

A narrative-based study on migrants behavior and response to disasters: 2011 Tohoku Earthquake and the Filipino students

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Disasters are never isolated events that individuals and communities faced. They come as compounded problems resulting from one tragedy after another. This case happened during the 2011 Great East Japan Earthquake. On March 11, 2011, a magnitude 9.0 earthquake shook the main island of Japan. Compounding this disaster was a massive tsunami that hit the Tohoku region minutes after this seismic catastrophe. As if such double devastations were not enough, the following days were raved with threats of nuclear turmoil as the Fukushima Nuclear Plant was damaged as well. The forceful earthquake and tsunami left thousands defenseless, frightened of recurring aftershocks, at the same time apprehensive of the sporadically behaving damaged nuclear plant. The triple tragedy of the earthquake-tsunami-nuclear radiation posed threat to personal safety and heightened sense of vulnerability for affected communities.

Based on the social vulnerability paradigm, migrants are among the vulnerable population during disasters. However, according to the International Organization for Migration (IOM, 2012), non-nationals, especially migrant workers and their families, have often remained invisible and thus not been accounted for humanitarian response mechanisms during disasters.

This study explores the vulnerabilities and capacities of migrants that dictate their behavior and response during natural-technological accidents and disasters. A qualitative study was conducted based on the disaster narratives of thirty (30) Filipino students from both Tohoku and Tokyo area who experienced the March 11, 2011 disaster. Together with this is the review of the Facebook page for the Filipino students in Japan within a year and a half period since the day of the Tohoku Earthquake.

Both from the interviews and analysis of the social media page, findings showed that these composites of disasters, risks, and hazards developed certain degrees of vulnerability for migrants. Based on the experience of the Filipino students, occasional earthquake is part of living in Japan. However, the magnitude and the effects thereafter were not likely foreseen, such as the tsunami and the nuclear crisis in Fukushima. Beyond the interest to know about facts regarding nuclear plants and radiation there was the interest to ascertain and comprehend the possible effects of a nuclear melt down and the damages that will result from such event (both immediate and long term).

The Facebook page reviewed from March 11, 2011 to September of 2012 showed it was primarily used as site for information gathering and sharing information about the earthquake, aftershocks, nuclear radiation, and other concerns on personal safety. Out of the 804 posts during this period, there were 288 posts about Japan 3.11, with 208 posts made in the next three weeks after the March 11, 2011 earthquake. It covered leading issues such as radiation, earthquake, Filipino students, assistance, safety, and departure, among other concerns. Radiation had been the most discussed theme in the page and even in the interviews. The Facebook page was used to post opportunities for support and assistance to other Filipino students and members of the Filipino community who necessitated assistance. This natural-technological disaster experience of Filipino students during the 2011 Tohoku Earthquake activated the sense of collective action among their co-nationals both in the physical and online platform. Information sharing had been one of the key medium to extend assistance especially to address the issue of nuclear radiation.

While this study is limited to the experiences of a certain group of migrants, it provided a potential to further study and look into the active behaviors of other nationals and/or other migrant groups (i.e. migrant workers, long term residents) during disasters. Also, the study presented a perspective on human vulnerabilities and capacities in addressing complex disasters.

Keywords: 2011 Tohoku Earthquake, migrants, foreign students

Impact of knowledge for understanding of haiku composed by the earthquake

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1. Introduction

Japanese short poems called 'haiku' are regarded as appropriate expressions of Japanese seasonal sentiments because they stem from the rich and diverse changes of the Japanese environment. But it is unknown how Japanese haiku responded to such great natural changes as earthquakes and volcanic eruptions. With this in mind, we examined the psychological effects expressed in haiku composed after the disaster of March 11, 2011. We hoped to find a new use of haiku as a new way to convey emotions, especially since haiku is spreading internationally.

Although it may be difficult to prove this immediately, we can learn how Japanese employ haiku to convey their emotions at present. Using questionnaires, we investigated how Aomori residents and those in other areas reacted to the above disaster.

2. Method of Study

Collecting 234 haiku on the internet relating to the quake, we asked respondents to put a circle mark to indicate if they understood a haiku, and to put a double circle mark to show that they empathized.

We received replies from 20 people in the affected areas of Aomori Prefecture and 20 from others areas.

3. Results

The total of 40 people responded on 4678 haiku which averaged 177 haiku per person. 3956 haiku were understood (single circle), and 722 were felt empathy (double circle).

More than two individuals understood every haiku, with the average being around twenty people. Regarding empathy, as the number of respondents increased the number of haiku decreased. When tabulated separately, answers for Aomori and others produced the differences found in the Fig. The following haiku had a 5% statistical test of ratio difference.

¥ Ohzeino Gusukobudori ineno hana: OHTA, Tsuchio

Many volunteered to help the recovery from the damage by the Fukushima nuclear accident in the rice field with flowering.

¥¥ Nanji shiruya Gama twitter Hangenki: OBARA, Takuha

Do you know that toad can twitter half-life of radioactivity?

The former higher and the latter is the lower in Aomori. Because the former includes the name of fairy tale in northern Japan known in Aomori and the latter was formed by the respondents of Technologists, who knew the half-life radioactivity.

4. Principal component analysis

The first axis is the frequency of responses, while the second refers to Aomori and other areas. This shows the differences between Aomori and other areas. In other words, empathy in haiku varies according to how much the respondent knows about the words used.

5. Calculation

One point given for comprehension, two for empathetic response. The highest score was 46 points, while most range between 15 to 30 points, with the lowest at 2 points. Based on this, the top 5 haiku were the following:

The first haiku told how parents found their child's summer hat with a floral decoration near their home. The child died in the tsunami. It expressed the parents' grief.

The next haiku was composed right after the quake. In mid-March he was searching for his mother, who drowned in the tsunami, in the snow that still lay on the ground in Northeast Japan.

The third haiku was composed by a Frenchman, Laurent Mabesoone, about radiation. A young child tells about the cesium diffused by the accident. The child learned this word from the media or elders' speech.

The fourth haiku is cheerful. Someone was found in the rubble, still alive, in the middle of the night, and someone shouted. Some hope remained.

Next, a baby in the shelter next to its mother, cold and uncomfortable. The parents were helpless and suffering.

6. Conclusion

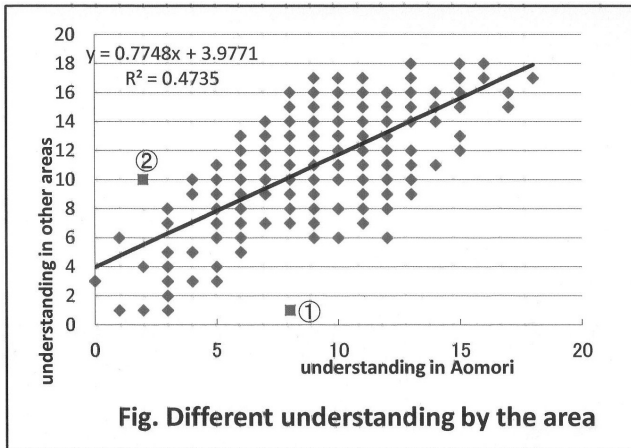
6.1 haiku gave empathy to people of non-disaster areas.

6.2 understanding of haiku was affected by the respondents' knowledge.

6.3 strong impressed haiku were found.

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Keywords: effects of knowledge, understanding of haiku, haiku by earthquake



INTERRELATION OF NATURE AND SOCIETY

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The analysis carries out by the authors using a large amount of data has shown that all biological crises on the planet over the last 600 million years, human separation in independent genus, all the main stages of Homo sapience and society formation, the rise and fall of civilizations, empires and states preceded and accompanied by natural disasters: climatic anomalies, floods and droughts, earthquakes, volcanic eruptions, etc., which confirms the well-known Aristotle-Leibniz-Mach principle of indissoluble unity of the physical and spiritual world.

In order to study the relationships between the "lifeless" and "living" nature and the society the authors compiled a list of natural disasters and social events (wars, revolutions, epidemics, genocides, fires, etc.), weighted by magnitude.

Classification of events by their magnitude is constructed on proposed by M.R. Rodkin and N.V. Shebalin in 1993 logarithmic scale, which is based on socially significant parameters of the material and human losses caused by earthquakes. Scale was modified by authors in accordance with established by S.P. Kapitza demographic characteristics of human development and changes of exchange rates over time and is used for the classification of natural disasters and social phenomena from unified positions.

This list includes about 2400 most socially significant ("strong") events occurring on the planet from the XVI century BC to 2014 inclusive. Such list of events weighted by the magnitude over a long period of time is compiled for the first time. It is fairly complete and statistically representative basis for studies of the distribution of natural disasters, social phenomena and their interrelation.

Keywords: geodynamics, society, magnitude of disaster, interaction of disasters, impact of society on the geodynamic processes