Networking of disaster relief volunteer organizations as a knowledge-sharing platform—A comparative study between US and Japan

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Abstract

This study shows that one of the benefits of networking disaster relief volunteer organizations is to provide an opportunity for knowledge sharing and platform creation. Also, the study investigates appropriate functions with which to equip the expected network organization assumed in Japan. For this purpose, an American case—the National Voluntary Organizations Active in Disaster (NVOAD)—and a Japanese case—disaster volunteerism after the Kobe Earthquake—were considered. The case study yielded three main findings. The NVOAD members' motivation for joining the network is sharing each group's tacit knowledge, making it explicit. This is defined as knowledge externalization. Rulemaking by volunteers is built into committee activities, and their face-to-face discussions can be interpreted as a mode of knowledge combination. In contrast, the Japanese system emphasizes the management of spontaneous volunteers, which enables a knowledge internalization process. The expected network organization in Japan can learn from the American case, while maintaining the advantages of the Japanese system.

Key words networking, disaster relief volunteer organizations, knowledge management, ba

1. Background

With the growth of the non-profit sector in society, the coordination of non-profit organizations is more important an issue than ever (Salamon, 2003). Part of this issue is managing disaster relief volunteers.

After the Great East Japan, or the Tohoku Earthquake and Tsunami in 2011, the social need for non-profit infrastructure organizations (i.e., organizations that provide services and support for the non-profit sector (Salamon, 2003)) and networks of non-profit organizations emerged in the field of disaster relief volunteering in Japan. Volunteer activities after natural disasters first expanded after the Kobe Earthquake in 1995 (Avenell, 2010). Later, the year 1995 came to be recognized as *saigai borantia gan'nen* (the origin of disaster volunteers). Fifteen years on from this epoch-making event, disaster relief volunteers have become an established part of society. At the time of the Tohoku Earthquake, in addition to the groups dating back to the Kobe Earthquake, newly founded organizations and thousands of unaffiliated individuals participated in helping survivors, clearing inundated houses, and, in the longer term, contributing to community-rebuilding processes. The support of international NGOs for domestic victims was also a novel phenomenon. Many people also decided to help by means of donations. For example, a survey found that 76.9% of Japan's population who were 15 years or older made financial or in-kind donations in 2011 (Kifu Hakusho Editing Committee, 2012). From a quantitative perspective,

disaster volunteerism in Japan has progressed significantly from 1995 to 2011. However, coordinators working on site (Iwate Fukko Collaboration Center, 2013) and the Cabinet Office (2012) both pointed out that geographical biases and leakages of relief activities were observed throughout the affected region.

Currently, Japan is at risk of another potentially devastating disaster, namely the Nankai Trough Earthquake. According to the government, the possibility of this earthquake occurring within the next 30 years is nearly 70% (Headquarters for Earthquake Research Promotion, 2013). At the same time, Japan's aging population means the country's social vulnerability is increasing as well. The population is expected to decrease between 2010 and 2040 from 128 million to 107 million, with the aging rate (percentage of the population over 65) changing over the same period from 16.2% to 36.1% (Statistics Bureau of Japan, 2015).

To survive a disaster on such a scale with a far smaller population, the capacity of the non-profit sector involved after the disaster will have to be enhanced. To this end, networking of non-profit organizations for disaster relief volunteers is essential. However, this issue has not been sufficiently discussed, either academically or practically. Works by Atsumi (2014, 2015) are a few exceptions that address alternative volunteerism of a "pay-it-forward network" whereby each organization works locally rather than comprising a large network to encourage the institutionalization of volunteers.

The author also admits a negative aspect of institutionalization of disaster relief volunteers: that survivor-oriented initiative is lacking. Putting this aspect aside, this study focuses on the knowledge-sharing aspect of volunteer networking. In many cases, volunteer activities start by generating tacit knowledge on site through direct contact with survivors and the communities in the affected region. Then, once a network of different groups has been developed, the groups need to share their knowledge with each other in order to collaborate.

The driving force behind expanding the network is knowledge dynamics, which converts tacit knowledge to explicit knowledge, and aggregates knowledge from multiple organizations. This study observes two cases of the knowledge-sharing process: the existing network in the United States, and disaster volunteerism in Japan after 1995.

The study is organized as follows. Section 2 presents relevant researches including a history of disaster volunteering. Section 3 shows the methodology for comparative study and the concept of a knowledge creation model. Section 4 describes the findings of the comparison study, and states which functions need to be developed based on the knowledge creation model.

2. Disaster volunteerism in Japan after the Kobe Earthquake

As stated earlier, the Kobe Earthquake transformed disaster volunteerism in Japan. The subsequent 20 years was a period of systematization of volunteers.

The Shinsai-ga tsunagu zenkoku network, or Shintsuna (2010), is one of the primary network organizations born in 1997 after the Kobe Earthquake. It consisted of about 30 groups and individuals who shared the idea of continuing to learn from Kobe and educating others in different areas in Japan. Until recent years, the network had remained a small network connected with the same thoughts about disaster volunteers.

Avenell (2010) is skeptical about the Kobe Earthquake prompting the only and sudden change in post-war volunteering, and suggests that people's desire to volunteer increased gradually, even before the event. Additionally, he states that a new movement emerged in which the central bureaucracies, such as the Ministry of Health, Labour and Welfare (MHLW), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and the Cabinet Office, utilized volunteerism as a response to failed governance in the context of the New Public Commons, a government initiative at that time.

At the same time, institutions called "disaster volunteer centers" were gradually stationed nationwide in order to accumulate unaffiliated volunteers on site. In general, local governments authorize the disaster volunteer centers in their local disaster prevention plans.

Atsumi (2014, 2015) makes a critical comment on this trend. He refers to the movement of volunteers involved in the conventional social framework as the "drive for institutionalization," and claims that it has had the negative effect of narrowing the capacity of volunteers. He questions whether volunteer groups should develop a large and exhaustive network, rather than conducting simultaneous voluntary activities in each local community, as a preferable form of disaster volunteerism.

There was, however, an initiative to build a network of non-profit groups after the Tohoku Earthquake, called the Japan Civil Network (JCN). The JCN is a coalition of Japanese NPOs formed to support those affected by the Tohoku Earthquake, and includes 641 groups and organizations as members, as of May 2015 (JCN, 2015). Since the primary purpose of building the JCN is to just share information, most organizations belong to it merely by being on the mailing list.

It is noteworthy that organizational networking is not always directly linked to the "drive for institutionalization." Under the common and grand mission of making damaged survivors' lives a little better, knowledge transactions by multiple groups and the development of trust between groups are essential. Therefore, this study focuses on the advantage of networking of fostering knowledge creation, and puts aside the problem of volunteers being embedded in the social system. Of course, the latter is not an issue that can be ignored. As such, securing dependency of volunteerism should be considered in future research and discussions.

3. Methodology

3.1. Comparative study

This study compares a network organization in the United States and recent disaster volunteerism in Japan, using semi-structured interviews and document readings.

In the United States, the National Voluntary Organizations Active in Disaster (NVOAD) was founded in 1969, after Hurricane Camille, to improve the response to disasters by non-profit organizations. Currently, the NVOAD consists of 56 of the nation's biggest faith-based, community-based, and non-profit organizations, as well as 56 state/territory VOADs representing local organizations.

Narratives and written documents from the NVOAD were collected during their annual conference in Indianapolis in May 2014, and from their website. In this study, semi-structured interviews were conducted with representatives from the member organizations. In the case of Japan, observations are based on the author's direct experience as a member of a non-profit organization engaging in relief activity from 2007 to 2012.

3.2. Knowledge management

Matsuda and Okada (2006) applied the knowledge creation model to a risk communication process in order to prepare for disasters at the community level. This study applies the same model to the networking processes of non-profit organizations of disaster volunteers.

The knowledge creation model was proposed by Nonaka et al. (2000) in the management field at the beginning of the 1990s. The model was an antithesis to management science based only on economics. They found that knowledge to be shared gives new value to business activities in a corporation. Recently, the model has been adapted to the management processes of non-profit organizations as well.

The knowledge creation model consists of two concepts: 1) the SECI model (the cycle of

knowledge socialization, externalization, combination, and internalization modes by the exchange of tacit and explicit knowledge) to describe the knowledge creation process; and 2) the concept of *ba*, a psychological and physical platform allowing continuous and creative knowledge transactions to take place. The four modes of the knowledge creation process are shown in Figure 1.
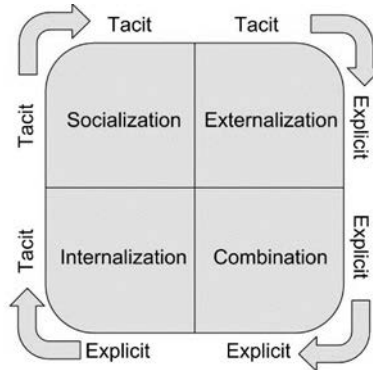
Figure 1. Knowledge creation model.

Socialization is a dimension in which tacit knowledge is shared (tacit to tacit) by face-to-face interactions. Since tacit knowledge is difficult to document, sharing experience is key to driving the mode. Externalization is a dimension in which tacit knowledge is converted to explicit knowledge through documentation. Explicit knowledge is easier to share with others. Combination is a mode where explicit knowledge is combined into different types of explicit knowledge. Information technology or systematized documentation enables the process. Finally, internalization is a mode where explicit knowledge is assimilated as tacit knowledge.

Ba is defined as a psychological and physical platform where knowledge conversion is generated. There are four types of *ba* corresponding to each stage of knowledge management: originating *ba* for socialization, interacting *ba* for externalization, systemizing *ba* for combination, and exercising *ba* for internalization.

This study first describes the networking process as a spiral phenomenon, in which new knowledge is generated by transactions both within a volunteer group and between different organizations. Then, the words of network members and the observed facts are evaluated through the SECI process.

4. Findings and discussion

For comparative purposes, the findings are divided into three sections. The first two describe features observed in the NVOAD only, while the third describes aspects missing from the US case. The following subsections provide an explanation of each finding, followed by an interpretation based on knowledge creation in order to understand the strengths and weaknesses of networking in Japan.

4.1 Members' reasons for joining the network

In the interviews, delegates of NVOAD member organizations were asked why they joined the network. Based on at least three responses, their answers can be summarized as "to improve the capacity of relief activities by inter-organizational collaboration." Below are the responses from two organizations. The

first is from a delegate of the American Red Cross, one of the largest non-profit organizations active in disaster relief. The second is the response from a newly joined member organization located on the West Coast.

Why did your organization decide to join NVOAD?

> We cannot manage everything. Other groups' activities compensate ours. For example, even if we prepare sufficient amounts of food for soup kitchens, sometimes a Baptist Church can offer better cooking. Or, when we serve a non-white community that the Red Cross is not familiar with, collaboration with local groups is indispensable. We know our own limitations. That's the benefit of the NVOAD. (A board member of the American Red Cross)

> We joined the NVOAD after our experience of Hurricane Sandy. Since our base is on the West Coast, we need a platform to share the information on the east and the whole country. Previously, we got information from the state VOAD, but it has now become easier to share information. (A staff member of a non-profit organization)

The NVOAD provides many channels through which members can collaborate. The annual conference the author visited is one such channel. They have also developed an online social system for their members, called VOADNET.

In contrast, there is no equivalent institution in Japan, although a similar network is in the process of being established (JVOAD, 2016). In the context of disaster volunteerism in Japan, the word "cooperation" (*renkei*) normally refers to cooperation between a non-profit organization and local governments, community associations, and business sectors, but not between organizations. There are a number of possible reasons for this. A major one is the size of the non-profit sector. As a rough comparison, there are more than one million tax-exempted corporations (so-called 501(c)(3) organizations) in the United States, according to the National Center for Charitable Statistics, but only 50,000 specified non-profit corporations (non-profit organizations authorized by law) in Japan. Japanese organizations prefer to engage within their own capacity rather than collaborating with other organizations.

4.2 Autonomous rulemaking by voluntary organizations

The NVOAD currently has 13 permanent committees and two temporary task forces (see Figure 2). The committees share and publish lessons learned, skills acquired, and best practices from previous disaster areas as points of consensus (PoC) and guidelines. Every member organization is required to join at least one committee and contribute to it. The author attended a number of committee meetings during the annual conference, where members were enthusiastic about producing documentation through discussion. Committees also help projects to apply for funds or for support from industries.

Name	Purpose	POC	Other publications
Advocacy	To identify emerging issues and empower policy and advocacy efforts across the VOAD movement by working closely with National VOAD staff, membership and other committees.		- Web materials (video)
Communications	To support information sharing among all stakeholders, including members and prospective members to promote their transparency and to support the mission of National VOAD.		- Branding Standards, Policies and Procedures
Community Preparedness	To promote preparedness as a national civic virtue and duty, identifying and sharing best practices, and collaborating with all sectors to identify and promote innovative ways to enhance community preparedness.		
Disaster Case Management	To provide a national disaster case management forum for National VOAD organizations to collect and share information, review emerging trends and issues, and recommend adaptations.		- Guidline for case management
Disaster Health Committee	To promote evidence-based best practices and initiatives that support Members, partners, volunteers and communities.		
Donations Management	To focus on unsolicited donations and work closely with state VOADs and government donation coordinators in times of disaster to serve as advisors and to support.	✓	
Emotional & Spiritual Care	To foster emotional and spiritual care to people affected by disaster in cooperation with national, state and local response organizations and VOADs.	✓	- Guideline (April, 2014) - Booklet "Light our Way"
Housing	To review issues related to repairs, rebuilds, muck-outs, and temporary housing.	✓	* Name of POC: Cleanup, Repair and Rebuild
International	To develop relations between NVOAD and foreign countries and internation NGOs and to prepare for international aids and collaborations.		
Long-Term Recovery Groups	To review issues related to Long Term Recovery Group formation and support.		- Guideline
Mass Care	To pursue avenues for joint action and planning among members and governments for building of shelter, feeding, bulk distribution of relief supplies and related services during disasters.	✓	- Guideline to manage shelters - Multi-Agency Feeding Plan Template
U.S. Islands & Alaska	To discuss effective supports and preparedness for disaster by the members from U.S. Islands and Alaska.	✓	
Volunteer Management	To have more affiliated volunteers and better managed unaffiliated volunteers in disaster.	✓	- Managing Spontaneous Volunteers in Times of Diaster
Taskforces			
Drought Task Force			- Report of drought disasters
Training Task Force			

Figure 2. **NVOAD committees and taskforces.**

All PoCs consist of normative rules with regard to each committee's mission, and are open to the public through their websites. For example, below is the PoC of the Mass Care Committee, ratified in 2011 (see Figure 3).

Ratified by Full Membership, May 2011

MASS CARE: Points of Consensus

Mass Care providers will:
1. Be transparent and collaborate with non-governmental organizations, government agencies, and the private sector to provide Mass Care services.
2. Determine the scope, scale, type, and duration of Mass Care services based on the impact of the disaster, community demographics, culture, economy, and geography of the affected region, and respond accordingly.
3. Provide care with dignity and respect, in a non-judgmental, confidential, and non-discriminatory manner.
4. Provide services in a manner that ensures the safety, security, and well-being of all, particularly children, youths, and older adults.
5. Strive to offer reasonable accommodations for people with disabilities and functional needs.
6. Provide a safe place for individuals and families; maintain respect for the cultural and religious differences of residents; and give consideration to the care of household pets.
7. Distribute food in a responsive, transparent, and equitable manner; and make every effort to ensure meals meet the cultural, ethnic, religious, and dietary needs of the affected individuals.

> 8. Distribute relief supplies in an equitable and coordinated manner while placing priority on items related to basic survival, health, and sanitation.

Figure 3. **Points of Consensus of the Mass Care Committee**

This type of documentation is clearly unique to NVOAD members. In Japan, a variety of instructions and manuals were published in order to coordinate disaster volunteers. Figure 4 shows a typical table of contents of a disaster volunteer management manual. The contents pay more attention to managing a volunteer center. In addition, most manuals are not published by disaster volunteer organizations, but by social welfare councils (*shakyo*) located in each municipality. A *shakyo* does not specialize in disasters, but is a "quasi-governmental" (Avenell, 2012) organization in charge of social welfare practices in individual towns and cities. This type of documentation is much closer to the "drive for institutionalization" described by Atsumi, which tends to control volunteers. Normative documentation by disaster volunteer groups is limited to a few examples. One such is a booklet called "Disaster volunteer culture" (*saigai borantia bunka*) issued by the Shinsai-ga tsunagu zenkoku network (2010), which considers what volunteers should bring to society.

> Table of Contents
> Disaster Volunteer Management Manual
> 1. Basic principle
> 2. Establishment and management of a disaster volunteer center
> 3. Volunteer needs handling
> 4. Volunteer coordination (reception, orientation, and reporting)
> 5. General affairs regarding center management (publicity, finance, and recording)
> 6. Closing of a center
> 7. Preparation in peace time
> 8. References (document format)

Figure 4. **An example of a disaster volunteer management manual**

4.3 Treating spontaneous and unaffiliated volunteers

As mentioned in the previous section, during the last two decades of disaster volunteerism in Japan, continuous emphasis was placed on providing opportunities to spontaneous volunteers, rather than fostering disaster relief volunteer organizations.

In contrast, the Volunteer Management Committee of the NVOAD commented on unaffiliated volunteers in its publication as follows: "The paradox is clear: people's willingness to volunteer versus the system's capacity to utilize them effectively." This statement implies that spontaneous volunteers are advised to affiliate themselves with a group before visiting an affected area. In principle, the American network puts lower importance on spontaneous volunteers, although there are some who have different opinions on valuing unaffiliated volunteers (Orloff, 2011).

One possible reason for this contrast between how spontaneous and unaffiliated volunteers are treated is that disaster relief volunteer organizations and faith-based organizations are so limited in number and size that they avoid controlling large volumes of unaffiliated individuals. Consequently, local institutions of *shakyo* in disaster-affected municipalities play a role in managing them. However, in many cases, one of the main units engaged in this mission is a volunteer promotion section, not a livelihood support section, even though local citizens are the victims. Therefore, disaster volunteer centers by *shakyo* have sometimes been criticized, because they have only catered to inbound volunteers while paying less attention to victims. Spontaneous volunteers have been valued extensively in Japan.

If an unaffiliated individual decides to participate in disaster volunteering, a volunteer center could ensure his/her opportunity to do so. Furthermore, once volunteers and their needs are determined, they are organized into groups and can work in a coordinated manner with strangers. This system is unique to Japanese disaster volunteerism.

4.4 Interpretation based on the knowledge creation model

There are two features enjoyed by the American network. The first is found in members' motivation to join the network. The second is the rulemaking initiative by member organizations through their committee activities.

Let us assume that the NVOAD functions as a platform for knowledge transactions, or *ba*, for the member organizations. In this case, organizations are able to enhance the quality of relief activities by compensating for each other's strengths and weaknesses, as well as by sharing information. This process can be interpreted as knowledge externalization, a mode of changing tacit knowledge into explicit knowledge, allowing it to be shared by others. Here, comments by a representative of the American Red Cross are worth considering. They need this dialog *ba* to engage in areas where citizens have different backgrounds from the Red Cross. Here, they collaborate with local organizations that can provide tacit knowledge on the local citizens. *Ba* offers opportunities to combine the potential benefits of different organizations, enabling them to achieve the grand mission of making survivors' lives a little better.

Members' commitment to committee activities, including face-to-face and online meetings, creates entirely new knowledge as PoCs or other documents. This process can be regarded as knowledge combination, which converts explicit knowledge into more complex and systematic sets of explicit knowledge. In this case, NVOAD committee activities also work on the "systemizing *ba*" (Nonaka et al., 2000), where explicit knowledge is collected, combined, and processed to form new knowledge, and is then disseminated among the members of the organization. Collected knowledge is described as normative rules by which volunteers govern themselves.

Some insight can be derived from the US case. As far as the author's observation extends, volunteer networks in the US work as a valuable knowledge-sharing platform by collaborating and rulemaking.

On the other hand, emphasizing spontaneous volunteering and running volunteer centers everywhere is a mechanism unique to Japan. Providing opportunities, or *ba*, for unaffiliated individuals on site after disasters generates knowledge internalization. Knowledge internalization is a mode of incorporating explicit knowledge as tacit knowledge, or "learning by doing." Unaffiliated individuals engage in relief activities under certain regulations. Skills and rules in relief activities are internalized by individuals in this way. If the doors to affiliated and well-trained organizations are closed to volunteers, this kind of process cannot develop.

Lectures and training for disaster volunteering have become more commonplace in America and Japan. However, it is known among field workers that many sound volunteer leaders can be found during missions, not on training programs. Opening gateways to unaffiliated individuals enables the securing of human resources. If gateways between victims and volunteers are limited to registered organizations only, this narrows the possibility of finding talented leaders. Volunteer centers and new technologies, such as SNS and GIS, make volunteer management easier (Whittaker et al., 2015). Exercising *ba* to prompt knowledge internalization should be maintained to complete the knowledge creation process.

5. Conclusion

In this study, an existing American network of disaster relief volunteer organizations was compared with disaster volunteerism in Japan after the Kobe Earthquake. Assuming the network organization to be a platform (*ba*) for knowledge creation, the American network succeeds in knowledge externalization and combination. On the other hand, Japan has a unique system of promoting knowledge internalization. These are all desirable functions that network organizations of disaster volunteers should try to attain.

In Japan, volunteerism and disaster management have been addressed in policymaking. In 1995, the Basic Disaster Countermeasure Act applied the word "volunteerism" before any other laws. However, there have been few opportunities to discuss the contents and norms of volunteerism. This issue needs to be addressed in future networking movements.

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