Post-Disaster *Memoryscapes*: Architectural Mediums as Practices of Care

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Abstract

This essay enters the Covid-19 pandemic activated discourse in a *sympoietic* manner by drawing parallels to the architectural response to the *3.11 Disaster* in Tohoku, Japan as a lens to reflect on architecture's broader response-ability towards matters of human displacement, collective trauma, loss, and memory. It explores the notion of burn-out through the scope of disaster-stricken Japan and the road towards recovery by examining three cases of architectural and curatorial projects to illustrate architectural skills and media – drawing, model-making and fieldwork. All of them were characteristically deployed and instigated community transformation through conversational platforms and trust-building. These platforms are referred to as *post-disaster memoryscapes*, to illustrate the result of fusing community collaboration with architectural mediums in a distinct ethnographical mode capable of reconciling past, present and future. The paper argues that such ethnographical modes of operating expand architecture's role from a limited sense of building (re)construction, towards the Harawayian notion of *sympoietic caring*.

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Received:
1 September 2020

Accepted:
2 April 2021

DOI:
10.17454/ARDETH08.08

ARDETH #08

Are we not like those mechanical toys that endlessly make the same gesture when everything else has changed around them? (Latour, 2004)

Introduction

As of March 1st, 2021, the coronavirus (Covid-19) pandemic accounts for 2,527,891 deaths, profound emotional and material losses, with over 49 million people still not recovered (Covid-19 Map - Johns Hopkins Coronavirus Resource Center, 2020) and health systems around the world continuously fighting against collapse. Natural and human-made disasters may have been a constant throughout history, but the beginning of the millennium has witnessed increasingly powerful phenomena in intensity and frequency[1] leading to the *world under threat* paradigm that is central now in STS discourse.

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Recently, there has been a growing interest among architects in investigating the increasingly significant and yet understudied relationship between architecture's role following disaster. In the edited volume "Critical Care: Architecture and Urbanism for a Broken Planet" (Fitz, Krasny, 2019) the editors weave together tenets of ecology, economics, social justice, feminism, and politics to envision a new direction for how architecture and urban planning can be expanded towards modes of caring. Since the onset of the coronavirus pandemic, many have attempted to make sense of the crisis by looking for commonalities amongst similar events in the past. In terms of epidemiological characteristics and intensity, the most apparent comparable events would be the 2003 SARS and 2015 MERS public health crises. Attempting to find architectural responses to crises as the one we are collectively faced with, one might have to investigate different worlds, and invite the consideration of broader themes, such as human suffering, loss (of place, space, health), trauma and memory, for which non-construction oriented architectural responses emerged and could serve as a paradigm for the moments architectural practice becomes immobilized by calamity.

1 – Hurricanes: **Katrina (2005), Ike (2008) Wilma (2005), Ivan (2004), Haiti earthquake (2010), 3.11 Tohoku Disaster (2011). Source: Arora and Arora, 2013.**

In “Staying with the Trouble: Making Kin in the Chthulucene” (2016), feminist theorist and historian of science Donna Haraway posits sympoiesis[2] as the vehicle to navigate the disassembling that characterizes our contemporary moment. This research employs the elements of sympoiesis towards a mode of caring where seemingly unconnected ecologies of practices can begin to inform each other, in essence pointing towards the butterfly effects that the anthropocenic era has brought upon our collective livelihoods. Sympoietic caring comprises of *a. situated knowledges* as the pivot towards a feminist empirical objectivity *b. sympoietic threading*: the process of creating an earth-wide network of connections between different communities, localities and temporalities to employ *c. compost writing*: a narrative with which to curate collaborative, synchronic and mutual understandings of unexpected stories, human and non-human.
Departing from the aforementioned framework, this paper focuses on the architectural response to the ‘3.11 disaster’ – the 2011 Tohoku earthquake, tsunami and nuclear meltdown – as a lens to reflect on possible architectural strategies of caring in the present state of crisis. It examines a series of initiatives characterized by a distinct “ethnographical” logic that allows them to operate beyond a limited sense of building (re)construction. The paper argues that each project deploys architectural and curatorial media – such as model-making, drawing, and fieldwork documentation – towards the reimagination of architectural practice involving volunteering and collaboration, guerilla-like interventions, storytelling and community economies.
The paper comprises two main parts. The first part argues that amidst the political economy of disaster, collective storytelling along with architects’ skills can constitute a tool for creating *memoryscapes* as the first line of action directly following a crisis along with preparing communities’ visions for reconstruction in the critical period of collapsed systems. The second part unfolds this argument in the context of the 3.11 disaster, focusing on three case studies.

2 - Haraway refers to M. Beth Dempster’s “sympoiesis” term of “collectively-producing systems that do not have self-defined spatial or temporal boundaries, what she summarizes as “making-with” (Haraway, 2016: 33).

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A1. The Political Economy of Disaster and the Call to Sympoietic Care

Disaster preparedness and response is influenced by political, economic, humanitarian imbalances, and already existing social vulnerabilities, with planet-scale changes in climate systems, socio-economic inequality, and geopolitics likely to "exacerbate these trends into the foreseeable future" (Fortun, Frickel, 2013). "Disaster-induced burn-out" can be understood through the framework of the "political economy of disaster" (Cohen, Werker, 2008) in which disparities in accessibility to effective institutional prevention condition the devastating consequences a disaster can inflict on a community. Insofar being able to afford to live on higher ground on a tsunami-prone coastline, or in a home with a balcony or back garden (vital assets during the ongoing pandemic), depends on one's socio-economic status, it is necessary to discuss the correlation of disaster impact with the spatial politics of planning as a direct result of market-led interests. In this manner, Donna Haraway argues that the entrenched capitalist modes of society serve as disastrous on their own accord bringing forth asymmetries and exposed localities. Following environmental historian Jason Moore (2016), Haraway uses the term *Capitalocene* to emphasize the role of unchecked capitalist economic growth in the proliferation of current global crises, leading to its own self-destruction (2016). Paradoxically or not, all-encompassing 'growth' also has resulted in multi-inequalities of shrinkage: a shrinkage of personal identity, of interconnection and thus, of a sense of place. These losses constitute the structural condition (Het Nieuwe Instituut, 2020) unto which vulnerable human and non-human communities reside today with contingent events occurring worldwide with increased power.

When disaster occurs, the backdrop of architectural practices, namely, capital, resources and previous organizational structures, become obsolete on a shorter or longer-term basis, bringing forth new architectural entanglements of 'normality'. It exists in spaces curated by politics, economic dynamics, social factors. Natural disasters occur in a political space and although events beyond our control may trigger a disaster, the level of government preparedness and response greatly determines the extent of suffering incurred by the affected population.

It matters which stories tell stories,
which concepts think concepts (Haraway, 2015: 160).

A2. Storytelling as a Practice of Care: Post-Disaster "Memoryscapes"

Writer Rebecca Solnit discusses the effects of disaster on communities, along with the opportunities that arise in critical moments, a condition she characterizes as "post-disaster utopia" (Solnit, 2009: 3). Similarly, ecologist C. S. Holling (2004) refers to "Omega followed by Alpha". The current moment under Covid-19 arguably comprises the "Omega" stage, characterized by the exertion of conditions upon which to grasp and admit the fragility of our everyday life, forcing the reconsideration of its premises and foundations.

"When systems collapse, 'a window of opportunity' opens up for alternative systems configuration" (Olsson et al., 2006), a window "into social desire and possibility" (Solnit, 2009: 6) for people to attempt to build upon tabula rasa, reclaiming some ownership on their livelihoods' primary decision-making. Calling upon what anthropologist Stephen J. Collier and sociologist Andrew Lakoff describe "regimes of living" as the configuration of elements of livelihood brought forth in "situations in which the question of how to live is at stake" (2007: 23).

Entering this ethical consideration, the act of passing down memory is a necessary step for creating involved communities who can critically engage and negotiate "how to live anew" with state authorities and negotiate points in case of the latter bringing back policies and strategies reminiscent of pre-disaster problems (Hokugo, Yuka, 2017: 42). Remembrance can emerge through community storytelling. According to political scientist Maarten A. Hajer (1995) storylines are "narratives […] that provide actors with a set of symbolic references that suggest a common understanding" (ibid.: 62). He goes on to argue that the storylines have a strong influence on institutional decision making. The role of architects then can transform towards the creation of stages for remembrance and reconciliation, emphasizing how the architect is able to distil the social into the architectural and allow for the amalgam to inform planning processes.

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B. Architecture After 3.11: Top-Down Responses and the Architect-Ethnographer

In 2011, Japan witnessed a mega-disaster, arguably the costliest catastrophe of this century (Arora, Arora, 2013). At 2:46 pm on March 11, a magnitude 9.0 earthquake struck off the Tohoku region, devastating Japan's north-eastern coastline and causing the second-largest nuclear accident in history. The event is referred to as a triple disaster, because it consisted of a series of catastrophes: earthquake, tsunami, and nuclear meltdown, occurring in a chain reaction (Otani, 2014).

After disaster erupts, architects' modus operandi along with spatial and conceptual skills are being challenged. The initial reflex response to a destroyed city would involve proposing projects of reconstruction or new masterplans. However, what is characteristic in the moments after such a crisis is a time-gap, the moment between "Omega to Alpha", where neither locals nor institutions are ready for such initiatives, at least not before new frameworks are established.

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According to co-founder of Atelier Bow-Wow, Professor of Architecture Yoshiharu Tsukamoto (personal communication, August 30, 2020) in the modern history of Japan leading to 2011 the post-disaster architectural responses were limited to two directions: a 'practical' direction involving the wait for 'normality' before giving rise to new projects (institutional civil engineering-focused approach), and a second one, evoking a 'heroic' dimension, where architectural imagination brought forth projects for the future, albeit without having a working platform to implement these to the present (1995 Kobe Earthquake architects' response, amongst them Tadao Ando). Drawing distant links to the fieldwork expeditions of architect Wajiro Kon following the Great Kantō Earthquake of 1923, it was in 2011 within the work of volunteer group ArchiAid that a third direction emerged: the ethnographic dimension.

In the case of Tohoku, within what was previously termed as the 'practical' response, the government chose to construct seawalls of up to 15 m height and for the most part requested residents to stay in their original vicinities, with a few exceptions in cases of pronounced danger. To bridge this gap in state strategy and to reduce the backlash, some municipalities

provided additional subsidies for house reconstruction, so as not to leave the disaster-stricken communities completely to their own devices.
According to scholars Kayo Murakami and David Murakami Wood (2014), historically such plans entail three components: gigantic seawalls, raising lower-lying land and group relocation to higher land. This approach appears to be consistent because 80% of the project costs for such large-scale engineering-dominated plans are funded by national government and therefore municipalities default to them, a fact that scholars Akihiko Hokugo and Yuka Kaneko have argued takes place without considering their necessity, let alone whether they are the best option (Hokugo, Yuka, 2017). Others note that this approach can marginalize local communities in the recovery process (Satoh, 2012).
Ecologist Izumi Washitani points out the irony in pursuing ever-more sophisticated technologies of civil engineering that increase social vulnerability to the natural disaster (2012), since government partnerships with civil engineering companies prioritize economic aims, "ignoring biodiversity and ecology" (Murakami, Murakami Wood, 2014: 240). Consequently, large-scale reconstruction that is executed within a top-down framework tends to neglect the unique and special needs of each locality.
In contrast, the richly manifold and small reconstruction actions of Japan's architects, who spread across the region and operated autonomously, show the real possibilities of alternative reconstruction strategies.
One of the civil society initiatives that has had a significant impact on post-disaster community building is ArchiAid, which incorporated in its core practices an ethnographic operative logic to fathom the scale of disaster's impact. It was founded at Tohoku University in Sendai shortly after the disaster and evolved into a network of more than 300 individual architects and 16 university laboratories. Starting in the summer of 2011, architectural educators and students visited 45 small fishing villages hit by the tsunami in the remote Oshika and Ogatsu Peninsulas, engaging with the locals, drafting design proposals, building models with residents and helping them express their views.
ArchiAid particularly and consciously utilized the broader skills of the architectural profession found

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within the conceptual design mediums to communicate with the affected groups and evoke memories which would then be inscribed in drawings and models, akin to counselling through architectural expertise. Then the acquired knowledge and experience would be utilized for future projects' realization. Therefore, in this window of time directly following the disaster, this generation of architects that has been defined by the 3.11 disaster managed to have a role in preparing the local communities for things to come, acting as a mediator of memories and wishes to potentially facilitate communities' recuperation.
The architects' skills can firstly be used to render the listening experience of the locals into design visions that precede actual projects, going on to gradually 'construct the confidence' of the people along with reporting via architectural media the disaster effects. In this essay the aforementioned preliminary visions are referred to as post-disaster memoryscapes, to illustrate the platforms that are a result of fusing community collaboration with architectural mediums in a distinct ethnographical mode capable of reconciling past, present and future.
From Latourian matters of concern (2004) to Maria Puig de la Bellacasa's matters of care (2012) we witness architecture's transition within which practical outcomes of the visions and their feasibility becomes irrelevant, as it becomes more important to show up for communities without definitive outcomes and benefits in mind, other than to document the trauma of the past, sympoietically co-design the hope for the future and smooth out the processes communities have to go through following disastrous events.

The understanding of those reasons could then allow a hybrid to emerge, made of the city that had disappeared and the city yet-to-be.

A Pattern Book for Oshika Peninsula: Architectural Ethnography – Towards an "Ecology of Livelihood"
In the case of Ishinomaki-shi in the Oshika region and the surrounding towns, the objective was to map the disappearance of things following the earthquake and tsunami, along with the reasons they were lost. The understanding of those reasons could then allow a hybrid to emerge, made of the city that had disappeared and the city yet-to-be. From then on, the collective used architectural tools to illustrate sequences linking past, present and future. One of the outcomes of this effort was "A Pattern Book for Oshika Peninsula (ArchiAid Oshika Peninsula Supporting Seminar, 2011-12)" where

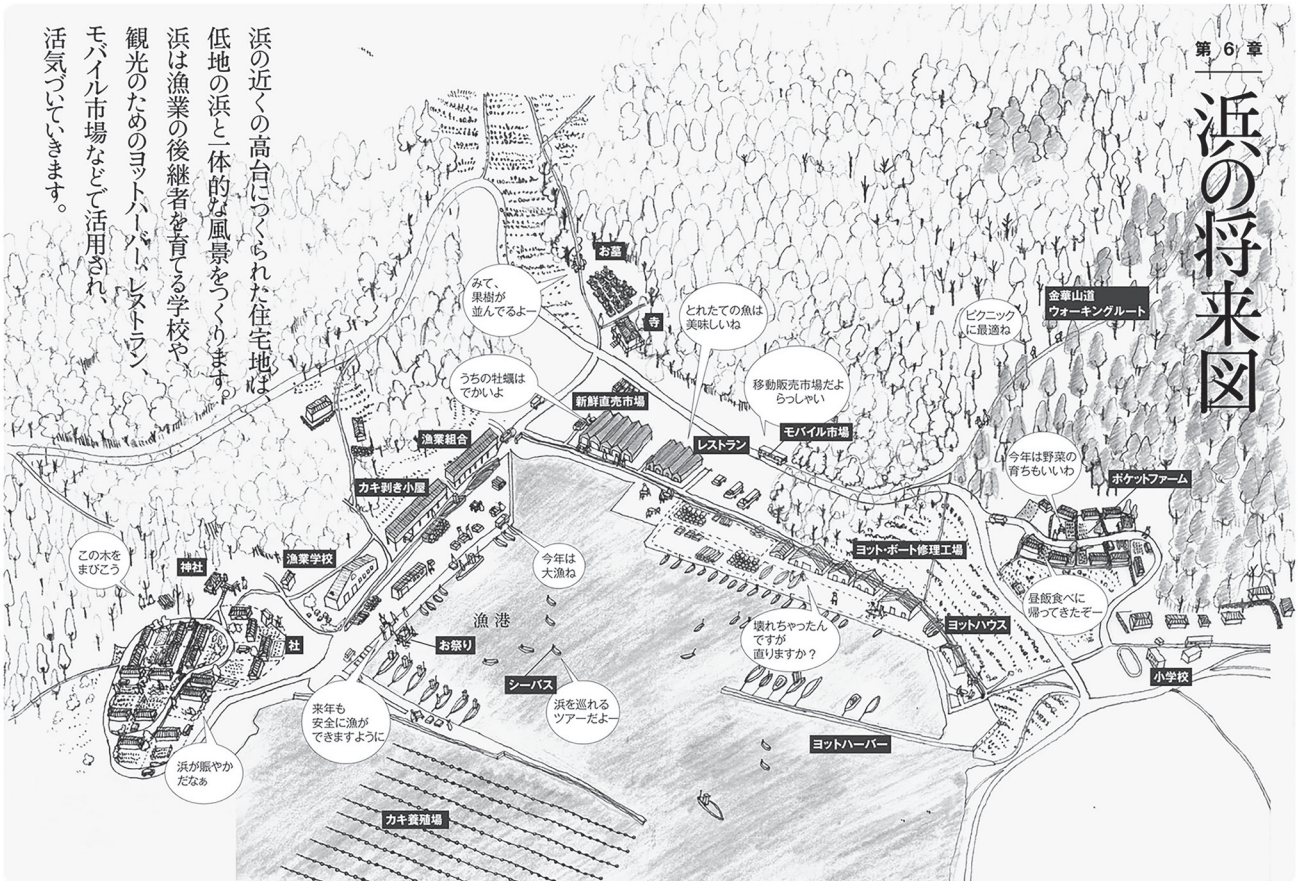

Fig. 1 - A Pattern Book for Oshika Peninsula – Coastline collaborative drawing with locals' dialogues.

a new life for the fishing villages was envisaged in the form of a typology book. It comprises a catalogue of elements for new architectural constructions that were desperately needed following the destruction of homes. At different stages of the project, drawings were utilized to present plans and ideas tailored to the viewpoints of specific subjects, in most cases professionals in the construction sector. There is an inherent critical evaluation of information, concerning what to include in or omit from the drawing, which, in turn, influences the project's development. As architect Tsukamoto Yoshiharu remarks, the post-disaster initiatives at Tohoku had served as a strong reminder that "architecture is not built on site, but within networks" (personal communication, 7 July 2020). This *ethnographic network* has multiple actors that influence the built environment, as well as the behavior of their inhabitants. What the notion of "Architectural Ethnography" proposes is essentially a systematic methodology of architects' social engagement within that network (Kaijima, Stalder, Iseki, 2018).

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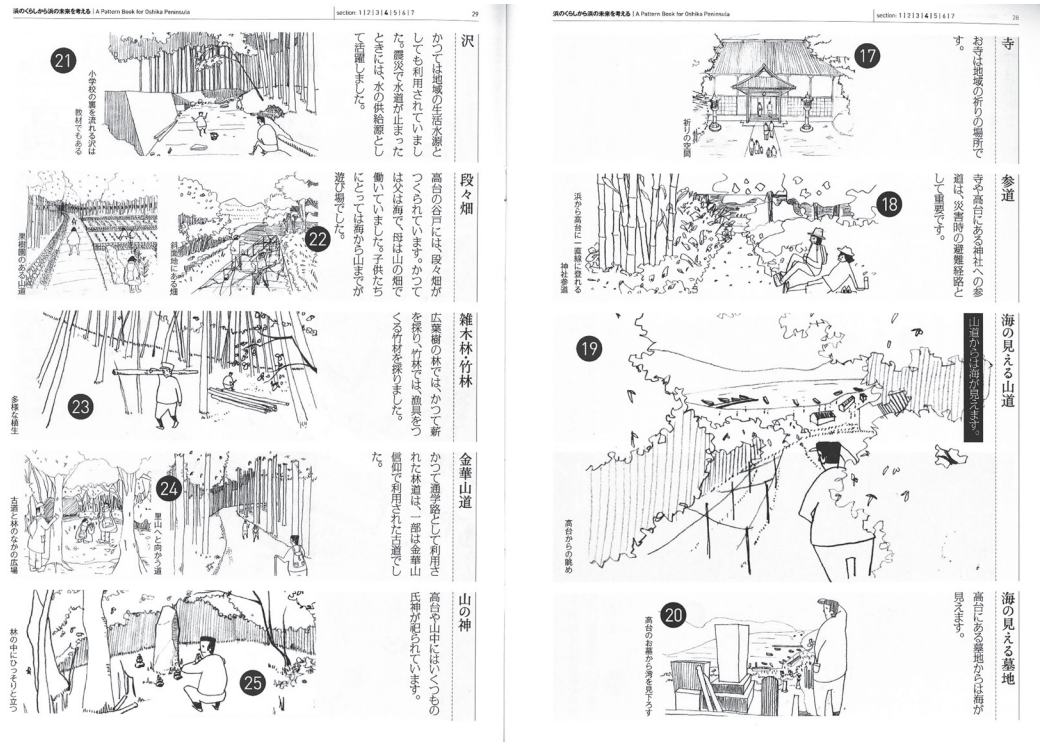

Architect Momoyo Kaijima of Atelier Bow-Wow was part of the organizing committee of ArchiAid, which operated with field surveys and interviews to create reconstruction plans for the coastal regions. When talking about the project of the fishing town Ishinomaki, Kaijima says:

We talked to village residents about the ways of life and the landscapes that had been washed away by the tsunami and used the fragments of information collected in the interviews to make drawings that reconstituted these spaces. The process was akin to putting together pieces of a puzzle in one's memory, and I began to think that we might call this way of working 'Architectural Ethnography'.

Lost Homes Project: Topographical Memory Inscriptions

The tsunami that followed the Great East Japan Earthquake reached 561km^2 of land, out of which 160km^2 were partially or fully destroyed. To handle the scale of this damage, a collaborative workshop under the name "Lost Homes Model Restoration

Fig. 2 - A Pattern Book for Oshika Peninsula – Elements of daily life: The Shrine, the stroll, the view to the sea, the natural resources of water and wood, the spirits living within rocks.

Fig. 3 - "Rikuzen Takata" reconstruction model, Disaster and Future (2020).

Fig. 4 - Lost Homes Project: 1:500 Model of Kesennuma bay prior to 3.11, Osamu Tsukihashi Laboratory, Kobe University, July-August 2012. Details and stories by residents in 'memory-flags', workshop held from 22-29 September 2012.

Project" attempted to document the destruction done by employing models at a scale of 1:500. As part of the ArchiAid Relief Group, it was an effort by Osamu Tsukihashi and Tsukihashi Laboratory that assembled professors and architecture students from all over Japan.

In these workshops, the 1:500 scale models were displayed for a week at meeting spots for each area, providing a space for communities to engage in dialogue and problem solving. A week later, the inhabitants gathered again to discuss their towns or villages through the models. They listened to and expressed memories about the towns, including personal experiences, community events, street scenes and so on. These narratives were transformed into 'flags' and placed directly on the models, re-establishing the life that once was. For example, in the workshop held in Otsuchi Iwate, more than 2000 memory-flags have been gathered, creating a working 'memoryscape' (O. Tsukihashi, personal communication, 18 July 2020). Information was collected about the affected areas to determine the extent of the disaster in each local-

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ity, in order to best allocate the resources, time and money necessary to make the models, giving priority to the areas with the biggest damage. This initial stage was followed by communication with the local communities to arrange meetings and, subsequently, with university laboratories of architecture across the country to pair them up with a given area and community. “Lost Homes” provided communities with

Fig. 5 - Record of Coastal Landscape, Watari Town, Miyagi (5 January 2012).

a means to both mourn their towns and consider the scope of disaster. The project utilized the medium of the architectural model for the purpose of discussion, memory-sharing and problem-solving and served as a bridge between the affected communities and the architects. In this sense, the most important space that the model created was the space right around it: the space where people meet, look, think and remember–a literal and metaphorical *platform*.

“Recorder311”: A Center for Urgent Ethnography

In the throes of disaster, not only material things risk extinction. As a result of traumatic experience, memory and narration become vulnerable as well, adding to the material losses. Two months following the disaster, the Sendai Mediatheque launched a community archive called “Center for Remembering 3.11”, also known as “recorder311”, in order to facilitate the collective processing of the devastating effects of the calamity and assist in the area’s reconstruction. The center’s goal was twofold: to collect memories, and to transform them into useful tools for the next generations.

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Fig. 6 - Sendai Mediatheque "recorder311": Exhibition "Records and Recollections" Scenes, from November 2014 to January 2015.

What started off as a panel exhibition of photographs in October 2011 evolved to a series of exhibitions with personal diaries, video, community driven curations. In November 2014 recorder311 curated an exhibition under the title "Records and Recollections: Walking Through Houses of Images" comprising everyday spaces of a house, seen in a new light as important specimens worth collecting. Other collections documented scenes of people struggling through power outages, food shortages, store closures and long queues.

The center has brought together citizens, curators, artists and staff to collaborate in the documentation of recovery through hosting a variety of projects. Namely, the "Thinking Table" and the "Philosophy Cafe" have served as platforms to "think, listen and talk together" (Sendai Mediatheque, 2014: 101). Moreover, the archives have demonstrated the significance of conveying experience in ways that transcend language. We can understand this mode of communication that supersedes language through Roland Barthes' notion of writing that serves to connect creation

and society: “a mode of writing whose function is no longer only communication or expression, but the imposition of something beyond language, which is both History and the stand we take in it” (Barthes, 1968: 1). On this platform the collected audio-visual material becomes the catalyst for the opportunity to take a stand towards “what happened”.

It is sobering to know that in the area affected by the disaster one can find stone plate monuments from the 17th century that provide warning signs: “If there is an earthquake, stay alert on a tsunami; If there is a tsunami, go higher than this monument; *don’t build residences in areas with tsunami-risk*” (Sendai Mediatheque, 2014: 82). The year 2020 marks the 16th anniversary of the Mid-Niigata Prefecture Earthquake of 2004, and the 26th anniversary of the Great Hanshin-Awaji Earthquake of 1995 – both events having had devastating effects on their respective communities. It is through building on this legacy that recorder311 aims to promote archiving as a cultural activity and an everyday practice accessible to everyone, pursuing its directness and urgency in diverse forms.

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Conclusion

From environmentally perilous activity, to increasingly rigid socio-economical structures that influence urban and rural planning, the premises of the livelihoods of communities and their financial, bodily and resource exhaustion comes into light when faced with disaster. In a world that prioritizes profit over safety and economy over healthcare, communities around the world are becoming victims, with the new common story being infection. For the foreseeable future, infection may very well be the thread that connects all our stories. If sympoietic caring and sympoietic threading are counter-forces, then learning from past contingency might be the way to care-with unexpected worlds that arose temporarily within a disastrous event, and then went on to dissolve into the newly established normality. The question is whether lessons from one contingent event have applicable aspects to another, extending a framework of looking at architecture through its capacity to transform in order to handle disaster. Presently, “Architectural Ethnography” methods are being put to practice to document the changing ethnos of our world amidst the Covid-19 health crisis. In the now largely

The question is whether lessons from one contingent event have applicable aspects to another, extending a framework of looking at architecture through its capacity to transform in order to handle disaster.

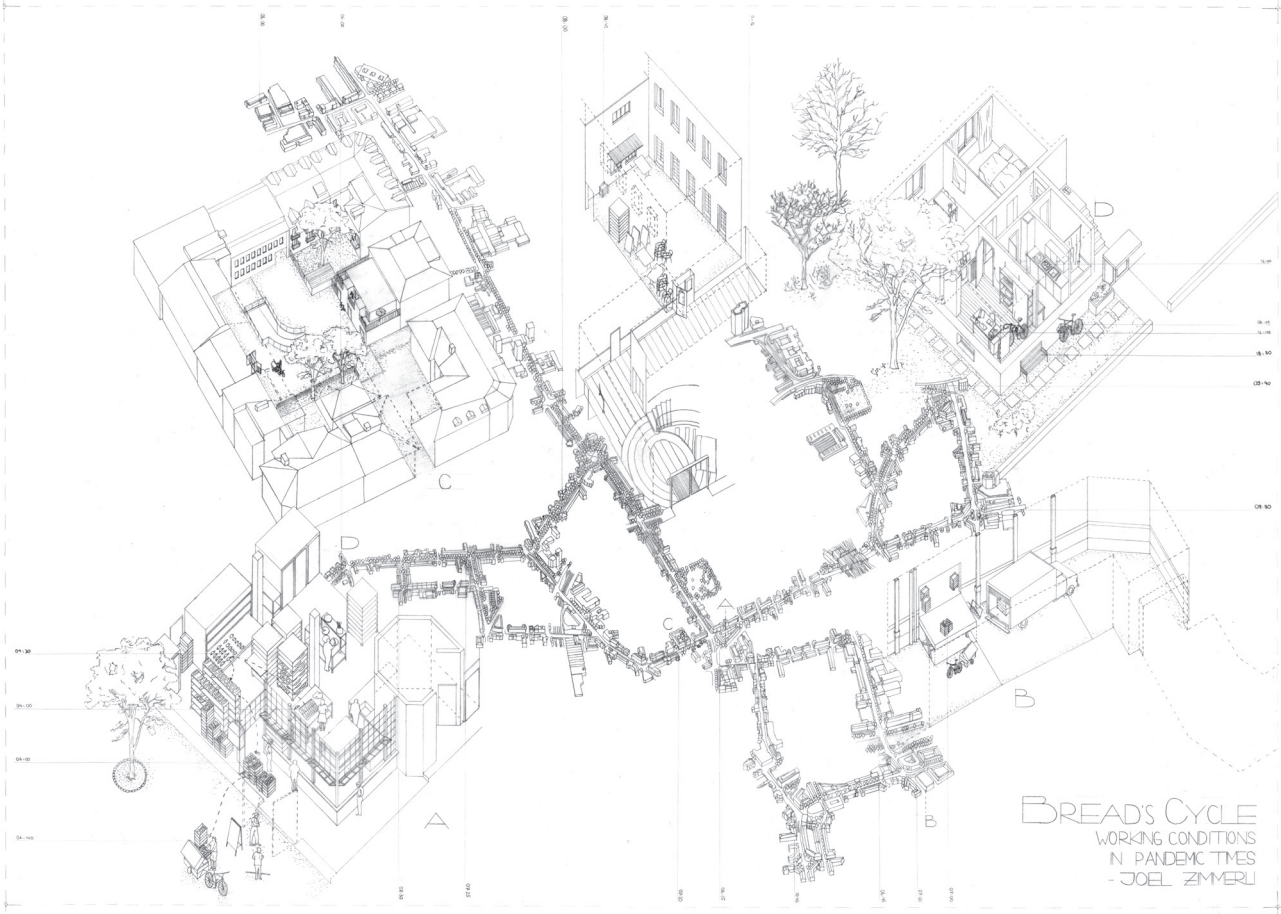

Fig. 7 - Architectural Ethnography in Times of Covid-19: Bread's Cycle, Working Conditions in Pandemic Times, Joel Zimmerli, ETH Zurich 2020.

digital classrooms, Momoyo Kaijima is using the lessons from Tohoku to guide research methodologies of understanding the implications of the pandemic on urban public and private realms (Figure 7).

Essentially, every time that inhabiting as we used to know it comes into question, the architects can serve their communities in meaningful non-construction ways by witnessing the changes to their livelihoods. Reflecting on the dynamic between the political economy of disaster, and the role of the politics of memory, this essay used the 3.11 Disaster with the aim to elicit architecture's response-abilities and potential expansion towards addressing human displacement, collective trauma, loss, and memory. Although Japanese architectural practice is generally conducted in metropolitan areas and focused on architects' conceptual ideas, post-disaster reconstruction led to more socially active practices in the affected aging rural societies. What emerged in Tohoku as an architectural response to disaster can be distilled to *a new expertise arriving*

from unique lessons. Using their visualization skills, the architects were able to communicate the results of complex, top-down government plans to local government programs and become more active agents in the recovery process, essentially operating as mediators. In this endeavour, architectural and curatorial media transcended their commonplace role as the means for projection or mere presentation and became tools of communicating memory itself between communities and architects. This process necessitated a collective, collaborative process, with the drawings and models produced not exclusively by the architects, but with the involvement of locals. In this modality, the primary contribution of design comprises forming platforms for community relations and trust-building. Such ethnographical modes of operating expand architecture's role from a limited sense of building (re)construction, towards a practice of caring.

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