

Action at a Distance: How do Ordinary People Self-organize Humanitarian Efforts Remotely and Collaboratively?

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Abstract

New forms of citizen participation in disaster response continue to emerge as disasters create the need, and technology creates the opportunity. The rapidly evolving connectivity and technologically mediated environment promise to expand the role of citizens not only participating through organized efforts, but also self-organizing group efforts. Using a case study method, this research aims to describe and explain the dynamic processes of how ordinary people come into being as a group for humanitarian efforts and maintain evolving processes of collaborative activities over time. I am exploring these issues in the context of a small group that emerged online in response to the 2011 Japan earthquake and tsunami. This poster presents the work-in-progress.

Keywords: disasters, citizen response, self-organizing groups, qualitative research

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1 Introduction

The greatest challenge following a disaster is to provide the right aid to the right people at the right place and the right time. Recent studies reveal that the technologically mediated landscape of disaster response is creating the new avenue where people converge digitally responding to the needs of disaster-affected communities directly regardless of where they are located (Hughes and Palen, 2009; Starbird, 2011). In the last decade, globally distributed digital volunteers who bring their expertise in computing have demonstrated their efforts in building the groundwork for this matter. Data standards for aggregation of registry information online such as “PeopleFinder” from the 2001 September 11, “Sahana,” disaster management systems from the 2004 Indian Ocean Earthquake and Tsunami, and interactive information mapping platform “Ushahidi” from the 2007 Kenyan crisis exemplify the recent phenomenon of volunteer-based, immediate citizen response operations (Wall & Chery, 2010; van de Walle & Turoff, 2007). The majority of research looking at this new trend of volunteer efforts has identified partial involvement of *ordinary* citizens those who have rudimentary skills and basic knowledge in computer uses and those who are capable of appropriating their familiar technologies and adapting new ways of using those technologies. It suggests that ordinary citizens are newly enabled to offer informational assistance through the organized efforts, purposefully crafted, organized with participatory culture, and designed in crowdsourcing modules (Denning, 2006; Palen & Liu, 2007).

Most cases in digital volunteer work expose the role for ordinary citizens engaging given tasks distributed by dedicated, skilled individuals who lead these efforts. Also much of the relevant research question the problematic aspects of technical capabilities as a large-scale organized effort or demonstrates the advantages of new technologies such as the two-edged effects of unfiltered information: serving the great sources for relevant, comprehensible, and actionable information and creating misinformation and disinformation (Zook et al., 2010; Fraustino et al., 2012). In this study, I have taken a different tack. I focus on *ordinary* citizens self-organizing disaster relief efforts bringing their everyday knowledge and practices of ICT rather than creating something technical. Instead of studying how to eliminate informational

problems or characterize advantages in computing mass scale information that the public provide and produce, my ongoing research attempts to describe and explain the dynamics of ICT uses that evolve over time when ordinary citizens come into being as a group for humanitarian efforts. More specifically, this research focuses on the people outside the disaster-affected sites. This research addresses the following questions: what kind of activities are involved beyond information processing, what efforts are coordinated, and how does self-organized collaboration take place for the sake of disaster aid assistance. I am exploring these issues in the context of a small group that emerged online in response to the 2011 Tohoku earthquake and tsunami of Japan. This poster presents a case study of the work-in-progress.

2 Background

On March 11, 2011, the 9.0 magnitude of the earthquake centered in Northeast Japan caused the tsunami ranged from 10 to 100 feet high, together with the subsequent nuclear meltdowns at Fukushima Daiichi Plant, approximately 155 miles northeast of Tokyo. In excess of 27,000 persons in Japan were killed or missing, and more than 400,000 homes and other buildings have been totally or partially damaged. Physical damage of \$309 billion, being nearly four times as much as Hurricane Katrina at amount of \$81 billion makes it the most expensive disaster in history (Nanto et al, 2011). This “mega-disaster” (the 3.11 disaster) that hit one of the wealthiest countries reveals new dimensions to understand not only international but also ICT-mediated response systems to disasters (Guha-Sapir et al., 2012).

As with hurricane Katrina, Haiti earthquake, and other disasters, the 3.11 disaster received outpouring of support from the world in various ways (Shklovski et al., 2010; Zhou and Lee, 2013). Through Twitter, Facebook, Flickr, and Youtube, for example, compassionate individuals around the globe shared what they were doing for the suffering others. Rumanian librarians and their patrons uploaded a video of cheering choirs. A text message sent from a mother who was evacuated from the tsunami together with her students made its way to her son in the United Kingdom who tweeted a rescue call on behalf of his mother, and as a result, his tweet captured the rescue helicopter who eventually saved all the evacuees including his mother and her students (Okamura, 2011). The manifestation of these global responses indicates that first responders are not only just victims, unharmed victims, professional rescue officers and agents and neighboring residents, but also members of the public in global scale (Murthy, 2011; Palen et al., 2009).

Especially for Japanese who live far from the disaster site: in a domestic and foreign land, these ICT became the most convenient and economical means to reach out directly to the people affected in Japan locally, share real-time information across the world through networks of digitally connected others, and to make decisions about how to help. As one of these myriad virtual responders, I myself as a Japanese expatriate following the aftermath of the 3.11 disaster started to recognize a pattern of global responses, besides groups of technically savvy experts and experienced volunteers as well as projects for monetary donations and emotional and eventful purposes. As sensible relief efforts, a typical response was material aid made to Japan from abroad, which includes shipping handicraft quilts from Singapore, muslin from UK, origami from Canada for instance. On the other hand, as the domestic response, visual and image archiving projects and other visual information preservation efforts were also prevailing. While these efforts were originated by and emerged through networks of concerned individuals and made their way promptly to the disaster-affected communities, the lifespan of these efforts was most likely transient, otherwise incorporated with similar or larger enterprises.

Compared to these examples as an emerging group, I found a rare case of emerging group efforts in response to disasters. The case of this present paper comprised of Japanese women in Finland. These women demonstrated paradoxical aspects in terms of 1) a population outside of the disaster site who resides thousands of miles away from the disaster site but was able to take action and persist to manage an improvised humanitarian efforts, 2) an emergence of self-organizing group comprised by ordinary people who demonstrated no domain-specific knowledge and prior experiences of disaster response and aid

operations, and 3) remote collaborative work involving undefined tasks and unknown sequences of group activities with unfamiliar members. Here is a brief story of the case.

Seven Japanese women living in two cities in Finland became leaders of a self-organized humanitarian aid group for the 2011 Japanese disaster. What began as blog posts that are disseminated through blogs and Twitter, the “Tutteli to Japan” (TTJ) became a project to send Finnish milk formula to the disaster-affected communities. The TTJ project started in a pre-existing blog of one Japanese housewife living in Finland. It began as a single post articulating compassion and, indeed, a sense of powerlessness. This was a typical kind of post seen in many settings, especially right after the disaster. And yet four days later, all of sudden, another post on the blog began by introducing a baby formula product from Finland. Then the online interaction snowballed into group action and collaborative work. Eventually the collectives of individuals worked on their ideas of “do something for Japan” and turned it into humanitarian efforts (Table I).

What is the TTJ?	A project that shipped a total of 12,000 Tutteli milk cartons from Finland to 12 different locations in the disaster affected areas of Japan through 6 separate shipments within 35 days.
Who was involved?	7 lead members of Japanese women living in Finland (Helsinki and Tampere). More than 15 active members who reside in six different prefectures in Japan (Nagano, Chiba, Tokyo, Miyagi, Iwate, and Fukushima).
Why baby formula?	In Japan, baby formula is manufactured and sold only in powder-based form, while in Finland the liquid formula product; Tutteli is even made for newborns, and well adapted in the Finnish culture. Japanese mothers of the TTJ lead members believed that Tutteli would help mothers who were in the disaster sites experiencing difficulties in feeding their babies due to the turbulent, unsettling circumstances with little or no electricity and water supplies.
How?	Over the course of 35 days, the TTJ members went through an ad-hoc process of connecting points to points that eventually led to the people who needed the milk within the disaster site. The lead members fundraised in Helsinki and online, purchased the cartons with the donations, picked up the cartons from the manufacturer and delivered them to Finnair Cargo at the Helsinki airport. The active members who found out about the TTJ through social textual spaces including Twitter and weblogs, offered to 1) identified who needed the milk in the disaster site, 2) picked up, delivered, and distributed the milk cartons to the identified recipients. Finnair volunteered free cargo shipments. The idea started circulating around March 14th.
When?	The first shipment departed Helsinki on March 25th and was delivered to the disaster sites on 29th. The remaining five shipments were completed between April 1st ~ April 30 th .
Where to?	The mothers in the 12 different disaster sites received the bulk supplies of milk.

Table 1: A snapshot of the “Tutteli to Japan” project (TTJ)

3 Citizen-led, self-organized humanitarian efforts

Grassroots efforts in response to disasters emerge at any given time, space and scale of disasters (Enarson, 2012). Our review on communities in disasters shows that disaster studies repeatedly capture groups of ordinary citizens engaging in rescue and response operations, particularly within the disaster-affected communities (Takazawa and Williams, 2011). As the people outside of disaster sites also begin to learn and

seek information about the disaster impacts, residents of neighboring communities and beyond join the response operations. The proximity to the disaster site is considered the critical factor for emergent behavior to potentially form organized efforts (Drabek, 1986). These “emergent group responses” tend to last small and short-lived, relying on disaster-affected individuals who do not remain helpless, but take on roles of the first responders in order to serve the suffering others, however devastated (Drabek, 1985; McEntire, 2007). Looking at members of emergent groups, these are of private citizens, individuals who are distinctly independent from organized entities, either with or without pre-existing structures and experience working together on a variety of tasks prior to disasters, in various conditioned work environments. Dynes and Quarantelli (1975) developed a typology of emergent groups that differ in its group structure (new or old) and tasks (irregular or regular) as primary elements to define organized efforts. Stallings and Quarantelli (1985) suggest that the developmental nature of post-disaster environments creates different demands for different groups at different times. Moreover, due to the nature of disasters that are concentrated in time and space, geographic locales of responders determine accessibility and feasibility of action.

Recent studies identify the critical roles that technologies play in enabling ordinary people to participate and engage in disaster and crises responses in new ways. Liu (2011) and Takazawa (2010) argue that ordinary citizens who do not necessarily engage in disaster response and humanitarian activities at present do respond to long past disastrous events through social interactions and discussions facilitated by social media. The social media space functions virtual gateway for ordinary citizens to reflect, reconstruct, and reinterpret disastrous events as to disasters and crises becoming timeless. Pentzold (2009) and Mori (2011) also argue that the temporal connectivity that social media platforms provide serves as the inception of constructing infinite connectivity among distant others. Sharing photos and motion pictures on YouTube, Wikipedia, weblog and other social websites foster sentimental attachment and sense of space among individuals in a form of collective knowledge construction, global memorization, and collective sensemaking. As the landscape of disaster response space diversified, both people inside and outside of the disaster-affected site or communities can proactively adapt and appropriate available resources and technologies to continue or reestablish the connectedness between themselves across time and space (Mark and Sameen, 2009). Moreover, the resilient behavior of ordinary people engaging in disaster relief efforts trying to maintain the connectedness with the people outside their proximity significantly contributes to the whole community affected by disasters to regain internal strength and resources to cope with the impact of disasters (Murphy, 2007).

As these studies suggest, the increasing adaptation of ICT and the restless introduction of destructive events around the globe promises to expand the role of citizens not only participating through such organized efforts as digital volunteer work, but also self-organizing group efforts beyond time and space (Starbird, 2011; Starbird and Palen, 2013). However, the processes that ordinary citizens go through in making such efforts are in fact an understudied subject area. This research aims to explain in great detail the unfolding processes of self-organizing groups as well as its non-linear interactions among members coming from different locations, cultures, and backgrounds in disaster contexts.

4 Method

The present poster specifically presents one single case of self-organizing group comprising geographically dispersed ordinary citizens who did not have history of working together, social relations prior, and no specific professional or personal affiliations but formed a group after the 2011 disaster of Japan. To our knowledge, it is a new phenomenon to study this type of self-organizing groups outside controlled laboratory settings. Using a case study method that provides a flexible approach to gather detailed contextual data and conduct in-depth analysis on particular phenomena, this single case study design allows us to identify specificities of self-organizing groups and analyze the data of a real setting in detail (Eisenhardt, 1989; Torrey et al., 2007; Tschan et al., 2009; Goggins et al., 2012). Currently, with the opportunistic and snowball

sampling methods, I am gathering the TTJ data that I can retrieve electronically using commercial search engines, RSS feeds, and proprietary databases. Those data sources include: the TTJ leaders and participants' blogs, TTJ tweet archives, news coverage, and other publicly available data (both textual and visual forms). Those materials are available in Japanese, English, and Finnish. I have begun to translate and apply the grounded theory approach to this primary set of data. I am using the blog posts to trace the temporal processes in the emergence of the group as well as the project. I am looking into interactions and activities to gather both factual and nuanced descriptions of involved parties and activities whether it is explicit or implicit.

5 Preliminary Findings and Discussions

Certain features of this case differ from other self-organizing groups that emerged in disasters. Unlike well-studied digital volunteer work type of efforts I discussed earlier, this particular type of self-organizing group is unique in the following three aspects; 1) technologies that they used, 2) aid that they provided, and 3) scale of their action and group. The technologies the group used are ones that they are familiar with, and using such generic technologies the group could transform their everyday practices to powerful action. Their uses of such generic technologies accelerate initial attention from larger pool of populations and lead to immediate response and interaction as in the creation of instant information infrastructure and backchannel on social media space.

Also, according to stereotypes of Japanese, in Japan or abroad, volunteering is not cultural practice in Japan. Taniguchi (2010) claims that “[T]he idea of volunteer work as an act of giving time to help others on one’s own initiative is relatively new in Japan” (p. 161), because of its long tradition of neighborhood collective culture and social responsibility attached to their local communities. In terms of women in disaster relief activities, we might not expect them to seize the initiative and self-organize especially among Japanese women (Ferris et al., 2013). Aspects of Japanese culture involve a lot of coordinated collaborative activity with high levels of social coherence and participation. But this is typically coordinated by recognized leaders, and there are distinct hierarchies, and roles involving status and gender which is why one might be surprised at this particular form of self-organizing.

6 The next step

I plan to collect additional data by interviewing and running focus groups with the TTJ leaders. With snowball sampling, I plan to continue finding additional data sources to include the TTJ participants. Since my preliminary findings presented in this document are all based on data that I gathered from members weblog, websites, and other publicly available online resources, I want to verify the findings and identify actual parameters for the processes of how the group came into being, what kinds of group interaction and activities were carried out over time, what barriers and obstacles appeared and how they resolved, who were involved in the process, how these individuals came to know the project and each other, as well as what their decisions were over the project participation and engagement.

7 References

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