Disaster, Resilience, and Social Capital: Filipino Students in the Aftermath of the 2011 Tohoku Earthquake

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Abstract

The paper explores the experiences of Filipino students as temporary migrants during and in the aftermath of the 11 March 2011 Tohoku Earthquake. Using interviews with 30 Filipino students from the Tohoku and Tokyo region, and a review of relevant social media pages, the study identifies the vulnerabilities of Filipino students, and describes how social capital—the bonds, bridges, and linkages (re)built with various social actors—enabled their resilience: their initial response, their ability to self-organize, their capacity to learn from their experiences, and their ability to adapt and survive the disaster.

Keywords: 2011 Tohoku Earthquake, social vulnerability, resilience, social capital, foreign students

Introduction

Specialists in the field emphasize "disasters as processes rather than isolated events temporarily demarcated by exact time frames" (Hoffman and Oliver-Smith 2002, 30). However, disasters are often recognized through their specific impacts. Anthropologists define disaster as "a process/event involving a combination of a potentially destructive agent(s) from the natural and/or technological environment and a population in a socially and technologically produced condition of environmental vulnerability" (Oliver-Smith 1996, 305). In such scenarios, disasters are best understood as tangible transformations taking place in the immediate environment that make people aware of their vulnerability and their degree of resilience (or lack thereof).

Despite the literature on the adverse effects and changes brought by disasters on communities and the state, a systematic study of how migrants cope with and survive disasters has yet to be fully conducted. Amidst rapid globalization and increased interconnectivity, migrants contribute to the society and economy of their destination countries. However, their needs are not always served. Kirby (2010) discusses the link between globalization and vulnerability, while Gandy (2008) speaks of the challenges of a globalizing metropolis. Indeed, it is one thing to experience a disaster at home, and another to cope with it in a foreign land.

Migrants are often perceived as victims because their coping mechanisms are often restricted by differences in language, and by a lack of policies in destination countries that provide protection and support mechanisms. This is not to say that migrants do not have any means to protect themselves. They maintain distinct capacities to deal with and respond to catastrophic conditions. The Hyogo Framework of Action 2005-2015 points out that migrants are part of vulnerable populations who deserve attention in disaster risk reduction planning (UNISDR 2007, 4). Indeed, migrants are increasingly recognized as essential stakeholders in reducing disaster risks (UNISDR 2015, 23). This paper explores the disaster narratives from a particular subset of temporary migrants in Japan: Filipino

students. The study asserts that as temporary migrants, Filipino students face specific vulnerabilities during disasters, and explains how social capital contributed to their social resilience during and in the aftermath of the March 2011 earthquake in Japan.

Disasters and Collective Narratives

Disaster narratives are based on the memories of those who personally faced, endured, and survived such crises. The accounts of the foreign students are key sources of information for this study. Their stories are significant fragments of their personal history, and reveal the type and extent of social connections present (or otherwise) in facing disasters.

The methodological framework uses collective narratives to highlight the significance of foreign' students social capital during and in the aftermath of disasters. Gerteis (2002, 609) emphasized that "collective narratives are important because they are the sites where schemas take concrete empirical form" and they reveal how foreign students "(a) make sense of their circumstances; (b) assess their capabilities and prospects for recovery; and (c) decide on and sustain a course of action" (Chamlee-Wright and Storr 2011, 270).

This study is based on the narratives of 30 Filipino students from both the Tohoku region and greater Tokyo area. "Filipino students" belong to those whose official status of residence during the disaster was "student."[1] First-hand accounts during the Japan 3.11 earthquake[2] brought to light key themes like relationship dynamics, the decision-making rationale during the disaster, and reflections on the students' stay in Japan. Face-to-face interviews were possible with most of the students. Some who experienced the disaster had already completed their studies and returned to the Philippines. To include the narratives of these students, the authors conducted Skype interviews, and corresponded via email with those who had poor or limited internet connection.

Social media such as Facebook has become an interactive repository and platform for narratives, which are continuously accessed and updated

to provide timely and relevant information. Thus, people's experiences and narratives in disasters, as posted on social media, can be examined through *document study* (see Sarantakos 2005). The authors reviewed the exchanges on social media among Filipino students, particularly on Facebook. The narratives reveal the social connections of the students during the disaster which contributed to their disaster resilience.

Vulnerability, Resilience, and Social Capital

The authors weave the key concepts of *vulnerability, resilience*, and *social capital* to sharpen the analysis of the Filipino students' narratives after the 11 March earthquake.

Social Vulnerability

Adger (2000, 348) defines social vulnerability as the exposure to the impact of certain environmental changes, and social resilience as the ability to adapt to these changes. Cutter, Boruff, and Shirley (2003, 243) claims that social vulnerability is "partially the product of social inequalities .....that influence or shape the susceptibility of various groups to harm and that govern their ability to respond." Seventeen factors can affect the level and extent of vulnerability: "socioeconomic status, gender, race and ethnicity, age, commercial and industrial development, employment loss, rural/urban, residential property, infrastructure and lifelines, renters, occupation, family structure, education, population growth, medical services, social dependence and the special needs populations" (Listed in a table, 246–49). During disasters, the combination of these factors equates to, and dicates, a certain degree of vulnerability and susceptibility to disaster risks.

Social Resilience: Four Phases

Resilience is observed in the changes in institutions, economic structures, and even demographics (Adger 2000, 354). In times of crises, attaining a sufficient level of socioeconomic stability and mobility may be

considered a valid manifestation of resilience. Although resilience has been operationalized in different ways across multiple disciplines, from the natural sciences (i.e. Physics) to the social sciences (i.e. economics, ecology), all agree that, fundamentally, *resilience* refers to the ability to adapt to changes. For Sapirstein (2006) resilience develops across four phases: "response," "self-organization," "learning," and "adaptation."

People initially make (1) a *response* to the disruptions caused by disasters. Once hazards are recognized as threats to personal safety or property, the immediate reaction is to utilize available and relevant resources in order to mitigate these risks.

After the first phase, people in a community or organizations (2) *self-organize* to launch emergency response and recovery actions to "maintain[ing] social order," and to attend to the population's needs. This community initiative provides a "sense of safety," control, and "predictability," (Sapirstein 2006, 4) not just for each individual but also for the whole group. Though similar to the response phase, self-organization focuses on restoring and sustaining community functions and social order (Sapirstein 2006, 4). Thereafter, significant points of disaster-related (3) *learning* identify adaptable schemes to mitigate the disaster's impact, as well as opportunities for recovery.

Disasters alter existing social fabrics and may sometimes change communities permanently. The (4) *adaptation* phase allows the opportunity to grieve and eventually adjust. A successful adaptation ensures people "deal with the situations at hand rather than romanticizing an idealized past or harboring anger and resentment at perceived (or real) failures of government and other institutions" (Sapirstein 2006, 5). The final phase is often what comes to mind when people hear 'resilience.' In reality, the three prior phases are as important as the last one, and are necessary to achieve effective adaptation. The end goal is to reach a sense of normalcy, one identical or better than the situation prior to the disaster. The duration of each phase varies, and they may overlap.

During disasters, the circumstances of a foreign student pose distinct social vulnerabilities, which can be alleviated through social capital—relationships and interactions with others.

Social Capital in Disasters

There are a number of ways to define and interpret social capital depending on the discipline and scale of investigation (Robison, Schmid and Siles 2002). Some scholars see it as collectively-owned resource (Bourdieu 1985) or as a function of a social structure (Coleman 1988). Others highlight the importance of *social connections* and *networks*. For instance, Putnam (2000) expounds on social connections in the context of reciprocity and trustworthiness, while policy makers and institutions utilize its definition of social capital in the domain of social relations and interactions (Woolcock and Narayan 2000; Policy Research Initiative 2005). For Dynes (2006), social capital is not measured in individuals, but is instead embedded in social relationships and networks among community members. De Filippis (2001) adds that social capital is an outcome of the relationships of individuals and institutions. At any rate, trust, mutual understanding, networks, communities, and cooperative action are key elements in understanding the term.

Scholars have also shown the importance of social capital for resilience amidst disasters: the 1995 Kobe Earthquake (Nakagawa and Shaw 2004; Aldrich 2012; Yamamura 2014), the 2004 Indian Ocean Tsunami (Minamoto 2010; Munasinghe 2007), 2005 Hurricane Katrina (Airriess et al. 2008; Chamlee-Wright 2010; Aldrich 2012), and the 2011 Tohoku Earthquake (Aldrich 2012).

In disasters, social capital can be measured through the forms of social connections among individuals and communities, namely "bonding," "bridging," and "linking" (Hawkins and Maurer 2010, 1779-80; Aldrich 2012, 3–34). *Bonding* refers to the social networks that "reinforce exclusive identities and homogenous groups," while bridging refers to networks that look "outward" and "encompass people across diverse social cleavages" (Putnam 2000, 22). The former commonly includes ties between family members, relatives, friends and neighbors; while the latter refers to relationships with classmates, colleagues, and other associations and communities. *Linking* describes the connections individuals establish with formal institutions to access resources (Policy Research Initiative 2005, 31). Linkages may be formed with government agencies, financial groups,

nongovernment organizations, and nonprofit organizations, among others. These three categories of connections are utilized under different conditions, including disasters.

Convergence For Collective Action

Collective action refers to a group's attempt to attain a specific objective (see Ostrom 2004). While the number of individuals therein may vary depending on the circumstances, collective action mitigates the impact of disasters on the group and on their networks by responding accordingly and extending assistance to those affected. Collective action in this sense dovetails with the several phases of resilience—outlined above—of a community. Quarantelli and Dynes (1977, 23) weigh in on the theoretical significance of mass and group response to "collective stress situations" such as disasters. In a similar report, they claim that "the monitoring of and response to the crisis is usually done by some sort of group" (Dynes and Quarantelli 1977, 1).

People gravitate to those in whom they find a sense of security and strength. Nowadays, connecting and building networks for collective response take place on both physical and virtual platforms. Before the internet, physical convergence was the only option for people to come together, mitigate the effects of disasters, and implement recovery measures in response to disasters. Today, convergence also happens in the digital world; a vital sense of togetherness can be created in "alternative" spaces through social media. Online networks can provide pertinent information, complement disaster response strategies, and enhance community togetherness.

The internet changed and sped up the way people converge (or attempt to converge) during disasters, allowing them to seek and obtain information, which they then extend to others. Slater, Nishimura, and Kindstrand (2012), for instance, expound on the role of social media as a fundamental medium for response, information, and political activism during the Tohoku Earthquake. In the same way, Filipino students utilized social media to respond immediately and disseminate information after

the earthquake; they helped their communities adapt to the circumstances by making it easier to confirm who was (or not) in immediate danger, and provide assistance accordingly.

Weaving together the concepts introduced in this section, we establish that migrants are among the most disadvantaged and socially vulnerable people during disasters. They develop their social resilience by tapping social capital. The migrants' disaster narratives in this paper demonstrate the complexity of connections, which defy geographical boundaries and reframe social relations as migrants process and address the uncertainties around them.

The Filipino Students and Japan 3.11

Japan is a common destination for scholars and intellectuals who pursue further studies and become agents of knowledge transfer between Japan and their home countries. According to the Japan Student Services Organization's (JASSO) institutional classification, international students in Japan attend "graduate school[s], university undergraduate, junior college, colleges of technology, professional training college, and university preparatory courses" (Japan Student Services Organization 2013, Table Form, 6). Filipino students are classified as *temporary migrants*, whose presence in Japan is "regular" and "documented" yet limited to a certain period (Opiniano 2007). Foreign students in Japan finance their education through their own resources or through scholarships, such as that from the Japanese government (*Monbukagakusho*) or from financial grants given by private institutions.

The research explores the narratives of Filipino students who were in Japan during the 11 March 2011 Great East Japan Earthquake. They were attending academic and training institutions in the Tohoku Region and in the greater area of Tokyo. At the time of the disaster, there were 497 Filipino students and 43 short-term Filipino students across the various prefectures and cities of Japan (Japan Student Services Organization 2013, 4–5). Despite their relatively small numbers vis-à-vis other foreign students,

an established network—groups and collectives—of Filipino students had existed prior to the disaster. They had built and maintained occasional social and academic engagements in Japan and the Philippines, and maintained connections among students and academics outside Japan (i.e. similar professional associations, colleagues or former classmates in the home university).

Out of the 30 students contacted for this study, five were then living in the Tohoku region, four of whom were students from Tohoku University in Sendai City and one from Fukushima University. The five formed part of the ten Filipinos studying in the Tohoku area during the 2011 disaster, and belonged to *Kapatiran*, a collective of current and former Filipino students attending educational institutions in the region. The rest of the respondents came from academic and research institutions in central Tokyo, including the University of Tokyo (3 students), Tokyo Institute of Technology (7), Sophia University (4), Waseda University (1), Meiji University (1), Tokyo Metropolitan University (1), Chuo University (1), Tokyo Gakugei University (1) Takushoku University (1), Tsuda University (1), and vocational schools (4). An association similar to *Kapatiran* also existed in the area. Living nearer the earthquake's epicenter, the students from the Tohoku area were the most vulnerable to afterschocks and nuclear radiation from the Fukushima Nuclear Plant. However, a number of the students in the Tokyo area experienced certain challenges as well. The subsequent section discusses the predicament of both the Filipino students in Tohoku and Tokyo.

Quotes from Facebook from the student informants are labeled, SI, which stands for "Student Informant;" while select Facebook posts were referenced using the student initials and the accompanying time stamp.

The succeeding discussion presents how Filipino students developed and exhibited resilience in the aftermath of the earthquake. It identifies the vulnerabilities of the students, describes how they went through the four phases of resilience (Sapirstein 2006), and discusses the impact of social capital on such resilience.

Points of Vulnerability

The interviews with the Filipino students revealed that their vulnerabilities corresponded with five indicators from the list of social vulnerabilities identified by Cutter, Boruff, and Shirley (2003, 246–48): (1) "socioeconomic status," (2) "language and cultural barriers," (3) "infrastructure and lifelines,"(4) "renters," and (5) "family structure."

Socioeconomic status becomes a source of social vulnerability when the community's ability to "absorb and recover from the losses more quickly through insurance, social safety nets, and entitlement programs" (246) are strained and prolonged. This vulnerability is based on as well on a person's "income, political power, and prestige" (246). Filipino students in Japan support their studies mainly through financial subsidies. On the average, private and government scholarship grants are enough to cover basic daily expenses, but there is little room for personal savings and thus limited financial freedom. With the combined risks of recurring aftershocks and escalating nuclear radiation threats, evacuating high-risk areas—including the decision to leave Japan completely—was an option. However, the surge in demand raised airfare well beyond the financial capacity of many students.

> Question: During that time, you've decided not to return to the Philippines?
>
> Not anymore. The south is okay. And that was the original plan. Also, there are monetary considerations among us. At that time, the airfares spiked, and it was also difficult to book a flight. But we remain ready. (SI1 2012)

Another source of social vulnerability are the "language and cultural barriers" between the Philippines and Japan, which sometimes impede access to resources, including funding and information, especially in high-hazard areas. The Filipino students found it a challenge to gather and process reliable information because of these differences.

> We don't watch the television [since it's all in Japanese], we monitor
> the news through the internet. When the news is reported in the
> Philippines, it was quite exaggerated. Yes, there is a tsunami and all,
> but the news is a little exaggerated. It was sensationalize [sic] so the
> people get more worried... about radiation. (SI2 2013)

In Japan, not all foreign nationals can achieve a sufficient level of Japanese language proficiency to comprehend the technical details and information about the disaster. Thus, despite the availability of such information through various media, foreign nationals found themselves at a great disadvantage.

The "loss of sewers, bridges, water, telecommunications, and transportation infrastructure" (Cutter, Boruff and Shirley 2003, 247) compounded disaster losses. Damage to public utilities limited the distribution and flow of resources and information in the immediate aftermath of the disaster. According to the students, the breakdown in transportation and telecommunication added to the challenges they faced.

> The previous week, we were doing laboratory cleaning, inventory,
> cleaning the lab. [After the earthquake] when we went up again,
> everything was shattered.
>
> Question: You mentioned you have lots of equipment in the lab?
>
> Yes. Gas tanks fell, everything was shattered and it's messy. But
> Sensei said "Don't stay in school anymore, if you can go home, do
> so." But since I'm staying in the dorm, there's no train and Komaba
> is far for me to walk. (SI3 2012)

Renters or transient residents were especially vulnerable. With the high cost of living in Japan, renting residential space is a common practice for most people, including Japanese nationals, long-term foreign residents, and students. As temporary migrants, Filipino students were prohibited from acquiring any residential property in Japan. Although no one among interviewees suffered large-scale damage to their apartment or dormitory,

their renter status complicated any decisions to leave Japan permanently, since they had contracts and fees to pay.

Lastly, a key source of vulnerability for foreign students (and their families as well) lies in their separation from immediate family and friends.

> I went home. I don't remember, maybe I went home for three weeks. We decided to go home suddenly. We even slept at Narita [Airport]. We stayed there overnight because there were a lot of people... I went home one to two weeks after [March 11]. I bought my ticket, my parents paid for it. My father said, he can't sleep, he was worried. They ask me to go home, so I did go home. (SI4 2013)

> I moved out of Tokyo because my mother got sick. She was hospitalized because of the worry. Everyday she would call, and ask that I come home. But I would say I am okay here. What is shown in the media in the Philippines is different... That's why I decided [to leave], even for one week. (SI5 2012)

The level and extent of these social vulnerabilities affected the Filipino students from both Tohoku and Tokyo. However, the level of vulnerability varied, with those in directly affected and nearby areas finding themselves at a greater disadvantage.

> [Students leaving for Japan on April 2011], it was okay and safe to come to Japan. Well okay but it's a different sentiment if you're in the Tohoku Region. Compared to those in Kyushu, people from Tokyo, people from Kyoto. The intensity of the feeling is different..." it seems safe". But you wouldn't notice it even if you are in Tohoku, because it appears safe. There were no buildings that collapsed... but the radiation... So if you are from Tohoku and you will be greatly affected, you'll think twice. It's inappropriate not to care about things. What if things happen, what will you do. So you really have to think for yourself. (SI6 2012)

It was in this challenging context that they developed their resilience after the disaster.

Filipino Students' Resilience during the 3.11 Disaster

To reiterate a previous section, building disaster resilience has four phases (Sapirstein 2006). This section presents the development of these phases in the case of Filipino students during 3.11.

Response

For the students, their initial response primarily meant ensuring their safety and that of others in their network. Students recalled their immediate actions on 11 March 2011.

> What I did was go the international center, in Sanjomachi. Tohoku University International House. I was thinking, what if I go there? Because the houses of the Filipinas are close together in that area. When I went to the lobby, there were already people there.... That's where I saw Sharon (another Filipino student). I was the only one who went to the Kaikan, then I saw Sharon. Sharon was with another Filipina, married to a Japanese, Ate Rita. She brought her pet with her. All three of us were together at the lobby of the International House. (SI7 2012)

> But Sensei said, "Don't stay in school anymore, if you can go home, do so"... Good thing there's Viber, phone signal was gone... but there's still 3G signal. I was able to make a call: "where are you? Where do you want to meet? Where can we stay for a while?" So we met, Andra, me, Terrence and Bryan. We stayed in one coffee shop, chat for a while. When evening came we went to the house of our Indonesian friend to stay for a while. By 11:00 pm, when train services resumed I went home. (SI3 2012)

Priort to the disaster, the Filipino student collective in the Tokyo area regularly gathered for various social and academic activities. This community bonding was supplemented by constant interactions on social media—particularly on Facebook—to disseminate information about activities and student queries. When the earthquake struck, the social media page of the

Tokyo-based students (Association of Filipino Students in Japan Facebook page)[4] was flooded with 3.11-related inquiries and confirmations of safety.

> [Among the students, did you account the students who were here?] Yes. We did that. We post on Facebook: "Give us the name of those you know. Email us your whereabouts or if you want to leave japan." That's why there's an increase in the Facebook group [membership]. It became 400 at that time, because we add all those we know and where they are. (SI5 2012)

The interactions in the social media platform showed students readily offering advice and assistance.

> Guys.. Hope your emergency bags are ready just in case... [there are still aftershock] (A, March 11, 2011, 18:32)[5]

> If anyone stranded near Kanda, Tokyo, Ochanomizu or Akihabara station you are all welcome to stay in my place just call me at 080-xxxx-xxxx 070xxxxxxxx or email me at xxxx.xx@gmail.com free dinner =D (G, March 11, 2011, 19:00)[6]

> Hey guys, for foreigners in Japan, We can listen to English news in NHK Radio 963 (B, March 11 21:29)[7]

Once the scale of the damage was revealed, students in Tohoku and Tokyo coordinated to provide greater support for other Filipino students in high-risk areas.

Self-Organization

The actions of Filipino students in the aftermath of 2011 Tohoku disaster was a key example of self-organizing. Even several weeks after the disaster, the students living in the greater Tokyo area utilized the AFSJ Facebook page, which became the virtual venue to coordinate assistance and information among the affected Filipino students, especially those in the Tohoku area. One post has it,

Hope everyone is safe and doing ok. Are there updates particularly on the Filipino students who are in the Tohoku region? (L March 12, 2011, 13:56)[8]

Furthermore, the Facebook page became a means to help raise resources that the affected students needed. Filipino students in Tokyo offered their own residences so that their compatriots could use them.

[translated] if anyone wish to take a bath or sleep in the house (near Etchujima and Monzennakacho station), you can borrow the key from xxxxx. We also left some frozen meat, boiled eggs, frozen rice, etc. We also left a laptop that you can use while you're there (C, March 16, 2011, 00:27)[9]

The students from Tokyo (SI14 2012, SI14 2012) shared how the Filipino students from Tokyo, Sapporo, and less-affected regions constantly coordinated to raise funds and overcome financial constraints on fellow students in high-risk emergency areas in order to help them evacuate from the Tohoku area.

NEED HELP! Hello everyone especially those who are living in Tokyo. Students of Tohoku Univ. are asking for our help. They are advised to leave Sendai and are planning to come here in Tokyo. There are 6 of them, 4 males and 2 females. They don't have a place to stay here, they are seeking of someone who can give them accommodation even for just a while. Our help will be greatly appreciated. Be safe guys. (L, March 15, 2011, 15:49)[10]

(Translated) Dear all, we need to raise funds to help the students. [The affected students] don't have sufficient funds [to return to Manila] because of the long route: Yamagata-Tsuruoka- Niigata- Tokyo- Narita. As we all know, the allowance of a PhD student will not suffice to cover the fare. They appeal for our help... Because of the change of plans, there will be more evacuees going home, 7 adults and 2 children. They are asking for our help. (A, March 17, 2011, 20:56)[11]

Through concerted efforts, the various Filipino student groups were able to raise money to finance the airfares of seven students and two children. The student group from Tohoku headed to Tokyo en route to Narita airport for their 22 March 2011 flight. Although temporary accommodation in Tokyo was offered, transportation problems and irregular schedules prevented students from Tohoku and their potential hosts in Tokyo from touching base with each other. Nonetheless, the students from Tohoku expressed their gratitude for the financial help they received from the other students.

Filipino students in Japan, regardless of the region or prefecture they were living in, saw the need to look after each other. Once everyone's relative safety was confirmed and serious needs were attended to, the next steps were to organize and extend their assistance beyond the student collective. As one student posted in the group's page.

> How can we help for now... for those who are asking if there is an initiative on how to reach out to the Filipino affected by the disaster, we are waiting for directives on how to go about it specifically from the embassy. Just be ready with what you can give. Each one can also have the initiative to look for ways on how to help and give us updates (A March 13, 2011, 16:31)[12]

For the students, self-organizing initially took place within the collective of Filipino students, and eventually extended to their networks of conationals. Students were not the only subgroup that wanted to help and provide assistance; nonstudent Filipinos, through various associations in different key cities and prefectures, shared the same intentions. Official agencies such as Philippine Embassy, the Philippine Assistance Group (PAG), and faith-based institutions (e.g. Franciscan Chapel Center, Kichijoji Catholic Church) were vital points of contact to other communities and collectives. Cooperation with and among these institutions was not new, but was enhanced or (re)activated during and in the aftermath of the disaster.

> Hi everyone, the Franciscan Chapel in Roppongi needs volunteers who speak Japanese who can entertain and play with the children. For those who are interested, please contact XXXX- XXX-XXXX. (A, March 18, 2011, 23:41)[13]

Learning

The *learning* phase often overlaps with that of *adaptation*. One of the students reflected on the significance of people and social connections in facing a calamity, particularly the absence of a safety net such as one's family and friends back home.

> I think it's very, very important for a foreign student to have a strong support system that s/he can depend on in times of disaster. Living away from family is difficult, and more so when disaster strikes. In such times, you will have to depend on the support of friends, neighbors, classmates, teachers, etc. It's important to not live in a bubble and be active in some form of community (SI8 2013)

Another student stressed on the significance of the disaster and how much it affected their conditions as foreign students. This included rethinking their motivation for staying and the need to adapt to present circumstances.

> That will be around three or four months until I got fed up of that kind of lifestyle. The more I try to think about it, the more I worry, I can't focus on my research, I can't focus on what I'm doing and I get stressed. So I was thinking, If I keep thinking like this, I would die of thinking like this. I should just forget about it and continue. I decided to stay. If I stay if I decided to stay, if I keep on worrying about my decision to stay... it's not worth staying isn't it? Why don't I just get out. I'm here. I'm here for another four years. Five years or whatever. Okay let's not think about it. (SI9 2012)

Learning from any challenging life experience includes reflecting on the circumstances and enacting appropriate solutions. Adaptation begins

when the learning is applied. It is validated when new strategies increase
the group's resilience in future disasters.

Adaptation

Recurring aftershocks especially in the months after the Tohoku
earthquake was gradually considered a "normalized threat" (see Bankoff
2003), given that Japan has always been earthquake-prone. But the people
were confident that the physical structures were durable enough to withstand
another disaster. However, the 3.11 earthquake was quite complicated
because of the threats of tsunami and nuclear radiation.

> Business as usual. There were still classes. It did not cease. The most
> frightening is the nuclear [radiation]. That's the only fear. And aside
> from that nothing else. (SI10 2013)

Adaptation does not simply refer to the acceptance of one's
susceptibility to disaster. It also entails the capability to regroup and find
opportunities to mitigate future risks.

> Coping with the 3.11 disaster made me realize that there will always
> be a day after where everything else will go back to a certain degree
> of normalcy. It doesn't have to be immediate nor will it ever be
> perfectly the same as before. But no matter how long it takes, that
> day will come and all will be ok again. Life goes on. We just have to
> do our best to help each other and gather strength from the people
> around us, and of course God. (SI11 2013)

Some time after the 11 March 2011 disaster, Filipino students
became actively interested in disaster preparedness; they organized and
attended seminars which featured disaster specialists, engineers, and
geologists, who all shared insights on the Great East Japan Earthquake.
Some students supported university-based seminars like the Earthquake
and Tsunami Seminar, which was sponsored by and held at the
University of Tokyo from 27 to 30 June 2011. Also, along with the

welcome event for incoming Filipino students, the AFSJ held a disaster preparedness seminar at the St. Anselm Church Hall in Tokyo on 5 November 2011, where Filipino students specializing in earthquake engineering and geology provided lecture/presentations on hazard-prone areas in Tokyo and safe dwellings. Furthermore, the Filipino students volunteered in rebuilding and recovery projects in the Tohoku region. As a student said,

> I trained to become a telephone counselor (which I always wanted to do but the earthquake strengthened my resolve because I wanted to help somehow) where we get calls from people traumatized by the event. (SI8 2013)

Their initiatives created linkages with local institutions and opened significant opportunities for community involvement. Filipino students in Tohoku strengthened ties with other Filipinos in the region. It became clear that people were responding to a need for collective action that can build greater community resilience through more established social connections.

Connections and Disaster Resilience

Building resilience highlights the importance of connections with and among various social actors. Disasters compel people to (re)create connections to increase their capacities to respond and recover. According to Woolcock and Narayan (2000, 225), "It's not what you know, it's *who* you know." Technical and economic resources are significant in addressing catastrophes, but one's social relations cannot be overlooked, and are just as vital in disaster resilience.

The students from both Tohoku and Tokyo recounted how they met up after the earthquake in, for instance, a nearby coffee shop, after which they stayed together overnight (SI3 2012; SI12 2012). Another group of students who lived close to each other decided to stay together temporarily (SI6 2012; SI7 2012). For both groups, the primary concern was to remain

close or maintain active communication with one another, while they monitored the changing conditions in the aftermath of the earthquake.

Being together reduced the fear of uncertainty. With the absence of their immediate families, the Filipino students found comfort in each other. The phases of *response* and *self-organization* highlight the importance of connections for disaster resilience.

These connections are forms of social capital: *bonding, bridging,* and *linking* during disasters. New *bonding* often happens among people who share traumatic experiences (Douglas 2006), and helps create or reinforce the sense of a shared community. Prior to the 3.11 disaster, Filipino students frequently gathered for picnics, seasonal gatherings, and academic events. After the disaster, reaching out to their fellow students and expressing immediate concern for each other's safety seemed only natural.

> Question: Did you become closer with your other batchmates?
>
> Yes. We became closer. That time, it seems like we're the only one here. Well, aside from the family in the Philippines. (But at that time) we are the ones physically and personally together. We gain strength from each other at that time. (SI2 2013)

This is consistent with the study of Neri and Ville (2006) on foreign students' network in Australia, where a stronger level of connection with conationals is a likely tendency among foreign students as they build their social networks in their host country.

While bonding entails the self-preservation of the group, *bridging* commences when people express their intention to help each other. We have already seen how Filipino students offered assistance to one another. Though they maintained immediate and cohesive connection with their conationals, the activities after the disaster also allowed Filipino students to enhance the established connections with their Japanese and non-Japanese colleagues and friends as well.

Ah! Here's the effect to me. Because I stayed, so the relationship became positive (well, it wasn't negative before) but it improved... the relationship towards the Japanese. (SI12 2012)

As I said, it taught me a lot of lessons about myself and about other people and especially about the Japanese people and especially the Filipino people. I mentioned earlier, I realized when a big calamity come you get to discover yourself more. How you react to the event. Of course I wasn't calm the whole time, I would panic, I would also be stressed but maybe because my mind was focused on doing something, it made me worry less. I am not saying I was brave, but the serenity of the people in my lab, people in the street, whenever we go to the grocery, people were very patient, to line up for food and water. That gives me strength at that time, why would I leave Japan if these people are so loyal to this country... I was very amazed at how japan was able to recuperate. Maybe until now they are still trying to get back in shape. But at least they will be able to because of their good nature and attitude. They're very hard working and very disciplined. Actually, their serenity is the first thing that really caught my attention. It inspired me a lot, to also be serene. Because whenever I start panicking, I'll say okay why would I panic when everybody else seems serene? (SI14 2012)

Linkages were also available in the many formal institutions and ad hoc entities that provided and extended support and assistance for all those affected. Many of these institutions were not exclusive for students. Some, however, catered specifically to foreign students in Japan.

Japan's Ryugaku Kyokai, or Study Abroad Support Council, has started providing a consultation service for foreign students in Japan affected by the March 11th earthquake and tsunami. The nonprofit organization will help those affected find temporary shelters, change schools, extend visas and make other necessary arrangements. The service is available by telephone or by e-mail. (E, March 26, 2011, 00:11)[14]

Other general linkages included home country offices, nonprofit organizations, religious institutions, and international humanitarian missions.

> [translated] If you have any relatives, friends or acquaintances, who are living within the 50km radius, kindly inform the office of the CONGEN or PM me their identities and contact info so that we can get in touch with them the soonest possible time. (J, March 12, 2011, 22:50)[15]

These various forms of social connections that the students made and rekindled during the disaster were evident across the various phases of their resilience formation. From the Filipino students, their connections with other students and their conationals and improved their relations with colleagues, as their access to relevant linkages enhanced their resilience throughout the crisis.

Conclusion

The role of, and the impact on, vulnerable populations in disasters is gradually taking prominence in the scholarly literature. Studies note that some groups in society are more prone than others to damage, loss, and suffering arising from various hazards (Blaikie et al. 2003). And social class, caste, ethnicity, gender, disability, age or seniority have a profound impact on the level of vulnerability to the threats and risks of disasters.

This study explored the vulnerabilities and resilience formation of Filipino students in the aftermath of the 11 March 2011 Tohoku earthquake. As temporary migrants in Japan, the Filipino students faced significant challenges that affected their ability to adapt to the disaster: limited financial resources due to their being renters, damaged infrastructures, difficulty in accessing accurate information in Japanese, and separation from their immediate families. Amidst these difficulties, the students capitalized on social capital—their personal networks of contacts and colleagues, and established linkages.

Through these connections, Filipino students exhibited the different phases of resilience formation (Sapirstein 2006). Disaster *response* transpired immediately after the strongest earthquake, and it entailed the need to assure people within their social networks (primarily conationals) that they were safe. The second phase of resilience formation emphasized the ability to *self-organize.* Regardless of distance between prefectures and regions, people were motivated to support the most vulnerable segment of the collective. The self-organization is likewise a form of self-preservation for the Filipino students, seen through the combined financial support and offers of accommodations to the more affected students. The *learning* phase followed once a relative degree of safety was ensured. Students gained valuable lessons from the disaster and later created strategies to *adapt* to future challenges to keep themselves more informed and more resilient.

The importance of social capital for resilience after a disaster is evident in the interactions with the various social actors in the Filipino students' network (*bonding*), across other communities and collectives (*bridging*), and with formal social institutions and agencies (*linking*), over the phases of resilience formation. Their experiences show how capacity-building and resilience are a continuous process that varied based on people's inherent characteristics and connections that helped empower them to avail of necessary resources.

Acknowledgment

Notes

[1] Foreign students are admitted by a country other than their own, usually under special permits or visas, for the specific course of study in an accredited institution of the receiving country. (Organization for Economic Co-operation and Development 2011)

[2] Here after, the 2011 Tohoku Earthquake will interchangeably referred to as Japan 3.11 or 3.11 Earthquake.

[3] In 2008, Japan ranked 8th among countires that had the highest foreign student population in tertiary institutions (Organization for Economic Co-operation and Development 2011).

[4] The AFSJ Facebook Page is exclusive to its members. Access to this page by the author is based on the membership to this group. All quotations were properly cited.

[5] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[6] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[7] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[8] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[9] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[10] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[11] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[12] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[13] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[14] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

[15] AFSJ's Facebook page, accessed 12 February 2013. http://www.facebook.com/afsjpage

References

Adger, W. Neil. 2000. "Social and Ecological Resilience: Are They Related?" *Progress in Human Geography* 24 (3): 347–64.

Airriess, Christopher A., Wei Li, Karen J. Leong, Angela Chia-Chen Chen, and Verna M. Keith. 2008. "Church-based Social Capital, Networks and Geographical Scale: Katrina Evacuation, Relocation, and Recovery in a New Orleans Vietnamese American Community." *Geoforum* 39: 1333–46.

Aldrich, Daniel P. 2012. *Building Resilience: Social Capital in Post-Disaster Recovery.* Chicago: University of Chicago Press.

Bankoff, Greg. 2003. *Cultures of Disaster: Society and Natural Hazard in the Philippines.* London: Routeledge Curzon.

Blaikie, Piers, Ben Wisner, Terry Cannon, and Ian Davis. 2003. *At Risk: Natural Hazards, People's Vulnerability and Disasters.* 2nd ed. London: Routledge.

Bourdieu, Pierre. 1985. "The Forms of Capital." *Handbook of Theory and Research for Sociology of Education*, edited by John G. Richardson, 241–58. Westport,CN: Greenwood Press.

Chamlee-Wright, Emily. 2010. *The Cultural and Political Economy of Recovery: Social Learning in a Post-Disaster Environment.* New York: Routledge.

Chamlee-Wright, Emily, and Virgil Henry Storr. 2011. "Social Capital as Collective Narratives and Post-Disaster Community Recovery." *The Sociological Review* 59: 266–82.

Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94: S95–S120.

Cutter, Susan L., Bryan J. Boruff, and W. Lynn Shirley. 2003. "Social Vulnerability to Environmental Hazards." *Social Science Quarterly* 84: 242–61.

DeFilippis, J. 2001. "The Myth of Social Capital in Community Development." *Housing Policy Debate* 12 (4): 781–806.

Douglas, Mary. 1994. *Risk and Blame: Essays in Cultural Theory.* London: Routledge.

Dynes, Russell R. 2006. "Social capital: Dealing with community emergencies." *Homeland Security Affairs* 2 (2): 1–25.

Dynes, Russell R. and Enrico L. Quarantelli. 1977. "Organizational Communications and Decision Making in Crises." Report Series 17. Delaware: University of Delaware Disaster Research Center.

Gandy, Matthew. 2008. "Landscapes of Disaster: Water, Modernity, and Urban Fragmentation in Mumbai." *Environment and Planning A* 40(1): 108–30.

Gerteis, J. 2002. "The Possession of Civic Virtue: Movement Narratives of Race and Class in the Knights of Labor." *American Journal of Sociology* 108 (3): 580–615.

Hawkins, Robert L., and Katherine Maurer. 2010. "Bonding, Bridging and Linking: How Social Capital Operated in New Orleans following Hurricane Katrina." *British Journal of Social Work* 40: 1777–93.

Hoffman, Susanna M., and Anthony Oliver-Smith. 2002. *Catastrophe and Disaster: The Anthropology of Disaster.* Santa Fe: School of American Research Press.

Hughes, Amanda L., Leysia Palen, Jeannette Sutton, Sophia B. Lui, and Sarah Vieweg. 2008. "Site-Seeing in Disaster?: An Examination of On-line Social Convergence." Edited by F. Fiedrich and B. Van de Walle. *5th International ISCRAM Conference*, May 2008.

Japan Student Services Organization. 2013. "Result of an Annual Survey of International Students in Japan 2012." *Japan Student Services Organization, Independent Administrative Institution,* February. http://www.jasso.go.jp/en/about/statistics/intl_student_e/2012/__icsFiles/afieldfile/2015/11/27/data12_e.pdf

Kirby, Peadar. 2010. "Vulnerability and Globalization: The Social Impact of globalization." In *The Routeledge International Handbook of Globalization Studies*, edited by Bryan S. Turner, 114–34. New York: Routledge.

Minamoto, Yuriko. 2010. "Social Capital and Livelihood Recovery: Post-tsunami Sri Lanka as a Case." *Disaster Prevention and Management* 19 (5): 548–64.

Disaster, Resilience, and Social Capital: Filipino Students in the Aftermath
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Munasinghe, Mohan. 2007. "The Importance of Social Capital: Comparing the Impacts of the 2004 Asian Tsunami on Sri Lanka, and Hurricane Katrina 2005 on New Orleans." *Ecological Economics* 64 (1): 9–11.

Nakagawa, Yuko, and Rajib Shaw. 2004. "Social Capital: A Missing Link to Disaster Recovery." *International Journal of Mass Emergencies and Disasters* 22 (1): 5–34.

Neri, Frank, and Simon Ville. 2006. "The Social Capital Experience of International Students in Australia: The Wollongong Experience." Working Paper, University of Wollongong.

OECD. 2011. *Education at a Glance 2011: OECD Indicators.* OECD Publishing. http://dx.doi.org/10.1787/eag-2011-en

Oliver-Smith, Anthony. 1996. "Anthropological Research on Hazards and Disasters." *Annual Review of Anthropology* (25): 303–28.

Opiniano, Jeremiah M. 2007. "Statistics on Filipinos' International Migration: Issues and Steps Towards Harmonizing the Data." *10th National Convention on Statistics (NCS).* Manila: www.nscb.gov.ph/ncs/10thNCS/.../cps03-04.pdf.

Ostrom, Elinor. 2004. "Understanding Collective Action." In *Collective Action and Property Rights for Sustainable Development*, edited by Ruth S. Meinzen-Dick and Monica di Grigorio, Brief 2, Focus 11. Washington, D.C.: International Food Policy Research Institute.

Policy Research Initiative. 2005. *Social Capital in Action: Thematic Policy Studies.* Ottawa: Government of Canada.

Putnam, Robert. 2000. *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon & Schuster.

Quarantelli, Enrico L., and Russell R. Dynes. 1977. "Response to Social Crisis and Disaster." *Annual Review of Sociology* 3: 23–49. http://www.jstor.org/stable/2945929.

Robison, Lindon J., A. Allan Schmid, and Marcelo E. Siles. 2002. "Is Social Capital Really Capital?" *Review of Social Economy* 60: 1–24.

Rudenstine, Sasha, and Sandro Galea. 2012. *The Causes and Behavioral Consequences of Disasters: Models Informed by the Global Experience 1950-2005.* New York: Springer.

Sapirstein, Guy. 2006. "Social Resilience: The Forgotten Dimension in Disaster Risk Reduction." *Jamba – Quarterly Bulletin of the African Center for Disaster Studies* 1 (1): 1–8, 55–57.

Sarantakos, Sotirios. 2005. *Social Research.* 3rd Edition. New York: Macmillan.

Slater, David H., Keiko Nishimura, and Love Kindstrand. 2012. "Social Media, Information, and Political Activism in Japan's 3.11 Crisis." *The Asia-Pacific Journal* 10 (24): 1–33.https://apjjf.org/-David-H--Slater--Nishimura-Keiko--Love-Kindstrand/3762/article.pdf

Statistics Bureau, Ministry of Internal Affairs and Communications. 2015. *Foreign National Residents by Nationality (2013 to 2015)* [In Japanese]. http://www.stat.go.jp/english/data/nenkan/66nenkan/1431-02.htm.

United Nations International Strategy for Disaster Reduction. 2007. *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.* Geneva: United Nations.

United Nations International Strategy for Disaster Reduction. 2015. *Sendai Framework for Disaster Risk Reduction 2015 - 2030.* Geneva: United Nations.

Woolcock , Michael, and Deepa Narayan. 2000. "Social Capital: Implications for Development Theory, Research, and Policy." *World Bank Research Observer* 15 (2): 225–49. http://documents.worldbank.org/curated/en/961231468336675195/pdf/766490JRN0WBRO00Box374385B00PUBLIC0.pdf

Yamamura, Eiji. 2014. "Natural Disasters and Social Capital Formation: The Impact of the Great Hanshin-Awaji Earthquake." *Papers in Regional Science.*

In-depth Interviews and Personal Communications

SI1, interview by Lisette Robles, 10 September 2012, Tokyo.

SI2, Skype interview by Lisette Robles, 28 April 2013.

SI3, interview by Lisette Robles, 10 October 2012, Tokyo.

SI4, Skype interview by Lisette Robles, 8 May 2013.

SI5, interview by Lisette Robles, 18 September, 2012, Tokyo.

SI6, interview by Lisette Robles, 6 May 2012, Sendai City.

SI7, interview by Lisette Robles, 6 May 2012, Sendai City.

SI8, email to Lisette Robles, 2013.

SI9, interview by Lisette Robles, 2 June 2012, Fukushima.

SI10, Skype interview by Lisette Robles, 3 May 2013.

SI11, email to Lisette Robles, 2013.

SI12, interview by Lisette Robles, 12 October 2012, Tokyo.

SI13, email to Lisette Robles, 2013.

SI14, interview by Lisette Robles, 14 September 2012, Tokyo.

SI15, interview by Lisette Robles, 14 September 2012, Tokyo.