burnt by this or that reporter last time, so they don't want to talk to them, but hey, it's still NHK, so maybe they will talk, but in a different way. NHK has so much more scope and visibility than scholars

⁶ Temporary housing.

in Japanese society, and that is certainly part of why people keep going back to talk to them. We don't want to simplify that relationship, because it is a complicated relationship. But we want to offer an alternative to that NHK voice.

LM: I think that is key. I'm always thinking how to work that complexity into the analysis and the research itself, and this very often proves difficult, as you know.

JMJ: I would like to ponder some final thoughts, following David's comment. Do the people on the ground still see effects of the internal colonization of Tohoku affecting their relationship with the rest of Japan? From what I've seen in my research on the 1933 tsunami, the state saw reconstruction in terms of internal colonization and developing Tohoku. Even anthropologists from the 1930s went into the field with the preconceived notion that they had to support the resettlement program because it was the only viable way of tsunami prevention. So they talked to locals with the goal of finding out why they had not resettled, thus, molding the locals' stories. So, whose story is it?

A Bibliographic Note on the 311-Disaster Research

Lisa Onaga, Kristina Buhrman, and Chelsea Szendi Schieder

The Teach311.org project formed in response to the need for a concrete resource to accompany the "teaching moment" spurred by the 11 March 2011 cascade of disasters in Japan (see in more detail at the website "Teach311.org"). The various researchers involved with the project over the years share an interest in lowering the barrier to awareness about key scholarship in the history and sociology of science and technology. Teach311.org today serves as a hub for introducing new resources for teaching in higher-level education and for catalyzing new academic exploration into various literatures and languages surrounding different categories of disaster.

The material appearing on the site began as a digital annotated bibliography of relevant books, journal articles, and multimedia, with translations across Japanese, Korean, Bahasa Indonesia, Chinese, and Arabic coordinated amongst volunteers. The project also offers a digital interview collection, original research and reflective essays about fieldwork and emergent issues, and a publication collaboration on the theme of "terms of disaster" with *Arcadia* of the Rachel Carson Center for Environment and Society.

Since 2020, the project has been known as the Teach311 + COVID-19 Collective, with new collaborations, articles, and video contributions, including from students and teacher-scholars of the Global South, which emphasize the similarities between the disasters ten years ago and today. The list below reflects recent literature suggested by project members, which complements the scholarship discussed in Kohta Juraku's reflective literature review introducing this commemorative issue of EASTS (News and Events, vol. 15, no. 2).

Jung, Byeong-ho 정병호 and Ga-hyung Choi 최가형 eds. 2018. *Ibonui jaenanmunhakgwa munhwa* 일본의 재난문학과문화 (*Disaster Literature and Culture in Japan*). Seoul: Korea University Press.

This book examines disaster narratives from the medieval period to post-3.11 Japan. It introduces and analyzes selected literature, movies, documentaries, anime, and other media products; authors investigate changing perceptions of disasters and the roles of disaster literature in different periods.

Lee, Kangwon 이강원. 2017. *Jaenangwa salda* 재난과살다 (*Living with Disaster*). Seoul: Seoul University Press.

Based on an ethnographic study at the Disaster Prevention Research Institute, Kyoto University, this book explores practices of Japan's disaster prevention sciences. By focusing on various experiments conducted between disasters, this book attempts to redefine what it means to live with disasters.

Kim, Kiheung 김기홍. 2019. "Inryuse maekrahwahagi: pohang 'chokbaljijin'ui sahoejeok guseong" 인류세맥락화하기: 포항 '촉발지진'의 사회적구성 ("Situating the Anthropocene: The Social Construction of the Pohang 'Triggered' Earthquake"). *Gwahagisulhagyeongu 과학기술학연구 (Korean Journal of Science and Technology Studies) 19 (3): 51–117.*

This article analyzes controversies within the scientific community as to whether the earthquake that occurred in Pohang, 2017 was caused by the Enhanced Geothermal System project or geological movements initiated by the Great Tohoku Earthquake in 2011. Based on Isabelle Stenger's Gaia theory and Barbara Herrstein Smith's relativist theory, it examines how the Pohang earthquake can be defined as an Anthropogenic event.

Chowdhury, Indira. 2015. "Oral History and Earthquake Survivors." *Teach 311 + Covid-19 Collective*, September 11. <https://www.teach311.org/2015/09/11/chowdhury30may2015/>

The parallels between the 2015 Gorkha earthquake in Nepal and an earlier earthquake in Nepal, as related on the same day to oral historian Indira Chowdhury, inspire a reflection upon the role of memory for both oral history subject and interviewer.

Hashimoto, Yuta. 2020. "Transcription Project: Tackling Pandemics in Early Modern Japan (Part 1)." *Teach 311 + Covid-19 Collective*, July 20. <https://www.teach311.org/2020/07/20/hashimoto-1-en/>

This article discusses the establishment of a project to use artificial intelligence to read sources in kuzushiji or Japanese cursive writing in the process of crowd-sourcing the transcription and analysis of primary sources on earthquakes in early modern Japan.

Kanebishi, Kiyoshi 金菱清 ed. 2016. *Yobisamasareru reisei no shinsaigaku: 3.11 sei to shi no hazama de* 呼び覚まされる霊性の震災学 : 3.11 生と死のはざままで (*Awakened Spiritual Earthquake Disasterology: 3.11 Between Life and Death*). Tokyo: Shin'yōsha.

This collection of essays, based on ethnographic studies of the 3.11 disaster area, examines ghost experiences, memorialization, and burial technologies as well as life and death in the nuclear exclusion zone.

Kenens, Joke, Michiel Van Oudheusden, Go Yoshizawa, and Ine Van Hoyweghen. 2020. "Science by, with and for Citizens: Rethinking 'Citizen Science' after the 2011 Fukushima Disaster." *Palgrave Communications 6 (58)*. doi:10.1057/s41599-020-0434-3.

This article reveals the ways in which the term "citizen science" can obscure significant and salient differences between organizations via an ethnographic analysis of citizen-led radiation monitoring groups that emerged after 3.11.

Kimura, Aya Hirata. 2016. *Radiation Brain Moms and Citizen Scientists: The Gender Politics of Food Contamination after Fukushima*. Durham, NC: Duke University Press.

This intersectional sociological analysis of technoscience, gender, and international food politics examines how and why women across Japan turned to citizen radiation-measuring organizations instead of other strategies to question the normalcy of living with radiation contamination.

Juraku, Kohta, and Shin-etsu Sugawara. 2021. "Structural Ignorance of Expertise in Nuclear Safety Controversies: Case Analysis of Post-Fukushima Japan." *Nuclear Technology 207 (1): 1–19.*

This collaboration examines three aspects of structural ignorance about the dynamic nature of nuclear safety and emergency preparedness in Japan after the 3.11 nuclear disaster at Fukushima Dai-ichi. The authors call for comparative studies of structural ignorance as a way of overcoming the structural tendencies in Japanese nuclear regulation toward avoiding conflict and uncomfortable knowledge and toward automation.

Koikare, Mire. 2020. *Gender, Culture, and Disaster in Post-3/11 Japan*. London: Bloomsbury Academic.

This social history of the response to the triple disasters in Japan considers the idea of "resilience" from various perspectives and examines how ideas of gender, militarism, nationalism, and transnationalism all interact.

Kottmann, Nora and Cornelia Reiher, eds. 2020. *Studying Japan: Handbook of Research Designs, Fieldwork and Methods*. Baden-Baden, Germany: Nomos Verlag.

The triple disasters created pressing new research situations in Japan that reinforced a need to articulate research methodologies for a new generation. This volume is an invaluable resource for early-career and veteran researchers striving to understand post-3.11 Japan. It includes several chapters drawing upon work in disaster-stricken areas to discuss digital oral narrative research (David H. Slater et al.); qualitative content analysis (Anna Wiemann); and coding ethnographic post-disaster data (Julia Gerster).

McLaughlin, Levi. 2021. "Disasters." In *Bloomsbury Handbook of Japanese Religions*, edited by Erica Baffelli, Andrea Castiglione, and Fabio Rambelli, 27–34. London: Bloomsbury Academic.

This contribution focuses on the redefinition of "religion" after 3.11 under a category of clinical, non-denominational "spiritual care," and puts this in the context of a longer history of the relationship of religion to disaster in Japan.

Thouny, Christophe, and Yoshimoto Mitsuhiro, eds. 2017. *Planetary Atmospheres and Urban Society After Fukushima*. Singapore: Palgrave Macmillan.

The essays in this volume build on debates in ecocriticism and examine the urban sociology and cultural politics surrounding the triple disasters. The collection convincingly shows how the economic-environmental crisis of "Fukushima" needs to be reconsidered as a planetary event.

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ORCID

Lisa Onaga  <http://orcid.org/0000-0002-5545-1699>

Julia Mariko Jacoby  <http://orcid.org/0000-0002-0418-9600>

Kohta Juraku  <http://orcid.org/0000-0002-0593-3980>

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Terada, Torahiko. 2011. *Jishin Zakkan/ Tsunami to Ningen Terada Torahiko Zuihitsu Senshū* 地震雑感/津浪と人間 寺田寅彦随筆選集 (*Miscellaneous Thoughts about the Earthquake, Tsunami and Humans: A Collection of Terada Torahiko's Essays*), edited by Shunji Chiba and Mitsuhiro Hosokawa. Tokyo: Chūōkōron Shinsha.

Tōhoku Kara No Koe: Dejitaru A-kaivu 東北からの声: デジタルアーカイブ (Voices from Tohoku: Digital Archive of Disaster, Recovery and Mobilization). <https://tohokukaranokoe.org/>

Lisa Onaga is a Senior Research Scholar at the Max Planck Institute for the History of Science and co-founder of the Teach311 + COVID-19 Collective.

Chelsea Szendi Schieder is a historian of contemporary Japan and Professor in the Faculty of Economics at Aoyama Gakuin University.

Kristina Buhrman is an Assistant Professor in the Department of Religion at Florida State University and researches the history of omens and disasters in premodern Japan.

Julia Mariko Jacoby earned her PhD at the University of Freiburg, Germany. Her dissertation was “Disaster Prevention in Japan 1885–1978: Natural Disasters, Scientific Expertise, and Global Transfers of Knowledge.”

Kohta Juraku is a Professor in the Department of Humanities and Social Sciences at Tokyo Denki University, working on the sociology of the governance of risky technologies.

David H. Slater is Professor of Anthropology at Sophia University, and archiver and curator of “Voices from Tohoku: Digital Archive of Disaster Recovery and Mobilization.”

Anna Wiemann is Assistant Professor at Ludwig-Maximilians-Universität (LMU) Munich, and researches networks and mobilization processes in the Japanese anti-nuclear movement after Fukushima.

Alexander Dekant is a first-year MA student at LMU Munich’s Japan-Center.

Stella Winter is a first-year MA student at LMU Munich’s Japan-Center.

Jacob Herzum is a first-year MA student at LMU Munich’s Japan-Center.

Levi McLaughlin is Associate Professor at the Department of Philosophy and Religious Studies at North Carolina State University. He has published and presented widely on religious responses to disaster since 2011.

Angela Marie Ortiz is the founder of A Place to Grow (<http://www.placetogrow-ngo.org>), a community-building nonprofit using fitness and language exchange to inspire and connect children in Tohoku.