



Original paper

Collective Tools for Disaster Recovery from the Great East Japan Earthquake and Tsunami: Recalling Community Pride and Memory through Community Radio and “Picturescue” in Noda Village, Iwate Prefecture

Tomohide Atsumi¹, Yuko Ishizuka², Ryohei Miyamae³

Received: 29/04/2016 / Accepted: 15/11/2016 / Published: 16/1/2017

Acknowledgements: The authors are grateful to the residents in Noda for allowing us to conduct research. This research was supported by Grants-in-Aid for Scientific Research, Institute for Academic Initiatives at Osaka University. We gratefully acknowledge Dr. James D. Goltz at Kyoto University for his assistance in checking the manuscript in English, a second language of the authors, and for his fruitful suggestions on the earlier version of this article.

Abstract Disaster recovery requires a vision of the community. This study will introduce the concept of ‘symphonicity’ which can be defined through the use of a 2X2 table. One axis of the table includes voluntary and pre-voluntary type societies corresponding to intentional and unintentional societies, respectively. The other axis includes the traditional distinction between community and association or Gemeinschaft and Gesellschaft.” Symphonicity, lies in the voluntary-community cell, which can be realized by moving the society either from voluntary-association or from pre-voluntary-community. However, moving a society from one quadrant to the other requires effort and vision. The authors of this study have been conducting fieldwork in Noda Village, Iwate Prefecture, Japan, hit by the Great East Japan Earthquake and Tsunami, and have identified two possible tools for community recovery. One is a movement to establish a community-radio-station for which various village groups produce their own program; while the other is “Picturescue” in which volunteers picked up tsunami-damaged photos taken before the tsunami and returned them to the original owners. Our participant observations revealed that these two activities motivated the survivors toward Symphonicity: community-radio led survivors to establish a sense of community with local pride, while Picturescue reminded survivors of the community before the disaster, further reinforcing their rationale for choosing to remain in the community. The socio-psychological and practical implications for utilizing such tools for recovery are discussed.

Key words

Tools, Recovery, Pride, Memory, Pictures, The Great East Japan Earthquake and Tsunami

¹Graduate School of Human Sciences, Osaka University, Japan, e-mail: atsumi@hus.osaka-u.ac.jp

² Institute for Academic Initiatives, Doctoral Program for Multicultural Innovation, Osaka University, Japan

³ Graduate School of Human Sciences, Osaka University, Japan

1. INTRODUCTION

Disaster recovery is a dynamic process of creating, maintaining, and changing the meaningful context of the world of survivors. Disaster recovery is the least understood aspect of emergency management, both from the standpoint of the research and practitioner communities (Smith and Wenger 2006). Button (2009) reported that disaster recovery was the least studied and understood of the phases of disaster, despite its significance and the fact that it is the lengthiest component of the disaster continuum.

Recently, however, the volume of empirical evidence and case studies of recovery has increased. Sociological analyses of the impacts of Hurricane Katrina, for instance, introduced theoretical analysis of disasters including the recovery process (e.g., Aldrich 2012; Brunsma, et al. 2007). For example, Aldrich (2012) found that communities with an abundance of social capital were likely to recover the population. For another example, Capowich and Kondkar (2007), a chapter in Brunsma et al. (2007), focused on neighborhood networks and concluded that the weak ties resulting from human interactions prompted reflection about one's homogeneous group as well as the other groups, thereby giving rise to an opportunity for cultural creativity after Katrina. In the wake of practical and academic interests in disaster recovery after the 2004 Niigata Chuetsu earthquake in Japan, an academic association of disaster recovery, the Japan Society for Disaster Recovery and Revitalization, was established in 2007 and began publishing an academic journal.

From the theoretical perspective of group dynamics (e.g., Atsumi 2007; Yamori, 2010), recovery research should focus on the long-term process of recovery in the field (e.g., Atsumi and Goltz 2014), and should contribute directly to the recovery process in practical ways. It is necessary for group dynamics researchers who focus on disaster recovery to have a conceptual and theoretical view of the future of the field, as well as to conduct research to bring about beneficial change. In the language of group dynamics, recovery research must be action-oriented and based on collaborative practice (Atsumi 2007; 2009) within the context of social theory and extension of the knowledge base.

The present study refers to a theory of social transition that includes disaster recovery but looks beyond recovery to a future state of society. Sociologists have described a transition of society, for instance, from *Gemeinschaft* to *Gesellschaft*, from a community characterized by personal relationships to one with impersonal relationships. Conceptually, any society can be placed at some point along this continuum. However, the current industrialized society of Japan also includes a variety of communities that can be classified in terms of personal relationships. It also contains intentionally established associations (e.g., company) as well as inevitably involved collectivities (e.g., market). Mita (2006), a Japanese sociologist, categorized society with two axes: on one axis is personal or personal bond-oriented versus impersonal or interest-oriented, while on the other axis is voluntary, intentional, or free versus pre-voluntary, unintentional, or compulsory (Figure 1). Each quadrant was labeled as association (voluntary-impersonal), seriality (pre-voluntary-impersonal), community (pre-voluntary-personal), and symphonicity (voluntary-personal). Of course, we do not live in a single quadrant, but a blend, and, as described above, the current society of Japan is an association of various communities.

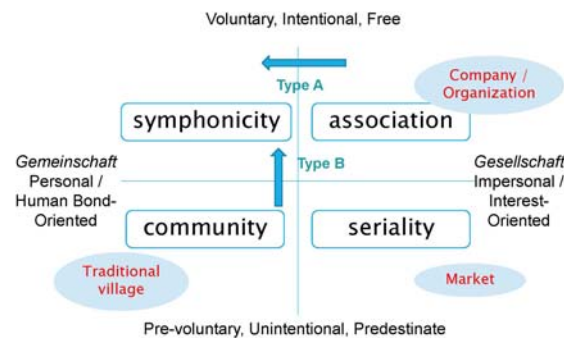


Figure.1 Quadrant of Society (Mita, 1990)

What vision of future society should we have during the recovery process of disasters? Mita suggested that people hope to live in a society characterized by personal relationships which are voluntarily and intentionally chosen. Ideally, they would like to live in a society consisting of associations of symphonicity where people connect with each other based on their own free will and voluntarily form various groups of their own, which interact with one another. The process of disaster recovery is a good opportunity to bring a society into such an ideal state. Hence, the present study, according to Mita, considers this ideal society as a goal of disaster recovery.

Once the ideal combination of social relations is identified for disaster recovery, the next step is to carry out a diagnosis of the current society affected by a disaster. Japanese society, like other modern industrialized societies, can be diagnosed as a modern industrialized society exposed to a global economy, but there are some associations which are part of traditional communities where *Gemeinschaft* still exists. There must be a plan or strategy to transition from recovery toward the ideal society. There are two directions in this case: one is to lead people to reorganize their voluntary but interest-oriented relationships into intentionally established associations of voluntary and human-bond-oriented relationships, or “symphonicity” (Type A in Figure 1), while the second direction is to motivate people to keep personal relationships, but intentionally re-examine whether they are voluntary (free will), or not (Type B in Figure 1).

The present research reports our own long-term fieldwork through which we observed a village and identified possible directions for its recovery from the Great East Japan Earthquake and Tsunami, and introduced two tools to guide survivors toward establishment of community-bonded relationship.

According to the activity theory (e.g., Engestrom1987), individuals do not work with an object, but instead their activities are mediated by tools, such as a hammer for assembling work and a sheet of paper with a pencil for computation. Such tools have been utilized in various community-based approaches (e.g., Nakazawa, et al., 1995 for review). For instance, a research group led by Tsukihashi effectively used a 1/500 architectural restoration model of a town as a tool for their workshop. One was a model of an area of Namie town, Fukushima Prefecture to provide a grief work from the Tsunami tragedy (Tsukihashi, et al., 2013), while the other was a model of an area of Otsuchi town, Iwate Prefecture to activate the residents memories of the town (Tsukihashi, et al., 2014). In another example, Matsumura, et al. (2011) made use of a community brochure, as a tool, to share memories of a town among the residents in Hyogo Prefecture.

We focused on activities by local people in Noda Village through our own long-term collaborative practices in the community, and identified two activities as possible tools leading to disaster recovery. One was development of a community radio station initiated by community leaders, and the other was a “Picturescue” movement conducted by a group of disaster volunteers. Although the community radio initiative has been examined as a medium to activate local communication in an emergency and during

peace time (e.g., Kitago 2015), and the rescue and return of photographs swept away by the 2011 tsunami was examined as a volunteer activity (Mizoguchi 2013), neither was examined in the context of disaster recovery. We hypothetically considered the former a typical example of Type A, while the latter a Type B in Fig. 1. An overview of our fieldwork is introduced in the next section followed by outlines of each tool and its implications.

METHOD

The present study consists of two cases of our own collaborative practices toward action research. Action research should be preceded by collaborative practice (Atsumi 2009). Collaborative practice is carried out for the betterment of the local people *without* any research purpose in advance. In other words, it is often simply volunteer work on behalf of the survivors. In contrast, action research is conducted for the betterment of local people but *with* a research plan. Once a problem is identified through collaborative practice, researchers and local people jointly attempt to solve the problem by conducting a research project.

For example, when disaster hits a community, people including researchers volunteer to assist the survivors. Since the researchers work as volunteers without any research purpose at this point, this process is called collaborative practice. While volunteering, problems are often identified by volunteers and researchers. For instance, miscommunication between local residents and local government agencies after the disaster may be a problem. Losing symbols and memories of the community as it existed prior to the disaster may also be a problem. Once such problems are identified, the researchers may wish to examine them and build up research questions, then conduct research in association with local people to solve these problems. This research is called action research.

During collaborative practice, a researcher takes notes and reports his/her practices on, for example, a blog of a non-profit organization. When he/she initiates action research, then his/her notes become the “fieldnotes” (Emerson, et al., 1995) of his/her fieldwork, and the blog serves as a record of such research activities (e.g. interviews). Researchers must have gained the trust of the local people first; otherwise, any research is likely to lose any meaningful significance for them (Atsumi 2009).

The first author visited Noda Village (Figure 2) about ten days after the tsunami (March 23, 2011), stayed one or two weeks per month for the first year, and has visited there twice a month and stayed for a few days during each visit. The reason why this particular village was chosen for our fieldwork will be explained in the next section. The second author joined him beginning in March 2013, while the third author visited once a month and stayed there a few days. Each has taken his/her fieldnotes and, based on their collaborative discussions, the first and second authors conducted action research on community radio, while the third author, supported by the first author, focused on Picturescue, described below.

In our focus on community radio, we recognized that there were many voluntary but interest-oriented associations in Noda Village. For instance, there was a group studying local history, a chorus group, a group for promoting health by controlling food ingredients, and so on. Each group was proud of its own activities and had a strong identification with Noda Village, but these groups remained independent without communicating with each other. Therefore, our research question was how to lead these people to reorganize their voluntary, but interest-oriented relationship into an intentionally established association which was voluntary and human-bond-oriented, or characterized by symphonicity (i.e., Type A in Figure 1). Based on these considerations, we initiated an action research process to solve this problem by initiating and investigating a movement to open a community radio station.

In collaborative practice with a volunteer group, the Photo Recovery Group of Team North Rias consisting of volunteers from inside and outside of Noda Village, our objective was to return photos

swept away by the tsunami to the original owners. We recognized that local residents were eager to recover their photographs, but, in a deeper sense, were tied to their community and the collective memory of Noda Village prior to the disaster through these photos. Therefore, our research question was how to motivate owners of the photos to maintain their personal and community relationships, but, at the same time, intentionally re-examine their sense of belonging in the community as a voluntary action (Type B in Figure 1). We, hence, initiated another action research project to solve this problem by investigating the Picturescue movement described in the following sections.



Figure 2: Map of the Tohoku Region of Japan, including Fukushima, Miyagi, Iwate, and Aomori Prefectures facing the Pacific Ocean.

Fieldwork

When the Great East Japan Earthquake and Tsunami occurred on March 11, 2011, many non-profit disaster organizations in Japan were activated promptly, one of them being the Nippon Volunteer Network Active in Disaster (henceforth, NVNAD). As the current president of the NVNAD and a researcher at Osaka University, the first author held an emergency meeting of the board members of the NVNAD to discuss what it should do, how, and where (Atsumi 2014; Atsumi and Goltz 2014). The organization dispatched an advance party to the Tohoku region to identify a community in need of volunteer workers. The advance team, consisting of 4 researchers including two from NVNAD, flew into Aomori airport located in the north end of the disaster region. They collected information from the north to the south and finally identified a small village, Noda, as the NVNAD's focal point of service due to considerable damage and the least number of volunteers compared to other communities in the affected region. See location of Noda Village in Figure 2.

Noda's downtown was completely swept away by the tsunami; 28 of the 4632 residents were killed and more than 300 houses completely collapsed. Since it is located far to the north within the disaster

region without easy access from the prefectural capital city, there were relatively few volunteers in mid-March. Therefore, the NVNAD, based on the report of its advance team, decided to support this village intensively.

Following the initial phase lasting 5 years, the office of NVNAD located in Nishinomiya began to send volunteers by bus, which took 18 hours to reach Noda village. Mostly university students responded to the NVNAD's appeal and joined its volunteer programs. It sent the first volunteer bus on March 29, 2011. The NVNAD sent a bus with volunteers every month for the first year, then 6 times in the second, and twice in the third year. Each bus brought about 20 volunteers from Nishinomiya city. NVNAD staff members, including the first author, made efforts to establish a local network of volunteers working in Noda village. Concurrently, Hirosaki University, Hachinohe College of Engineering and Technology in Aomori Prefecture, and universities in the Kansai region (i.e., Osaka University and Kwansei Gakuin University) all sent student volunteers to Noda Village. The NVNAD attempted to link all these schools and established a network of volunteers for Noda Village, called "Team North Rias (TNR)" in May, 2011. During the summer and autumn of 2011, disaster volunteers used TNR's local office in Noda Village and regularly visited people living in temporary housing (Atsumi 2014; Nagata 2012).

In March, 2013, Osaka University established its satellite office next to the TNR office in Noda village. The first and second authors were appointed as its manager and co-manager, while the third author, a graduate student, conducted research there. Although there have been a variety of relief activities and research since then, the present study introduces two activities relating to our recovery vision; one is a community radio project mainly conducted by the first and second authors, while the other is a project for returning photos swept up by tsunami and conducted by a subgroup of TNR in which the third author has participated. Hence, the TNR has been a fruitful place for our collaborative practice and the satellite office of Osaka University where we conduct action research (e.g., Lee and Atsumi 2014, 2015, 2016).

ACTION RESEARCH

We have conducted a series of action research projects in Noda Village. The present study introduces a movement toward establishing a community radio station and a series of activities by the Photo Recovery Group of Team North Rias.

Community Radio: A Tool for Type A

This movement is an example of motivating people to reorganize their voluntary interest-oriented relationship into an intentionally established association that is both voluntary and human-bond-oriented, what we have called symphonicity (Type A in Figure 1). In this section, we will describe this activity and cite a few typical expressions of opinions of community members.

The Great East Japan Earthquake and Tsunami made local residents in Noda Village realize that radio was a crucial medium not only to collect local information, but also to send out situational reports to other residents. Hence, in December, 2011, a few local residents and some disaster volunteers organized a research team to establish a community radio station, NodamuRadio (henceforth, NoRa) in the village. This research team spent two years learning how to operate a community radio station and practiced legally-small-area broadcasting at the summer festivals from August 24 to 26, 2012, and From August 23 to 24, 2013 with volunteers and graduate students from Osaka University. The effort to establish the NoRa reached a peak in December 2013, and four local residents and several supporters including the first and second authors organized "A Preparatory Committee for Opening NoRa (henceforth PCONoRa). The PCONoRa set its goal at opening the NoRa in the Spring of 2017, whose mission was announced as: "NoRa is a radio [station] of the Noda people, by the Noda people and for the Noda people".

The PCONoRa held monthly meetings (10 times), and conducted a series of experimental broadcasts 5 times from December, 2013 to September, 2014. Two young residents learned the process of making programs and broadcasting, while disaster volunteers and graduate students of Osaka University helped their activities (e.g., editing scenario of the program). The experimental broadcasts to local markets, seasonal festival, and temporary houses led local people to recognize the NoRa. However, the PCONoRa faced a mountain of difficult problems: human resources (i.e., the number of local volunteers), funds, and technical knowledge were extremely limited.

In the Summer of 2014, a regional FM station, FM-Iwate covering Iwate Prefecture, asked the PCONoRa to join its project supported by the national government. It was an experiment to test if the endpoint of its relay system could change its contents from regional information to local information (e.g., from information in the prefectural capital to that in Noda village). The PCONoRa identified local groups of residents (e.g., chorus club, association of local history, kindergarten teachers, and so on) and provided them with opportunities to make short radio programs featuring their own activities in Noda village. Consequently, 16 local associations (about 40 residents) broadcasted their own radio programs as official programs of FM-Iwate from December, 2014 to February, 2015. These programs were listened to by local residents in Noda and became the topic of conversations among them.

Since February 2015, PCONoRa has held a series of open forums on the future of NoRa, and 60 local residents have participated in the discussion. The second open forum (March 12, 2015) was a reunion of performers of the radio program. Twenty local residents got together and expressed their opinions about their radio programs, and discussed the future of NoRa. The first and second authors' fieldnotes recorded many opinions at the forum:

"Making and broadcasting our own program was a good opportunity to reconsider my own activities."

"It was too short to tell our activities. If there is a chance, I would like to make another program."

These opinions indicate that making and performing a radio program motivated local residents (i.e., survivors) to find the meaning of their own activities and have opportunities to reconsider their own village and their lives there. Participation in NoRa helped restore local pride and led people to reorganize their voluntary but, to some extent, interest-oriented relationship into an intentionally established association of voluntary and human-bond-oriented relationship, symphonicity.

Picturescue: A Tool for Type B

The Picturescue movement is an example of motivating people to maintain their pre-disaster relationships through the restoration of photos, in addition to intentionally re-examine whether they are based on voluntary association, or not (Type B in Figure 1). This activity will be described and insightful expression of the opinions of survivors will be excerpted from our fieldnotes.

The "Photo Recovery Group of Team North Rias" was formed in Noda village immediately after the Great East Japan Earthquake. Many photos were damaged by the Tsunami and many were on the ground or buried under a mountain of rubble. Volunteers and survivors picked them up and restored them to the extent possible. After that they voluntarily formed the "Photo Recovery Group of Team North Rias" to restore sixty thousands of water damaged photos. The "Photo Recovery Group of Team North Rias" continues to operate and holds a restoration gathering of "rescued" photos once a month. Due to limited opportunity to record the number of restored pictures returned to their owners for every gathering, the number of pictures restored and returned is shown in Figure 3 only from July 2012 to March, 2015. Since photos are recovered and restored, we coined the term "picturescue" to describe this activity.

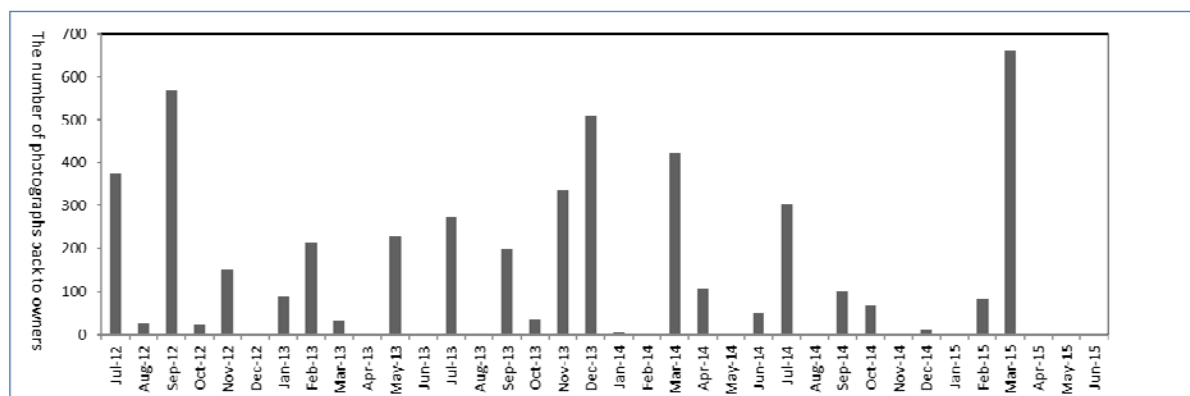


Figure 3: The Number of Pictures Restored and Returned from July, 2012 to March, 2015

On the “gathering” day morning, the members of the Photo Recovery Group of Team North Rias arrive at the designated location after about a two hour drive from Hachinohe city, which is located in the south-eastern part of Aomori prefecture. Nine people are affiliated with the photo group. Two are local survivors and one is a student volunteer. The remaining team members live in Hachinohe city so, when they carry out the photo restoration gathering, they must come to Noda village in the early morning. Approximately 3 or 4 members of the Photo Recovery Group make up the gathering. They bring the photos and the albums that have been restored and stored in the community hall and display them for survivors to assemble and identify their photos. At 10:00 AM they finish their preparations and wait for the visits of the survivors.

Members of the Photo Recovery Group move to an assembly facility at a temporary housing complex in the afternoon. They display the photos and the albums in the same way as in the morning. After their preparations, they wait for the survivors to arrive and discover their memories. The photos identified are taken home with the survivors who own them. However, at 16:00 they collect the remaining pictures and return them to the storage facility. After that they leave Noda village for their own homes in Hachinohe city or elsewhere.

Although the ultimate purpose of the picturescue effort is the same, the morning and afternoon gatherings differ in one respect. The former is aimed at survivors who do not reside in temporary housing units, the latter is aimed at mainly the temporary housing residents. Thus, the Photo Recovery group acts for a variety of survivors. Some survivors live in a temporary house, some in the houses they built after the tsunami, and others in the home of a relative. The photo group includes survivors in any housing situation because all were impacted by the earthquake and tsunami and may have lost photos to the tsunami.

All Noda village residents, whether they have lost photos or not, are invited to the gatherings where they can chat and recall their memories of everyday life before the tsunami. The Photo Recovery Group serves tea and confectionaries to those who come to the gathering to encourage them to chat. No doubt, a photo itself is just a mass of many ink spots. But when survivors see a photo and remember their own daily lives with others, the photo will change from mere ink spots into invaluable memories of their lives before the earthquake and tsunami.

For example, a recovered photo of a sunset in Noda village reminded an elderly woman of her days before the tsunami. She told the third author that she did not pay much attention to the sunset because it was taken for granted that a sunset would always be visible from her home, however, now that she could not see the sunset from her temporary house, the simple pleasure of watching this natural phenomena was no longer available and the photo reminded her pre-disaster life in Noda village. This narrative is

essentially insightful because it indicates the significance of Picturescues: when local survivors see a photo and remember their own daily lives with others, they are motivated to maintain or restore these personal relationships, and, at the same time, to have a chance to reinforce the rationale for choosing to live in Noda village.

DISCUSSION

The present study provided a vision of how a disaster-impacted community can restore important social relationships jeopardized by the disruption caused by the disaster. We observed that Noda Village gradually changed into a society consisting of associations of symphoncity where people connect with each other by their own will and voluntarily form various groups of their own, and such collectivities are associated with each other. It identified two tools for restoring potentially broken social ties in a disaster impacted community.

First, as a tool of Type A, a community radio movement indicated that making and performing a radio program contributed to restoration of local pride and led Noda Village residents to reorganize their voluntary but, to some extent, interest-oriented relationships into an intentionally established association of voluntary and human-bond-oriented relationship, symphoncity. The community radio is not only a medium to broadcast local information but also one to provide a program through which local residents actively transmit their own activities. Hence, there are at least two advantages; one is to give them an opportunity to summarize their own activities during the program broadcast, while the other is to connect them with other residents who are not necessarily living next to each other by sharing information through the program. The former is likely to make them proud of their activities, whereas the latter strengthens and deepens their ties in the village. We may conclude that these activities transitioned their relationships from the quadrant of association to that of symphoncity (i.e., Type A).

Second, as a tool of Type B, the Picturescues movement suggested that survivors, seeing a photo and remembering their own daily lives with others before the disaster, motivated them to maintain or restore these personal relationships, and, at the same time, reinforce the rationale for choosing to live in Noda village. Namely, their mostly pre-voluntary living in a community may change into a life in (association of) symphoncity.

Remembrance plays an important role in recovery and photographs are an important part of remembering the past. Survivors who lost their pictures have lost an important aspect of their past. Loss of photographs, and thus memories of pre-disaster Noda Village, combined with the negative associations of Noda Village with the disaster, may have contributed to an out-immigration of residents. They could have moved away from the Noda Village after the Tsunami due to the loss of their memory of the past (i.e., pictures). However, the photograph restoration gatherings provided a context in which to cherish their memories, as well as recover their damaged pictures. Hence, they remained in the same village and tried to return to their daily lives. Of course, it is impossible for them to completely resume their lives before the tsunami, but the restoration of community solidarity through the radio and Picturescues projects contributed to their choice to remain in Noda Village. We may conclude that these processes led them from the quadrant of community to that of symphoncity (i.e., Type B).

Obviously, these cases are not the whole story of recovery from the Great East Japan Earthquake and Tsunami for Noda Village survivors. However, the implications of Type A and B toward a restored community, a life in association of symphoncity, can and should be applied to recovery processes of communities affected by disasters in other regions. In recovery from a disaster, it is important to employ methods that serve to restore community pride and identification as well as preserve elements of the community's pre-disaster social relations, such that these relations are not severed. Our action research, which included assisting survivors in establishing a local radio station and restoring lost and damaged

photos served this end.

Needless to say, we should continue to collaborate with local residents and disaster volunteers in Noda village as well as conduct psychological and sociological examinations in theoretical and experiential ways to establish academic and practical tools for disaster recovery. The present study suggested that researchers and practitioners should contribute to a dynamic process of creating, maintaining, and changing the meaningful context of the world of survivors –through innovative methods of disaster recovery.

REFERENCES

- Aldrich, D. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. Chicago: The University of Chicago Press.
- Atsumi, T. (2007). 'Aviation with fraternal twin wings over the Asian context: using nomothetic epistemic and narrative design paradigms in social psychology'. *Asian Journal of Social Psychology*, 10: 32-40.
- Atsumi, T. (2009). 'Acceptance in a disaster area: process technologies for implementation scientists'. *Journal of Natural Disaster Science*, 30: 97-103.
- Atsumi, T. (2014). Relaying Support in Disaster-Affected Areas: The Social Implications of a "Pay-it-Forward" Network. *Disasters*, 38 (s2): s144-s156.
- Atsumi, T. & Goltz, J.D. (2014). 'Fifteen Years of Disaster Volunteers in Japan: A Longitudinal Fieldwork Assessment of a Disaster Non-Profit Organization.' *International Journal of Mass Emergencies and Disasters*, 32 (1): 220-240.
- Brunnsma, D.L., Overfelt, D., and Picou, J.S. (2007). *The Sociology of Katrina: Perspectives on a Modern Catastrophe*. Lanham, MD: Rowman & Littlefield Publishers.
- Button, G.V. (2009). Family resemblances between disasters and development-forced displacement: Hurricane Katrina as a comparative case study. In A. Oliver-Smith (ed.) *Development & Dispossession: The Crisis of Forced Displacement and Resettlement*. Santa Fe: School of Advanced Research Press. pp.255-274.
- Capowich, G. E. and Kondkar, M.M. (2007). Rebuilding New Orleans Neighborhoods after Hurricane Katrina: Toward a Theory of Social Structure and Cultural Creativity. In D.L. Brunnsma, D. Overfelt, & J.S. Picou (eds.) *The Sociology of Katrina: Perspectives on a Modern Catastrophe*. Lanham, MD: Rowman & Littlefield Publishers.
- Emerson, R., Fretz, R., and Shaw, L. (1995). *Writing Ethnographic Fieldnotes*. University of Chicago Press, Chicago.
- Engstrom, Y. (1987). *Learning by Expanding: An Activity Theoretical Approach to Developmental Research*. Helsinki: Orienta-Konsultit Oy.
- Kitago, H. (2015). *Komyuniti FM no Kanousei: Koukyousei, Chiiki, Komyunikeishon. (Possibility of Community FM; Communalilty, Community, and Communication.)* Tokyo: Seikyusha. (in Japanese)
- Lee, Y. and Atsumi, T. (2014). *Higashi Nihon Daishinsai karano Fukkou (1) Omoiwo Sasaeni-Kikigaki, Iwateken Kunohegun Nodamura no Shinsai no Kiroku (Recovery from the Great East Japan Earthquake (1) Life History of Survivors in Noda Village)*. Hirosaki University Press. (in Japanese)
- Lee, Y. and Atsumi, T. (2015). *Higashi Nihon Daishinsai karano Fukkou (2) Ganbarunoda-Iwateken Kunohegun Nodamura no Chiikiriyoku (Recovery from the Great East Japan Earthquake (2) Interviews in Noda Village)*. Hirosaki University Press. (in Japanese)

- Lee, Y. and Atsumi, T. (2016). *Higashi Nihon Daishinsai karano Fukkou (3) Tachiagarunoda-Kita Riasu Iwateken Kunohegun Nodamura no QOLwo Juushishita Saigai Fukkou Kenkyuu (Recovery from the Great East Japan Earthquake (3) Research in Noda Village*. Hirosaki University Press. (in Japanese)
- Matsumura, N., Oda, H., Kida, N., Kusuda, Y., and Hirai, Y. (2011). Effects of the Familiarity to the House Environment by Sharing Personal Memories at a Suburban New Town. *Journal of Japan Society of Civil Engineers, Ser. D3 (Infrastructure Planning and Management)*, 67(5), 1415-1425. (in Japanese with English Abstract)
- Mita, M. (2006). *Shakaigaku Nyuumon (An Introduction to Sociology)*. Tokyo: Iwanami. (in Japanese)
- Mizoguchi, Y. (2013). A Volunteering Activity after the “End of the Volunteering”: A Case Study of Relief Activities of Private Photos Flooded on 3.11. *Social Systems: political, legal, and economic studies*, 16; 163-179. (in Japanese with English Abstract)
- Nagata, M. (2012). A “Soft” Volunteerism in Super-extensive Disaster: Case of Noda. Rajib Shaw and Yukiko Takeuchi (eds.) *East Japan Earthquake and Tsunami: Evacuation, Communication, Education and Volunteerism*. Research Publishing Services. Chap.12, pp.239-253
- Nakazawa, A., Naruse, K., Hisa, R., and Tanaka, A. (1995). A Study on Transition of Argument about Community Development, 1970-94. *Summaries of technical papers of Annual Meeting Architectural Institute of Japan. F-1, Urban planning, building economics and housing problems*, 627-628. (in Japanese with English Abstract)
- Smith, G.P. and Wenger, D. (2006). Sustainable disaster recovery: Operationalizing an existing agenda. In H. Rodriguez, E.L. Quarantelli, and R.R. Dynes (eds.) *Handbook of Disaster Research*. New York: Springer, pp.234-274.
- Tsukihashi, O., Tomobuchi, T., and Akita, R. (2013). An Essay on Restoring and Using memories of Place in Ukedo Area in Namie: A Proposal of Making/Painting 1/500 Scale Model Restoration Workshop for Devastated Area As a Greif Work. *Graduate School of Engineering Kobe University Journal*, 5, 13-24. Doi:10.5047/gseku.j.2013.003 (in Japanese with English Abstract)
- Tsukihashi, O., Yamada, K., Nakamura, A., and Hirao, M. (2014). Study on Restoration and Sharing Method on Town Space in Devastated Area: The Workshop with 1/500 Restoration Model of Machikata Area in Otsuchi Town, Iwate Prefecture. *Journal of Architecture Planning, AIJ*, 79, 699, 1129-1137. (in Japanese with English Abstract)
- Yamori, K. (2010). *Akushon Risaachi: Jissen suru Ningen Kagaku (Action Research: Practicing Human Sciences)*. Tokyo: Shinyosha. (in Japanese).