JAPAN: Facing Major Natural and International Challenges in the 21st Century

Proceedings of the 25th and 26th annual conferences of the Japan Studies Association of Canada [JSAC]/ Association canadienne d'études sur le Japon

カナダ日本研究会

Introduction

This slim tome contains four presentations, submitted originally at the 25th and 26th annual conferences of the *Japan Studies Association of Canada* [JSAC], held at Carleton University in Ottawa and at the University of Saskatoon, in October 2012 and October 2013, respectively. The main thematic focus of the 2012 conference was the unfolding aftermath of the March 11, 2011 *Great Eastern Japan Disasters* [Higashi Nihon Daishinsai, hereafter 3/11 or 3/11/11], the earthquake/tsunami/Fukushima Dai-ichi nuclear energy plant core meltdown – natural and technical chain-disasters which caused around 20,000 dead and missing, widespread homelessness, horrific physical and mental suffering and hundreds of trillions of yen [tens of billions of dollars] in material/financial losses. The full programme was very diverse and well represented in number [29 papers and one roundtable discussion] and quality of regular presentations. A spontaneous Skype discussion with survivors in the area afflicted by the cataclysm and a talk by Dr. Jackie Steele [the Canadian editor of the *Tokyo University Social Sciences Quarterly/Tōdai Shaken*], the 2012 JSAC Conference Dinner Keynote Speaker, on her two-week saga of coping with the unexpected and survival, accompanied by her baby-girl, contributed unforgettable and inspiring human – but also professional - highlights.

Guest lectures by prominent Tokyo University economist, Professor Itō Motoshige, on Japanese-Canadian economic relations in the context of the proposed *Trans-Pacific Partnership* [TPP] and by Professor Nishihara Masashi, Director of the Research Institute for Peace and Security in Tokyo on "*Japan in the 'Asian Century',*" respectively, completed the topical spectrum of the conference.

The richness and diversity of the presentations at both gatherings stand in stark contrast to the very small number of essays in the present volume, reflecting the editor's failure [notwithstanding numerous appeals] to impress upon colleagues the immediate as well as future practical importance, usefulness and professional relevance of the integral reconstruction of the conferences, as an [edited] *e-publication*.

The theme of the 2013 JSAC conference in Saskatoon was *Japan on the Edge* in reference to what looks like a fast deterioration of the security environment in Asia Pacific.

Three of the essays concern the 3/11/11 disaster; the other one addresses the political dimensions of whaling and its impact on Japan's international image.

JSAC President and University of British Columbia Geography Professor Dr. David W. Edgington's contribution is entitled "*Local Government Emergency Response Following the Great East Japan Earthquake Disaster*." The essay strikes a fine balance between transmission of facts and detailed analysis of data – both rooted in intensive hands-on fieldwork.

University of British Columbia Anthropology Professor Dr. Millie Creighton's piece, "'We Shall Not Forget': Rendering, Remembering and Commemorating Tohoku's and Japan's Triple Disasters in Local Cities and Communities," combines professionalism with heartfelt compassion to report on her multi-year work in several of the Tohoku communities in areas most heavily affected by the disasters. While this paper focuses on the communities and activities within them, a longer more analytical version of the paper with citations to other materials is slated to appear in The Journal of Global Initiatives, Volume 9, No. 1, 2014. This will be a special issue devoted to Japan thus other articles in it will also be of interest to those studying and researching Japan.

Daniel Baker, an MA student at Carleton University's Norman Paterson School of International Affairs [NPSIA] with meaningful Japan experience and knowledge and a leading representative of Canada's young generation of Japan specialists, has contributed "*Telecommunications and the response to 3/11/11*." The essay is a significant examination of the role of communication and social media technologies during and in the aftermath of the cataclysm.

The essay of Dr. Michiko Aramaki of the *Simon de Beauvoir Institute* of Concordia University in Montreal is titled "*The Anglosphere and the construction of anti-whaling as an anti-Japanese discourse."* The author considers racism rather than genuine concern with the survival of most whale species, to be behind the anti-whaling campaign of what she calls the dominant *Anglosphere* nations [the US, the UK, Australia, New Zealand, Canada], particularly when contrasting the treatment of Japan with that of Norway , the other major whaling nation. The interpretative line of the piece is highly challenging in that the criticism of the radical leftism of the most aggressive anti-whaling groups and individual activists – embodied by Greenpeace and Canadian Paul Watson - draws on Saidskyism. The latter is a portmanteau coined by historian Dr. Jacob Kovalio in reference to the most influential anti-Western, Islamist/Leftist duo of "public intellectuals": E.W. Said [the author of *Orientalism* a propaganda tome whose main ideas are drawn from the writings of Sayyd Qutb , the chief ideologue of the Muslim Brotherhood in nominally-Christian Said's native Egypt] and N. Chomsky - the notorious extreme radical leftist .

The Organizing Committee of the 2012 JSAC Conference, gratefully acknowledges the indispensable financial support of the Japan Foundation in particular, as well as that of the Office of the Dean of the Faculty of Arts and Social Sciences, the Office of the Vice-President Academic and the History Department of Carleton University and that of the then ambassador of Japan to Canada, HE Ishikawa Kaoru.

The 2012 JSAC conference organizers thank for their meaningful efforts student-volunteers Eddy Jakobovitz, Lakru Vidhyatilaka, Satim Robinson and especially Alexander McCaffrey, who has also contributed to the compilation of this Proceedings item.

Jacob Kovalio
Carleton University, Ottawa, May 2014

Japan: Major Natural and Political Challenges in the 21st Century

Papers presented at the 25th and 26th Annual Conferences of the Japan Studies Association of Canada / Association canadienne d'études sur le Japon

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Local Government Emergency Response Following the Great East Japan Earthquake Disaster

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1. Introduction

"Insomuch as disasters are geographically localized, municipalities are most often required to assume primary responsibility for emergency management. However, the policy-making administrative and fiscal capacities of local government to design, implement and support effective programs is very problematic" (Waugh and Hy, 1990, page 11)

The massive earthquake and tsunami that struck Japan on March 11, 2011 (hereafter the '3.11 disaster'), followed by the release of radiation from the Fukushima Daiichi Nuclear Power Station, represent one of the greatest disasters to attack Japan in modern memory. As will be described in more detail, under the Japanese emergency response system local governments are expected to be among the 'first responders' and primary managers of an emergency, even though the national government may furnish most of the resources and technical expertise. To some degree, this model matches those used in a wide number of jurisdictions around the world, where citizens turn to local governments to alert them of an impending emergency, to assess the magnitude and keep them properly informed of the situation, to relocate people where necessary from dangerous areas, and to provide for a rapid restoration of services and recovery from calamities; as well as to mitigate the impact of future emergencies. Translated into its simplest terms, residents and local businesses expect local governments to prevent, respond to and manage crises effectively (Atkinson, 2014).

Catastrophic disasters, however, such as the 3.11 tragedy in the Tōhoku region of Japan, represent a different type of emergency in which hundreds of thousands of lives are immediately at risk. The significant loss of lives in this case, estimated at over 15,884 dead plus 2,636 missing, and more than 270,000 living in evacuation shelters, was indeed a major human tragedy (*The Washington Post*, 2014). Along the Sanriku and Hamadori coastlines of Japan, first responders in local municipalities, such as ambulance or local fire departments, were in many cases themselves victims of the disaster. Local resources quickly became exhausted or crippled due to the loss of communication and transportation infrastructure. Local government leaders were often unable to determine or to communicate their priority needs to outside sources of help, because there were simply just too many avenues to prioritize. Due the extra pressures placed on local governments, not least of which is the need to solve unanticipated intra- and inter-jurisdictional conflicts that may interfere with emergency management, catastrophic disasters clearly demand a different type of response than routine disasters (Comfort et al., 2013).

This paper addresses these issues by examining local government emergency responses in three municipalities following the Great East Japan Earthquake Disaster. Through focusing on how local government behaved in an unexpected emergency this research contributes to an understanding of the strengths, weaknesses and reform efforts of Japan's disaster management system. While there have been many evaluations of the national response to the 3.11 crisis, the

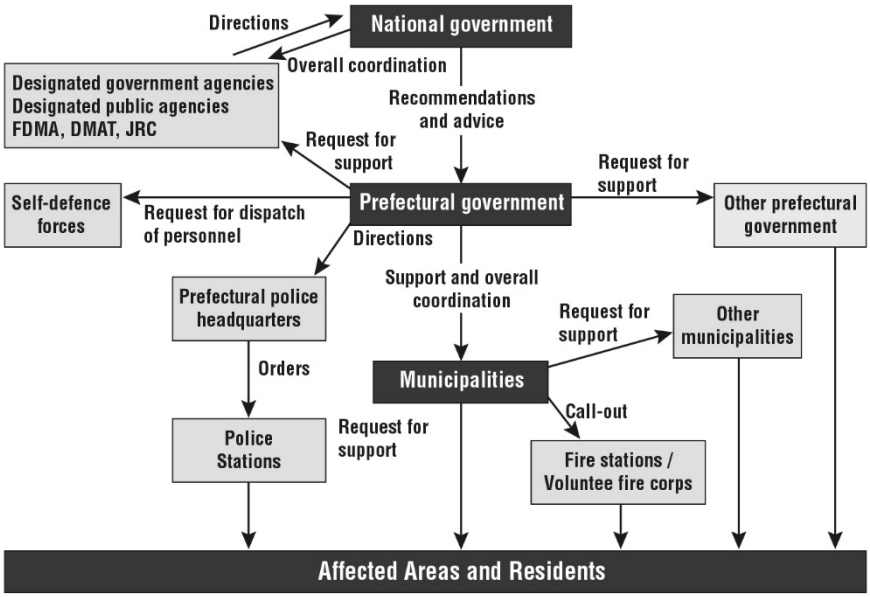
behavior of local governments remain relatively understudied (Suzuki and Kaneko, 2013; Sakaki and Lukner, 2013).

The paper first sets out the role expected of Japanese local authorities within the national disaster response system, and then draws on secondary sources to describe the particular challenges in the emergency response to 3.11 the many problems encountered by first responders in the Tōhoku region. Next, material from the author's field work in Tōhoku, together with interviews conducted there, and also in Tokyo during 2011 and 2012, reveal the particular problems experienced by three local municipalities – Ishinomaki, a fishing community in Miyagi prefecture, which had the highest loss of lives and the largest proportion of any town inundated by the tsunami; Sendai, the major administrative centre in both Miyagi prefecture and the Tōhoku region; and Sōma, a smaller agricultural port and fishing town in Fukushima, located about 45 kilometres north of the stricken Fukushima Daiichi Nuclear Power Plant. The interviews took place with senior officials who were involved in the emergency during the first days of the 3.11 crisis. While these three cities are not necessarily representative of the 30 or so local governments affected by the tsunami along the 600 kilometer Sanriku, Sendai Bay and Hamadori coastlines, they reveal interesting insights into the challenges faced by municipalities in one of Japan's major disasters. The paper concludes with some lessons that can be learned from the research.

2. Japan's Disaster Response System

Britton (2005) has identified a number of distinctive characteristics of Japan's disaster response system. First, its origin can be traced to the Disaster Countermeasures Basic Act, 1961, which was prompted by the Isewan typhoon in 1959 that left more than 5,000 dead. Based on this legislation, Japan operates its disaster management system as a three-level hierarchical organization shown in Figure 1, with the national government at the top, followed by prefectural governments and municipal governments (cities, towns and villages).

Figure 1. Japan's three-level hierarchical disaster response system



Source: adapted from Hyogo Prefecture (2009: 2)

Second, Japan does not have a central government agency equivalent to the US Federal Emergency Management Agency (FEMA). By contrast, the Central Disaster Prevention Council is chaired by the Prime Minister, and comprises the entire Cabinet, including the Minister of State for Disaster Management. This Council creates and promotes the implementation of a Basic Disaster Management Plan for Japan, and a Disaster Management Operation Plan is also made by each designated government organization and public corporation. In addition, prefecture and municipal disaster management councils also make Local Disaster Plans. These are compiled according to local circumstances but reflect the guiding principles in the Basic Disaster Management Plan (Nazarov, 2011).

Third, as is the case in many other countries, Japan's municipal governments are tasked with the direct responsibility to carry out emergency preparedness and disaster mitigation as well as response, relief and recovery operations.

In sum, municipalities are the primary 'first responders' in the case of disasters. It is their responsibility to issue evacuation orders, plan for emergencies by stockpiling food and supplies, and to initiate responses to disasters such as opening and maintaining emergency shelters. They are also in direct control of maneuvers such as firefighting, rescue and ambulance services. Local fire brigades are under the command of municipalities, and at a time of emergency they play a key role not only in putting out fires, but also in rescue missions and the evacuation of people and sounding warning systems. Besides official fire crews Japan has a well-organized volunteer fire fighting system (called fire corps) under the control of local government. Prefectural offices operate police forces and where necessary they will engage in search and rescue during disasters upon the request of the mayor of an affected municipality. But only in the extreme cases of large-scale disasters affecting wide areas will related prefectures support the municipalities by carrying out overall coordination efforts.

If the scope of the disaster elevates beyond response capabilities of both the municipality and prefecture, then the national government will put into action its own disaster response forces, such as the Self Defense Forces (SDF), the Fire and Disaster Management Agency (FDMA), the National Police Agency (NPA) and the Japanese Red Cross (JRC). Depending on the scale of the disaster, *ad hoc* emergency headquarters are set up at all three levels of government to coordinate rescue, relief and recovery operations, and also within designated public organizations if there is such a need (e.g. electric power corporations, the Japan Railway Company, and so on) (Nazarov, 2011). One issue here is that the various national agencies cannot decide in advance on a division of responsibilities and who should take the lead, as each disaster is different (e.g. fires, floods, hazardous material spills). In principle, each national agency has a representative at the national government's disaster headquarters at the time of a crisis to facilitate coordination. Moreover, at this level they cannot decide on the details of any post-disaster response (e.g. search and rescue), which have to be coordinated by the emergency headquarters set up in each local municipality.

A fourth feature identified by Britton (2005) is that many systemic innovations to Japan's disaster response system were carried out following the 1995 Great Hanshin-Awaji Earthquake (commonly called the 1995 Kobe earthquake) where 6,434 lives were lost and an unacceptable delay in first response occurred at multiple levels (Nakamura, 2000). In the post-disaster review conducted after the Kobe earthquake many systemic faults in existing protocols were identified, including long delays in the transmission of crucial information to the Prime Minister's office concerning the impact of the disaster, and the cumbersome procedures in effect at that time for summoning the SDF to commence search and rescue operations, as well as a lack of cooperation between the SDF and local governments. Moreover, there was a delay in establishing an early

stage medical assistance system, which according to one commentator could have saved around 10 per cent of the casualties, or about 500 lives (Ono, 2012).

Still, many lessons learned were taken into account and changes in emergency management procedures were initiated in Japan after 1995, especially emphasizing reform in the national leadership of emergency response. This included placing more authority and responsibility in the hands of the prime minister and the Cabinet secretariat, seeking to ensure more centralized and timely leadership in times of crisis. For instance, the post of Minister of State for Disaster Management was newly established in January 2011 to integrate and coordinate disaster management policies and the measures of various ministries and agencies. The Disaster Countermeasures Basic Act as well as the Self-Defense Forces Act were also revised and provided updated institutional arrangements such as permitting SDF officials to direct emergency operations, and stipulating the authority of the Defense Minister to dispatch the SDF for emergency response operations where there is no time to wait for a request from a prefectural governor. At the local level, many municipalities invested in state-of-the-art emergency control centres, and mutual support arrangements with other local governments outside of their area for future disaster emergencies (Nazarov, 2011).

A wide range of new agencies has also been set up since 1995. For instance, Emergency Fire Response Teams were established in 2004 by the FDMA to provide rapid support to municipalities and prefectures as reinforcements in the case of wide-area disasters, such as a large-scale earthquake. The necessity for greater response to urgent medical needs right after a disaster led to the Japan Disaster Medical Assistance Team (DMAT) system being established in 2005 to provide emergency units that deal with trauma and crush syndrome in the first 48 hours and which are able to support restoration of damaged hospitals. Following the withdraw of DMAT teams from a disaster site, special prefecture-based Japan Medical Association teams (JMATs) were also mandated to take over until local hospitals and clinics in an afflicted area could function again (Ono, 2012).

Apart from reorganizing key structures of disaster management at the national level, the government has invested in new communications technologies and the development of networks of information. For example, in 1996 the Japanese government established the Cabinet Information Collection Centre as the central institution charged with collecting and evaluating information during a crisis. In 2004, the FDMA introduced the ‘J-Alert’ system involving satellite-based information warnings to local governments as well as to the public. The Central Disaster Management Council in 2003 commenced studies of large-scale earthquakes, including trench-type earthquakes in northeast Japan (the Japan Trench off of Tōhoku and the Chishima Trench off Hokkaido) and estimated the magnitudes of shaking and tsunami heights that could be expected, and projected a damage scenario together with guidelines on countermeasures that would be required (interview with Y. Tanigami, Manager, Disaster Prevention Division, Fire and Disaster Management Agency, Japan, Tokyo, April, 2012).

While these national initiatives are commendable, individual agencies, whether at the national, prefectural or local government levels, have been left largely to develop their own emergency plans and methods of operation. Little effort in the ten years or so up to 2011 was made to create standardization across the various agencies involved in disaster management, either across jurisdictional or level of government lines, which would enable effective coordination at the scene or in support of the response at higher levels of government. Complaints also surfaced during this period about insufficient resources at the local level and

that many localities avoided spending scarce budgetary resources on professional crisis management staff (Furukawa, 2000; Sakaki and Lukner, 2013).

Overall, Britton (2005: 357) characterizes the Japanese system as 'fragmented' and 'reactive'. Despite the major changes implemented since 1995 he argues that "policy coordination remains a perennial problem that neither organizational realignments nor establishment centralization…has solved". Hampering more efficient working practices between different organizations and levels in the bureaucracy he identifies tendencies towards "compartmentalization that results in less than ideal interaction among relevant offices" as well as a "proclivity to create a new organization when a new task has been identified rather than to incorporate the activity into an existing organization" (*ibid.*:358). Moreover, he also notes that there much fewer professional disaster managers in Japan compared to North America. In Japan, officials in charge of preparing or implementing disaster plans are typically bureaucrats who rotate through various jobs in government without specialized training or career advancement in disaster management.

The existing Japanese information system and chains of command were clearly tested in 2011 through the 3.11 triple disasters of earthquake, tsunami and nuclear reactor breach. On their own, the earthquake, tsunami and nuclear disaster would each have been a serious destructive event; together they formed an unprecedented challenge to national and local response frameworks. For Japan, long considered a model for disaster preparedness, it put to the test improvements the government had made to its response mechanisms as a result of the previous devastating earthquake in Kobe.

3. The Special Challenges of 3.11

The Geography of Tsunami Damage. To begin with, because of the offshore nature of the earthquake, the relatively low levels of local ground shaking, and high standards of building construction, few deaths were due to the earthquake itself; about 92 per cent of all deaths were caused directly due to the tsunami. Furthermore, casualties resulting from the inundation of the tsunami varied tremendously by location. For instance, in Sendai city, with a population of more than one million, 755 people perished, or just 0.07 per cent of the total population. But in Rikuzentanaka, Iwate prefecture, out of a population of 23,300, more than 2,100 people died – over 9 per cent of the population. In Otsuchi, Iwate prefecture, in excess of 1,600 people perished out of a total population of 15,300 – more than 10 per cent of the population. In Ishinomaki, Miyagi prefecture, more than 5,800 people died or are listed as missing, almost as many as those who perished in the 1995 Kobe earthquake (EERI Special Earthquake Report, 2011).

Explanations for these differences can be categorized into various physical and human factors. Physical factors include those such as geography and topography, distances to safe higher ground and tsunami shelters, together with pre-disaster land use. In some communities, the shape of the local bay or port - along with its depth - channeled the tsunami wave deeply inland and increased its height. In other areas, due to a more southward facing opening, ports escaped with less damage. There were higher casualty rates on larger plains with more houses where the distance to higher ground was longer and the gradient steeper. Pre-disaster land uses and the location of housing also influenced survival outcomes. For instance, some communities, such as Taro, Iwate prefecture, had high percentages of their population immediately adjacent to sea walls that were built to withstand tsunami but were breached in 3.11 by the high waves. This was totally unexpected by local municipalities. The Sanriku coastal district of Japan on the Pacific side of

Tōhoku region not only faced several tsunami disasters over the last century or so, but was in retrospect the best prepared against tsunamis, with kilometers of anti-tsunami sea walls and other countermeasures, such as 'tsunami forests' of pine tree plantings along the coastline to dissipate tsunami wave energy, and speakers were installed to provide voice warnings to residents. However, since the scale of the earthquake and the height of waves were far beyond anticipation, none of the countermeasures worked as expected. Many sea walls and water gates on rivers were breached in a matter of seconds, and many tsunami evacuation buildings were flooded by the massive tsunami (EERI Special Earthquake Report, 2011).

How Effective was the Tsunami Warning System? A second issue faced by local governments during the 3.11 disaster was the effectiveness of their earthquake and tsunami warnings. In recent years there have been multiple ways of sending messages about the earthquake and tsunami wave heights to various localities and individuals in Japan, through mobile phone networks, radio, television and municipal public-address systems. However, the particular risk and vulnerability of this particular level 9 magnitude earthquake in concrete terms for each locality was not readily available. Essentially, all local governments obtained the information about this disaster and other natural disasters from the Japan Meteorological Agency, but each municipality had to make a decision about the likely impact and how best to warn their communities. Many of those who died were elderly and therefore less mobile, less able to receive warnings or hear local sirens, and less able to evacuate easily to higher ground (EERI Special Earthquake Report, 2011).

In some towns and villages, experience with past tsunamis, including those that hit the Sanriku coastline in 1896, 1933 and 1960 (the latter which came across the Pacific Ocean from Chile) may have led to inaccurate conclusions about the impact of the 3.11 disaster. Thus, a number of communities erected markers indicating the maximum height from the Chilean disaster in 1960, and residents may have believed that the wave would not go beyond these designated boundaries. Indeed, many projections of maximum tsunami wave height, extent of inundation, evacuation routes and refuge areas, heights for structures to be used for vertical evacuation and response planning were based largely on a recurrence of the 1860 Meiji Sanriku tsunami, or the 1960 Chile tsunami. These were selected as scenario events for disaster management planning because they were thought to be most likely events. The larger Jogan earthquake and tsunami of year 869, which involved tsunami waves significantly higher than either of these disasters, was viewed as an 'outlier', a 1,000-year event, and therefore not taken as seriously (interview with T. Koizumi, Senior Coordinator for International Earthquake and Tsunami Information, Earthquake and Tsunami Observation Division, Seismological and Volcanological Department, Japan Meteorological Agency, April, 2012).

Other human factors that influenced escape behavior in the face of local warnings included disaster preparedness, experiences drawn from past tsunami experiences along the Sanriku, Sendai Bay and Hamadori coastlines, and the instinct to protect property. Basically, there were some residents who were able to take appropriate evacuation actions while some could not. What set this former group of people apart from the rest was that they were trained to evacuate in their everyday lives. For example, a school in Kamaishi, Iwate prefecture, evacuated from the tsunami successfully due to preparations and training (Hayashi, 2011). In the Sanriku region the population was instructed to observe *tsunami tendenkō*. The phrase literally means 'run, without concern for others and as hard as one can in the time the tsunami is coming' (Yamori, 2013). This culture of *tendenkō* saved many lives. In other communities, however, people believed they were safe, often because they had no knowledge of any large tsunami after the last one on the coastline

in 1933. For instance, Natori city in Miyagi prefecture, just south of Sendai, had many casualties as the expansion of Sendai's suburbs into this area included city folk who had no knowledge of the tsunami risk (Hayashi, 2011). The fishing communities basically knew how to evacuate, but newcomers who lived in coastal communities often did not.

The Failure of Local Government Response Facilities. A third set of challenges was that the force of the tsunami literally swept away many local government offices and consequently their ability to respond adequately. For example, in Minami Sanriku, Miyagi prefecture, not only the disaster management centre, but also the fire house, the police station, the main hospital and the town hall with all its records were destroyed (Fackler, 2011). As noted earlier, Japan's disaster response system depends in large part on local municipalities relaying information to the prefecture, and from there to the national government offices in Tokyo, particularly their specific needs for emergency relief, medical and other requirements. But in many places local governments were incapable of taking any organized action apart from setting up a local disaster-response headquarters, as mandated by the Disaster Countermeasures legislation. In the worst case, in Otsuki town, Iwate prefecture, the mayor and many other officials lost their lives as the tsunami struck while they were holding meetings, ironically concerning emergency management issues (Hayashi, 2011). Some days after the disaster event, prefecture governments sent staff to certain devastated communities to re-establish local government functions where officials had been killed or injured and to contribute their experience in response and recovery efforts.

The Role of National Level First Responders. A fourth array of issues concerned the operations of 'uniformed' first responders (military, police and fire brigades) in the first few days after 3.11. The comments below indicate the scale of mobilization of the SDF and other national agencies, and the following section of the paper details challenges surrounding their operations in the Tōhoku region. On the very first day of the disaster, and immediately after the earthquake struck at 14:16, the national government established its own emergency disaster response headquarters headed by the prime minister at 15:14. Within the same day, the Ministry of Defense ordered deployment of the country's military, the Japan Self-Defense Forces (SDF). As a result, by the end of the first week around 110,000 active and reserve troops were involved in search and rescue operations in Tōhoku, together with nearly 28,000 members of the National Police Force and the Fire and Disaster Management Agency, together with the Japan Coast Guard. In addition to these official 'first responders', the government also moved quickly to organize and coordinate volunteer efforts, including the Japanese Red Cross, which serves as an auxiliary organization to the government for disaster relief. The activities of various 'first responders' in the disaster zone during the first week or so are summarized in Table 1, which is based on official reports and interviews conducted in Tokyo with various organizations. Other prompt actions by the national government included allocation of almost $50 billion for critical tasks, including debris removal, temporary housing and restoring infrastructure (Carafano, 2011).

Table 1. The Role of First Responders in the 3.11 Disaster

Agency	Primary Duties in the Initial Rescue and Recovery Phase of the 3.11 Disaster (the first two weeks)
A. National Level	

Self-Defense Forces	-helicopters dispatched for aerial surveys -disaster information gathering by aircraft -rescue of survivors -delivery of food and water to stranded survivors -transportation of personnel and supplies -delivery of meals, water, bathing services and medical services to victims at emergency shelters -opening roads blocked by disaster debris -removal of disaster debris
Fire and Disaster Management Agency (FDMA)	-overview of early warning systems -coordination of emergency response and response to requests by municipalities -sending help to far-away municipalities, such as fire brigades and special rescue equipment, including boats, vehicles and helicopters
Japan Coast Guard (JCG)	-search and rescue operations -clearing harbors of debris -delivering relief supplies -providing shelter for evacuees at its regional headquarters
Disaster Medical Assistance Teams (DMATs)	-conduct medical support activities transport patients by helicopters or ambulances -provide emergency medical care in the first 12 days
Japan Medical Association Teams (JMATs)	-provide medical assistance at hospitals and clinics in the disaster area -provide medical treatment at evacuation centres and first-aid centres
Japan Red Cross	-medical relief, hot meals and psychological care for evacuees -storage and distribution of relief goods such as blankets -provision of blood products -collection and distribution of voluntary donations
National Police Force	-directing local traffic -recording deaths -watching over general safety -searching for bodies
B. Local Level	
Local Fire Departments (including volunteers)	- putting out fires - engage in rescue missions - sound warning systems and help in the evacuation of people
Non-government Organizations (NGOs)	-humanitarian and disaster relief -some rescue operations (retired police and firemen)
Private companies	-provision of food and other supplies -provision of special equipment for clearing debris by construction companies
C. Other	
United States Forces (Operation Tomodachi)	-provision of ships and aircraft for offshore logistics and support for Japanese rescue forces -search and rescue -transport of supplies -search for missing people

Source: Field-work

While the growing crisis at the Fukushima Dai-ichi nuclear plant greatly impaired the capacity of the national government to focus on recovery in Tōhoku, it is widely agreed that the first week after the event involved a relatively successful response due to the rapid deployment of many first responders (Suzuki and Kaneko, 2013). Following changes in protocols established after the 1995 Kobe earthquake, the SDF immediately commenced their own reconnaissance on March 11th. At 14: 52, the SDF commenced flights by helicopters and later on air force planes to grasp the extent of the devastation from the skies. Official requests for SDF assistance came from the governor of Iwate prefecture at 14:52, Miyagi prefecture at 15:02, Ibaraki at 16:20, and Fukushima prefecture at 16:47, and these swift requests also contributed to the speedy rescue and relief operations. SDF liaison staff were already sent to the three Tōhoku prefectures and put in charge as coordinators to collect information and to select SDF troops to respond to the disaster according to local circumstances. Along the coast, local fire fighters, volunteer fire corps, prefectural police and the coast guard were at the forefront of rescue and relief operations in the tsunami-swept areas. Unfortunately, the scale of the tsunami was far beyond what was expected so that additional resources were needed (interview with N. Yamaguchi, Lieutenant General JGSDF (Ret.) Professor/Director, Centre for National Security and Crisis Management, National Defense Academy of Japan, Yokosuka, April, 2012).

The Ministry of Defense issued its own large-scale earthquake disaster dispatch order at 18:00, and responders were dispatched from SDF bases in the Tōhoku region, from national ministries in Tokyo, and from emergency operations in prefectural capitals from around Japan. With the necessary institutional arrangements in place under the Japanese disaster legislation, and due to prior wide-area disaster training *within* the SDF, speedy expansion of rescue operations was possible. For example, the Ground SDF No. 21 Infantry Regiment, stationed at Akita Garrison, on the west coast of Tōhoku, arrived in Kamaishi City, Iwate prefecture, at 7:30 in the morning of 12th March. After establishing an air-base for helicopters, they commenced rescue operations for the Hakozaki fishing community of around 300 households, which was completely isolated due to local roads being cut by the tsunami (Suzuki and Kaneko, 2013). In this and other areas that were isolated due to inundation and submersion of coastal land, rescue helicopters, transport helicopters and other modes of transportation were utilized to assist the evacuation of tens to hundreds of survivors. Aircraft and ships were also mobilized to carry out search and rescue operations in the seas neighboring the disaster-stricken areas (interview with Yamaguchi, *op.cit.*).

The SDF response to the earthquake was unprecedented and was the largest operation ever executed. At the peak the SDF had about 107,000 personnel, 550 aircraft and 60 ships deployed. Moreover, ready reservists were called up for the first time outside of training activities. The number of rescued people by the police, fire fighters, coast guard and SDF totaled 27,157 as of 26 June, 2012 (Suzuki and Kaneko, 2013). The SDF were able to rescue approximately 19,000 survivors, which accounted for 70 per cent of all those rescued, and accordingly earned very high public esteem from these operations. In Kobe, their neighbors or the local police or fire brigade rescued more than 80 per cent of people, whereas in Tōhoku over 80 per cent were saved by the SDF, indicating the greater overall efficiency of the emergency response this time (Itō, 2012).

Medical teams and supplies were also sent to the affected area by the national government, which adopted a ‘push-type’ support system to send relief even before local governments in the affected areas sent their requests. These groups included DMAT teams and other medical

organizations such as the Japan Medical Association Teams (JMAT teams), the Red Cross and other medical teams dispatched from various prefectures. Compared to the Kobe earthquake, there were few wounded, basically because the populaces of the stricken communities were either dead or alive after the tsunami hit, and the main need of survivors was to evacuate to designated shelters. In many of the devastated communities, shelters were without food or water for nearly three days (EERI Special Earthquake Report, 2011).

4. Problems encountered by First Responders in the Tōhoku region.

Difficulty Gaining Access to the Devastated Coastline. A number of reports have drawn attention to the problems encountered by the first responders sent from across Japan to the devastated coastlines in the Tōhoku region (see Shimizu, 2011; Joint Research Group on Resilience of Kyoto University and NTT, 2012). For instance, debris and landslides blocked roads leading from the major regional hub, Sendai, north to the Sanriku fishing communities. Furthermore, many other local roads and rail lines all along the coast were destroyed. For instance, lines of access from the major inland north-south highways (National Route 4, and the Tōhoku Expressway) east to the Pacific shoreline over hilly terrain, were also impassible in many places by road damage. In addition, marine access was obstructed on the first day of the catastrophe by continuing tsunami action, and later by damaged dock facilities and floating debris. The SDF together with the Tōhoku regional office of the national Ministry of Infrastructure, Land and Transportation (MLIT) adopted a 'comb' strategy to provide access to various coastal areas. Thus, on the first day, the SDF secured Route 4, from Tokyo north to Aomori city, Aomori prefecture, and on the second day a strategy was made to secure various east-west roads to the coast. Finally, by the end of the first week following 3.11, the clear up of the Sanriku coastal road (Route 45) was completed, stretching around over 500 kms north of Sendai to Aomori. In this job, the US Forces were involved in provided logistical support in 'Operation Tomodachi' (Operation Friend), together with personnel and 'across the beach' access using military landing craft and airboats to transport heavy equipment for debris removal. As well, US forces took the lead in the recovery and reopening of Sendai's major airport, which was flooded by the tsunami (Terada, 2012).

The Lack of Communication Infrastructure. All agencies were confronted with the loss of electrical power, and disruption of radio, landline telephone as well as cellular telecommunication, which prevented early reporting of damage and response needs. Knocked-out telecommunications infrastructure did not recover until mid-April. Access to special satellite telephones and allied information technology equipment was limited and inadequate to entirely fill the communications gap. Moreover, such communication technologies that could be used in the first days and weeks were designed generally for internal use *within* each first responder's institution, and these were not aimed for communication with other agencies. All of this caused a serious obstacle to effective rescue actions since constant communication between the various agencies were required during the early stages of the emergency (Joint Research Group on Resilience of Kyoto University and NTT, 2012).

The communication blackout also impacted on the work of local government as many municipalities lost access to their own data and information, as well as those of local fire departments and prefectural police units. As noted earlier, if municipal governments lose their functions in a disaster, then the prefectural government will take over the responsibility for disaster relief. But in spite of this, after 3.11 the prefectures could not control disaster relief

operations adequately for several days because of their own shattered communications. In many cases they were not able to grasp the disaster situation until the SDF set up communications posts at prefectural office buildings allowing SDF reconnaissance units to report the damage to the governors. The SDF signal corps extended field communications networks to suffering areas through mobile microwave stations. This started on day three and was completed by day six (Joint Research Group on Resilience of Kyoto University and NTT, 2012). On the day of the disaster SDF rescue helicopter units entered devastated locations to rescue survivors based on their self-gathered information, but they had to wait until dawn of March 12th to start full-scale mobilization of rescue activities (Mizokami, 2011).

Coordination Problems. Yet another issue was the problem of institutional coordination of rescue operations, not only between various first responders, but also with local governments. By way of example, and as already mentioned, at a time of crisis it is important for local governments to send a clear request that they require outside help. The prefectures, and eventually the FDMA in Tokyo typically coordinate these requests. Apart from this 'vertical channel', municipalities hit by disaster will also attempt to instruct other municipalities in other regions to assist them under mutual aid agreements that were set up following the 1995 Kobe earthquake. In addition, the FDMA has role in arranging help from far away municipalities to send their fire brigades and equipment to the disaster zone, and the FDMA itself manages its own special rescue equipment, including boats, vehicles and helicopters.

All in all, complex lines of information requests are triggered in a local catastrophe (see Figure 1). Coordination at the national level is theoretically carried out at the level of the National Government Disaster Headquaters, and each national-level agency in Table 1 has a representative on this body to help facilitate synchronization of effort. However, as noted earlier, they cannot decide on the precise details of a wide-area response effort, which has to be coordinated by the emergency headquarters set up in each local municipality.

Evaluation of the effectiveness of various coordination efforts by first-responder agencies, long after the 3.11 emergency was over**,** highlighted the need for better harmonization between government agencies at all levels, and with the SDF, as well as with non-government organizations (NGOs), especially in the initial stage of the response. For instance, the SDF entering a local government area for the first time require information on suitable sites for securing staging areas and heliports, and the precise location of evacuation areas. Other agencies, such as DMAT teams and the Japanese Red Cross teams, were challenged by shortfalls in communication, as they had no ground support or cars to take them to the ruined northern coastal areas once they arrived in Sendai from Tokyo or from Red Cross hospitals around the country. They eventually depended on SDF for their transportation assistance, and the efficient execution of their operations was susceptible to disorganization and inefficiency (Hayashi, 2011). Furthermore, medical teams assisting victims and survivors on the coast typically had no way to report the local situation to secondary hubs (inland hospitals). Due to the number of damaged hospitals, clinics and pharmacies there were major shortages of oxygen as well as dialysis liquid and medicine. The swift transportation of patients to hospitals is key but due to communications breakdown there was confusion over the location of survivors who needed medical assistance, the location of suitable hospitals, and the use of SDF and other agencies' helicopters (Okada and Ogura, 2014).

Coordination by the SDF with local authorities was strained in part because local governments were often dysfunctional due to the devastation caused by the earthquake and tsunami, and also due to the multiple parties within the government with whom coordination was

necessary. Thus Imamura (2012) noted that from the SDF's point of view a major factor in the confusion was related to the structure of local governments, such as problems caused by navigating through the difficulties of a vertically integrated administration and friction with those local governments that assumed the principle of the Disaster Countermeasures Basic Act, which states that the municipal governments have the primary lead responsibility in dealing with disasters. He notes that the 'operating culture' is very different between local governments and the SDF.

"Some of the challenges in coordination between SDF and municipalities were due to the latter's adherence to the norms of equality and fairness in the provision of servies to the public. The basis job of these administrators is to distribute goods and services to those in need. However, available resources are not unlimited and must be distributed properly and efficiently. Therefore, local governments, in order to achieve equality and fairness, take a great interest in the pre-assessment of need. Local governments also make a point of democratic procedures so as to obtain the consent of the majority and not to cause a sense of injustice among the population. But democratic procedures and thorough pre-assessments take a long time. The SDF on the other hand had to make immediate decisions and conduct operations under unclear circumstances. Thus SDF and local governments had different senses of speed and urgency in responding to emergencies" (Imamura, 2012: 31).

As diverse teams of responders arrived in devastated communities, they encountered local units of the prefectural police and local municipal firefighters, as well as other teams converging from outside through mutual aid arrangements or self-initiated assistance efforts. But all these various teams had to organize on an *ad hoc* basis; they had no common specific charge, no firm system of organizing for collaboration, no certain knowledge of others' professional competences, and no pre-existing personal relationships. While in many instances, their work was effective, they lost time in getting organized and had difficulty working with other responders across teams and professional lines. There was no manual of what to do. Basically the SDF was self-contained and had its own command structure, the US Forces were self-contained, as were the FDMA units sent to Sanriku. These 'uniform wearers' were organized in such a way that was not designed to cooperate with other institutions. Since each institution had its own distinct communication system, it often brought technical difficulties. For this reason the cooperative efforts between these institutions were taken by the people conducting rescue activities in the local disaster areas, not at the broader institutional level. Moreover, there was no one to coordinate the various NPOs and volunteers that arrived in the Tōhoku region. In places such as the Miyagi prefectural government's auditorium in Sendai a great many stakeholders were assembled for coordination purposes, representing central and local governments, police, fire brigades, the SDF, NGOs, the Red Cross and many others. Though physically sharing the same workspace, each agency functioned without significant communication or information sharing in the initial week of the emergency. The result was that in a number of cases, duplication occurred in the interventions of various actors in the early stages in the operation, wasting valuable resources and reducing efficiency of the rescue activities. Eventually, a division of labor fell into place as the SDF conducted search and rescue operations, while the Red Cross and DMAT teams assisted in setting up triage to treat the injured and helped transport them to hospitals. At evacuation shelters, the SDF provided water and food support and later on organized baths, while Japan Red Cross took charge of medical services, psychosocial support and the provision of non-food items, such as sleeping and hygiene kits (Markus, 2012).

The Distribution of Food and Medicine, and the Shortage of Fuel. After the first week of rescuing people and getting them to safety, the next period of 10-14 days was a challenge to bring food, water and medical supplies to where they were most needed. Over the first week after the disaster struck more and more people evacuated to emergency shelters. Thus, the second week commencing around 10th March, 2011, saw another set of challenges occurring, such as inadequate supplies of food, gasoline and medical supplies at the emergency shelters. The SDF received many more requests for transportation assistance during this period. Due to the steady build-up of evacuees in the emergency centres there were inadequate clothes, underwear, socks, work gloves, paper diapers for children and the elderly, sanitary products, tissues, pocket warmers for the cold weather, and hand creams. There was also a shortage of drinks and instant food, as well as packaged food, stationary, loud speakers, cars, buses and so on. Some shelters in the devastated areas did not have enough medical assistance, and a few of them had to wait a long time before the arrival of assistance (Itō, 2012).

One of the reasons was the acute shortage of fuel in the Tōhoku region after the disaster. The national government mobilized a large amount of aid materials (medicine, food and blankets) but it was unable to reach the people affected quickly enough. Obtaining petrol for supply vehicles was a problem and resulted in long queues at service stations that were open. This was mostly a result of shortages due to the breakdown of six out of nine oil refineries in the Kanto and Tōhoku areas due to the earthquake. For instance, the large *kombinat* industrial zones at Kashima in Ibaraki prefecture closed up and could not produce oil products for some time. In the second week after the disaster, there was tremendous delay in getting petrol into the disaster area.

Moreover, the disaster happened in winter and in the cold areas of the country, so the lack of fuel for heating in emergency centres and other facilities, as well as in homes, was a serious problem. In response, the SDF provided free fuel that had been stocked at camps and bases to municipal government offices, hospitals, shelters, and other facilities. As well, the SDF made it possible to fuel emergency vehicles, such as police vehicles, ambulances and fire trucks, at fueling stations established and operated at the camps of dispatched units. The SDF also assisted in transporting fuel to temporary service stations set up at shelters and other locations.

All told, a lack of fuel and logistical issues proved to be the biggest challenge at this later stage of the emergency. Some 700 petrol tanker vehicles were mobilized in order to deliver fuel to petrol stations in the affected areas, and then to supply emergency vehicles carrying relief items with petrol As an additional measure to solve the petrol shortages, on March 14th the Ministry of Economy, Trade and Industry ordered private oil refining companies to reduce their buffer oil stock from 70 days to 67 days, and then to 45 days on March 21, to allow 22 days worth of oil reserve stock (about 9,240 thousand kl) to be used for the disaster zone. However, since petrol tankers only deliver gas from tanks to gas stations, they were not designated to supply fuel directly to cars. Therefore, the government designated 100 out of the total 500 or so gas stations in the disaster zone in order to prioritize the supply of gas to vehicles used by police and fire departments (interview with Y. Tanigami, Disaster Prevention Division, Fire and Disaster Management Agency, Tokyo, April, 2012).

4. Emergency Responses by Three Municipalities

The abovementioned material has set out the many difficulties involved in organizing an adequate response to the 3.11 catastrophe over such a wide disaster zone in the Tōhoku region. This section turns to the experiences and challenges faced at the municipality-level drawing on

interviews and city records in three case study local governments in the period immediately after the 3.11 disaster. Special emphasis in this part of the research was placed on recording: (1) the degree of local damage in each city; (2) how residents responded to warning signs; (3) the effectiveness of municipal government interaction with first responders, and (4) local government experiences in setting up emergency shelters. The size of each municipality together with the extent of damage and casualties are shown in Table 2. It should be noted that only Sendai and Sōma cities had written a comprehensive record of the activities conducted by their Disaster Management Headquaters. Due to the devastation that occurred in Ishinomaki city, no formal record of the municipalities activities following 3.11 has yet been made. However, the municipality's fire department had a record of the extent of devastation in their city, including how they addressed rescue and recovery activities in days after the earthquake and tsunami.[1]

Table 2. Data on Population and Casualties in the Three Case Study Municipalities

Location	Deaths	Missing	Evacuees	Destroyed Households	No. of Shelters	Pre-disaster Population (2010)
Ishinomaki (Miyagi)	2,698	2,770	14,776	60,928	125	171,107
Sendai (Miyagi)	531	2,400	2,829	29,981	31	1,001,804
Sōma (Fukushima)	395	86	1,160	1,856	8	38,108

Source: data acquired during field-work.

A. Ishinomaki City, Miyagi Prefecture

Ishinomaki was among the most seriously affected by the 3.11 disaster. Following the earthquake, several tsunamis, the highest around 10 meters high, travelled inland up to 5 kilometers from the coast. While the commercial part of the city and the municipal office was protected from the largest wave by a hill lying close to the shore, the tsunami destroyed around 46 per cent of the central city and devastated many public schools as well as the entire southern foreshore neighbourhood of Kadonowaki, which was largely leveled. In total, approximately 29,000 city residents lost their homes and nearly 5,500 people were dead or recorded as missing, roughly 25 per cent of the city's population and close to the total number of fatal casualties after the 1995 Kobe earthquake, where 6,434 were killed.

A senior official noted that outlying fishing communities in Ishinomaki were more likely to have been aware of tsunami risk, compared with residents employed in the city's commercial sectors. "Unlike the fishing communities in Ishinomaki city, some white-collar workers in our city were not sure whether or not they were living close to the sea, and so did not evacuate in time" (interview with T. Hiramatsu, Disaster Measures Section, Ishinomaki City, April, 2012).

It should be noted that Ishinomaki is an amalgamation of the central part of the town and six smaller villages, a merger that took place in 2005 - the *Heisei gappei* municipal amalgamation movement. While the national government encouraged mergers to make the local government system more efficient, it may have had the effect of cutting residents off from first responders, such as in the remote fishing villages of Ogatsu, some 20 kilometers northeast from downtown Ishinomaki. Samuels (2013: 40) argues that "the consolidation seems to have weakened the capacity of localities to respond to citizens at just the moment when they were in greatest need". Apart from the destruction of fishing harbors and villages Ishinomaki also lost its centrally-located

fish processing plants, among the largest in Tōhoku. After 3.11, due to damage of the earthquake the coastal land sunk and became under water at high tide, consequently it could no longer act as a port.

Interaction with First Responders. The city reported that local fire and ambulance services did what they could on 3.11, working by themselves and reporting back to the city. The first troops of the SDF rescue mission arrived late on the evening of 3.11 and set up their base at an athletics base close to the city hall. "We already had some experience working with them beforehand as we conduct an emergency drill once a year. Japanese love anniversaries and we celebrate the 1978 Miyagi-Oki earthquake on June 10th. The SDF also had their own drills for emergencies in this area, and our local government assisted with this. In addition, local communities in Ishinomaki had their own emergency drills on June 10th" (Hiramatsu interview, *op.cit*). During the following day, a team of firefighters arrived to help from Niigata, and on the 14th March a team came to Ishinomaki from Hokkaido.

The city office was not in a position to direct the work of any of the local or outside first responders, but received information on the damage and the injured, and the work done in rescuing survivors after the disaster. The report provided by the Ishinomaki Fire Agency records that firefighting crews responded immediately to by putting out fires that broke out by the earthquake and tsunami, and for calls for rescue from survivors. Some fire brigade staff and their vehicles were washed away by the tsunami, and some had to be evacuated to shelters. On the second day, the Fire Agency also brought in patients to the local hospitals that were still operating. For instance, the Red Cross had an earthquake-proof hospital in Ishinomaki that functioned as a centre for the injured and as a base for relief supplies brought in from outside.

Experience at the Evacuation Centres. The city opened 400 officially designated emergency centres at the peak some days after the tsunami. These included formal centres, such as high-school gymnasiums and community centres, as well as many 'informal' locations were used, such as private houses. "We had pre-made contracts with companies to send in food and we stored this in the city hall and then sent the supplies to the emergency centres on 3.11" (Hiramatsu interview, *op.cit*.).

B. Sendai City, Miyagi Prefecture

Sendai is a much larger city, with a population of around one million. It is one of Japan's 'designated cities' that can operate independently of the local prefecture, in this case Miyagi prefecture. Sendai was founded in 1600 by the daimyō Date Masamune, who established his castle town around 10-15 kilometers inland in the knowledge that the coastline was at risk of tsunami from time to time. During the Tokugawa era (1600-1868) the coastal marshes near the castle were reclaimed into rice paddies in order to increase food production. Much later they developed as agricultural suburbs of Sendai city. Even though Sendai has been subject to many major earthquakes in recent history, including the 1978 Miyagi earthquake, which was a catalyst for the development of Japan's current earthquake building codes, the impact of the March 2011 earthquake and tsunami was not anticipated. The Pacific-facing Wakabayashi area of the city was totally leveled by tsunami waves destroying 1,200 homes.

Sendai was comparatively lucky compared with nearby Ishinomaki, as the tsunami did not enter its city centre and the earthquake caused little damage in the city due to previous replacement of infrastructure after the devastating 1978 temblor. Nevertheless, the tsunami affected 5 per cent of total land and severely damaged Sendai Airport in the adjoining city of Naotori, as well as killing hundreds of residents in the coastal community of Arahama, which was severely inundated. The tsunami arrived one hour after the earthquake with a maximum wave height of 10 meters and deluged around 5 kilometers inland, around ten times of the

regularly expected Miyagi-oki tsunami, but equivalent in inundation and destruction to the 1,000 year cycle of the year 869 Jogan earthquake (Shishikura et al., 2011). The Arahama district of Sendai had few reinforced high-rise concrete buildings for residents to escape to. And the only official tsunami evacuation building in the area was the Arahama Elementary School, a four-storey building with an accessible roof. This remained standing after the tsunami and sheltered around 520 evacuees. Natori city, just south of Sendai was worse affected and many urban residents who lived there had no knowledge of the potential tsunami risk and perished in the 3.11 disaster. The Sendai airport at Natori was flooded for about a whole month.

Setting up a Disaster Headquaters. Sendai recorded the detailed actions taken by the municipality after the 3.11 earthquake and tsunami struck. A great tsunami alert was issued by the city by the fire department at 14.46, directly after the quake, and warnings were sent out to residents to evacuate away from the coast. At 15.40, evacuees from the coastal Nakano and Arahama Elementary Schools were sent to official emergency evacuation centres by the city's own helicopter. The city formally requested the help of Miyagi prefecture, as laid down in legislation, at 15.30 and requested the assistance of the SDF at 15.40. As prescribed, a Headquaters for Disaster Relief was set up with the mayor as the Director and an initial meeting held at 16.00 on the first day. Thereafter the Disaster Headquaters met three times a day until March 13, and twice a day from March 14-18, in order to share information among various City Departments.

Because Sendai is a large city with many international residents, a Sendai Disaster Centre for assisting in multiple languages was set up and open for 24 hours until March 16 in order to help foreigners living in the city. During the first day of the disaster, evacuation centers were opened up and blankets and other relief supplies delivered. Calls were made to other cities for help in rescue activities and to make supplies of food, fuel and other supplies based on mutual aid pacts arranged several years before (interview with Jun Umenai, Disaster Reconstruction Bureau, City of Sendai, April 2012).

Liaison with First Responders. The city's fire and ambulance services were responsible initially for rescue operations and full-scale operations along the coastal districts commenced in the morning of the second day. As in the case of Ishinomaki, previous drills involving the city, the local fire brigades and the SDF were important in allowing linkages to occur between these emergency agencies. "Traditionally, relations between city governments and the SDF were delicate due to Japanese military history, but after the Kobe earthquake in 1995 things changed a lot. Before 3.11 we had interaction with the local SDF forces every 12th June marking the anniversary of the 1978 Miyagi earthquake. About 10,000 citizens and municipal officials participate yearly in the 12th June exercises. After 1995 we were able to welcome the SDF to these events, which are run by the city and involve local fire and ambulance" (Umenai interview, *op.cit.*).

In terms of existing protocols, the city still had to formally contact Miyagi prefecture to request the assistance of the SDF to conduct rescue exercises. "On 3.11 the national rules were that the city had to contact the prefecture to call in the SDF, but Miyagi prefecture and Sendai City contacted the SDF separately around the same time. At first, just one or two SDF liaison personnel from the Northern Army base close to Sendai came to the city on the first day, but over the next few days, many liaison personnel came and stayed over several nights. By Sunday 13th March, the city hall had been transformed into a large makeshift emergency relief centre with Japanese military commandeering the eight-floor city hall in order to treat evacuees. Disaster teams also came to help Sendai from all around Japan – from Kanagawa prefecture on March

12th, from Shimane prefecture on March 13th, and from Kumamoto on March 16th" (Umenai interview, *op.cit.*).

In terms of how the various rescue teams worked with each other, the city official had this to say. "We had around a 72 hours window of opportunity to rescue survivors. Helicopters of the SDF and the city were vital to identify where isolated victims were located and where search and rescue teams should go to. They could spot serious damage and direct ships and ground rescue teams. In the first three days the interaction between the various rescue forces was very dynamic and rescue teams took victims to the city's emergency centres. After that, the situation became more stabilized, and the SDF's role changed to helping survivors at the centres with food and baths, and searching for bodies and the missing. The city shared information with the SDF and other teams on how to do this and how to deal with victims. The city's fire and ambulance teams also exchanged information with the SDF and with agencies working in surrounding municipalities. These meetings however were not recorded" (Umenai interview, op.cit.).

"Later there were many NGO centres set up in Sendai to help coordinate volunteers. Their role was limited at first, but after one week many volunteers came and stayed in Sendai and also went further north to the devastated areas along the Sanriku coast. In truth, the city had a problem with so many volunteers" (Umenai interview, *op.cit.*).

Management of Emergency Centres. The number of city emergency shelters peaked at 288 on March 14th and were established at city community centres, junior high school gymnasiums, and private condominiums. At the peak about 100 private shelters used for victims in various residents' homes. One particular dimension of emergency shelter management in Sendai was that the number of survivors quickly declined compared to other municipalities. This was mainly because there were only a small number of houses badly damaged compared to Ishinomaki and other coastal towns, as the central district was built away from the coast. Moreover, the return of evacuees was also conditioned by the state of infrastructure and lifelines. The previous 1978 earthquake had encouraged rebuilding and strengthening of critical facilities such as electric power and infrastructure such as gas pipes. In fact, electricity was reconnected in the first week after 3.11 in Sendai, and this appeared to be a major incentive for survivors to vacate emergency shelters and return home. Water and gas was reconnected later on, but in general Sendai coped with the earthquake and tsunami much better than other coastal cities (Umenai interview, *op.cit.*).

C. Sōma City, Fukushima Prefecture

Sōma is a coastal city of approximately 37,000, located in the northern Hamadōri area of Fukushima Prefecture. The city centre, where city-hall is located, lies around five kilometers from the port and harbour facilities on the coast and is surrounded by agricultural land. The city's Matsukawa-ura Port had boasted one of the largest fisheries hauls in the Tōhoku region before the disaster. On 3.11, the eastern, sea-side part of Sōma was inundated by devastating tsunami flood waters that measured up to 9.3 meters or higher and which reached up to approximately four kilometers inland up to the embankment of the elevated Route 6 Sōma Bypass, sparing the city hall and the downtown. Completely flooded areas included Sōma Port and the Matsukawa-ura Bay area.

A senior official spoke of the local tsunami warning system put in place after a minor wave reaching 1.8 meters high occurred in 2010, triggered by an earthquake from Peru. As in Ishinomaki city, the local fishing communities were most aware of tsunami danger. "In Sōma we experienced a similar high wave tsunami about 400 years ago, which was the 1611 tsunami that

hit the Sanriku coast. About 200 people were killed in Sōma at that time. In the northern part of Matsukawa-ura Bay at the Haragama area of the city, close to the fishing port, residents rushed to the local temple and survived. Hence the tradition of 'go to the temple if there is a powerful earthquake' allowed more of the people of our coastal communities to evacuate in time on 3.11. But in the southern part, the Isobe area, there was no temple to run to. Isobe was a later settlement and not associated with fishing at all. In total, we had 459 killed by the tsunami, which would have been more had it struck at nighttime (interview with K. Yoshino, Director of Industrial Affairs and a central member of the Disaster Response Team, Sōma City Hall, December, 2011).

The Work of the City Disaster Headquaters. Following the initial earthquake at 2:46 a tsunami warning was given through sirens along the coast and evacuation announcements were made via radio and Sōma's fire engines. Within the first hour a disaster response team assembled at the city hall, comprising the head of the fire brigade, prefectural police and volunteer fire fighting teams, as well as the mayor and senior officials. Damage through the earthquake was not so severe, but city staff first inspected buildings in the immediate vicinity of the city hall. "City officials were dispatched to check all facilities housing the handicapped and seniors, and to report on the extent of the damage. The earthquake caused injuries at a nearby supermarket, and some residential houses collapsed. Fires broke out from broken utility poles. Along the coast, fire halls were instructed to tell people to evacuate immediate" (Yoshino interview, *op.cit.*).

The first tsunami wave of three meters came at 3:46, one hour later. The second larger wave came 10 minutes later, breached the sea wall and reached the eastern roads, destroying a fire office in the process. "When the second tsunami came there was mass confusion. Evacuation centres designated after the earthquake and tsunami were opened but there was only radio communication with them as the electricity was out. Information on the situation at the coast came in bits and pieces" (Yoshino interview *op.cit.*). By 4:02 fires were reported at the city's industrial district in the coastal area, and that the tsunami had reached the elevated Route 6 Bypass. At the instruction of the mayor, fire department units were sent to check the situation of more isolated areas, rescue evacuees and guide them to shelters. Over the next four hours, information kept coming in about the devastation caused to housing by further waves of the tsunami, together with the number of injured and evacuees at Sōma General Hospital, just north of the city hall.

Arrival of the SDF and other Rescue Teams. Four hours after the second tsunami wave hit, the city was able to ask for the assistance of the SDF, having gained permission first from Fukushima prefecture. "The initial priority was to get a feel for the damage and to ask for assistance. It was important to assess which areas were affected, which roads were broken or blocked. How was help to arrive? Could the SDF arrive by road, by helicopter or by water? A request for help from the SDF was eventually sent to the Fukushima prefecture office at 7:30. The first SDF liaison officer came at 8:13 from their camp in Fukushima city and left with fire department cars to the coast to survey the damage. But as it was March it was dark by 4:00 on the first day. We should have called them in earlier. In the following morning we could eventually assess the damage" (Yoshino interview, *op.cit.*).

Rescue missions commenced at dawn the following day and people rescued who were left isolated along the coast due to broken and flooded roads. Helicopters from the SDF and the prefecture government were used on the third day, and all isolated survivors were rescued by day four. SDF units came from Hiroshima and Niigata, and ambulance services came from all over Japan. Police and fire brigade workers came from Osaka, as Tokyo was potentially in danger

from the nuclear power plant incident. “One problem was how to feed the SDF and other rescue teams that came. The city used its web site to send out calls for food, water and other materials. The Red Cross and other organizations provided clothing as people who were hit by the tsunami lost everything. One week later the national government came in. They were late because of the broken road system. The Ministry of Infrastructure, Land and Transportation conducted their own survey to assess the damage and started building broken roads” (Yoshino interview, *op.cit.*).

Management of Evacuation Centres. On the first day, ten difference places were designated as evacuation centres in Sōma, including a community centre, a public stadium, and various elementary and middle-level schools in each city school district. Most of these were west of the city hall, away from the devastated coast. Officials were dispatched to each shelter later the same evening with food supplies, and help was also requested from other cities, towns and villages for food, water and blankets for evacuees. A call for 3,000 extra blankets was requested from the Red Cross Fukushima Division.

“At the beginning, there were 2,500 people in the evacuation centres, mainly school gymnasiums. It was March and so the weather was freezing. All electricity was gone. There were not enough blankets, food or water. City workers used backpacks to distribute food at night from the city hall and to make pots of *takidashi* [stew]” (Yoshino interview, *op.cit.*).

A City Official’s Regrets. Mr. Yoshino summed up the city’s regrets about their disaster response efforts. “We never expected that a tsunami of this size would come to Sōma and make such damage. The warning signs should have stressed evacuation immediately after a large earthquake, and in making plans in the future we must think of establishing community leaders who can educate the residents exactly where to evacuate to and where to run to. Warning systems including radios and public PA systems were alright in the daytime, but at night time the warning may not come. At the evacuation centres we needed more supplies of food, water and blankets in stock. Above all else, we have to find a quicker way of requesting help from the SDF and Red Cross. The prefecture itself was also overwhelmed on 3.11” (Yoshino interview, *op.cit.*).

5. Conclusions

Being one of the most disaster-prone countries in the world, Japan has developed a sophisticated and all-embracing disaster management system based on a three-layered governance system. When it works well, the three-layered hierarchy in the system allows tackling local disasters or accidents, such as fires and floods or oil spills, at an appropriate level and with resources depending on the scale and implications. As has been pointed out, this system has been continually upgraded since the 1990s in an incremental manner based on experience with natural disasters in the last 25 years or so. However, this paper argues, along with many Japanese commentators, that although the country’s level of emergency preparedness has been excellent in many respects, the response to the catastrophic 3.11 earthquake and tsunami revealed shortcomings, such as the need to establish relationships between agencies prior to disaster, to agree on practical methods for coordination, and to improve information sharing (see Shimizu, 2011; Sakaki and Lukner, 2011). In situations such as after 3.11, when varied response groups arrived on the Pacific coastal towns of Tōhoku from many places, then a high degree of co-ordination across the normal lines of collaboration was essential, both across a wide geographical area as well as well as across various levels of government. While it was commendable that first responders devised *ad hoc* management systems in the midst of disaster, this may not the best

way to run a disaster response. As noted by many practitioners and commentators, “when disaster strikes, it is already too late to put together a system of response” (Takeda, 2012:1).

The findings of this research, which was based on an examination of various written reports as well as many interviews with government officials in Japan, leads to a number of recommendations for improving existing procedures.

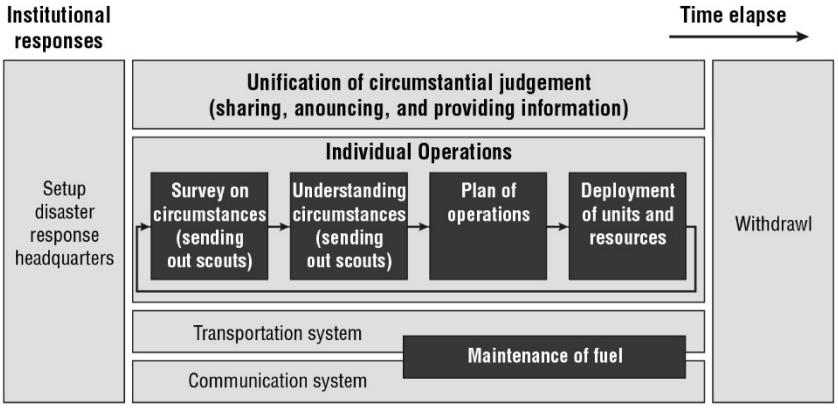
First, there is a case to be made for more central coordination at the national level. Japan does not have a government agency equivalent to the US Federal Emergency Management Agency (FEMA). As a result this leaves a vital gap in coordinating immediate disaster management. One solution is to have a central government management authority responsible for coordinating central and local government responses, along with international assistance, into one focused disaster response. Japan needs to seriously consider a formal mechanism to coordinate operations in response to disaster risk management. This does not necessarily mean that Japan needs a new agency, but rather a well-understood pre-event mechanism for coordination (see Shimizu, 2011).

Second, during a large-scale disaster a ‘pull’ and ‘push’ form of sending relief to particular disaster areas in Japan should be employed flexibly. The ‘pull-support’ system for requesting critical supplies of food, medical supplies and forms of relied has to be supplemented by sending necessary resources at appropriate times from other parts of Japan. To avoid delays in resource distribution there should be a centralized information system that allows emergency managers to check both supplies and demands of necessary items as well as the location where they are stored (see Itō, 2012).

Third, at the local level it is important for each emergency institution (local governments, the SDF and FDMA units) to act in a disciplined and cooperative fashion during a large-scale crisis. Many Japanese commentators have supported the introduction of a standardized North American-style command ‘incident command framework’ in advance of any emergency to unify disaster response procedures across a wide array of institutions.[2] At present, local governments establish Disaster Management Headquarters, which - as indicated by this research - experienced coordination and logistical challenges after 3.11 when dealing with the many outside agencies involved in search and rescue operations. The national government in Japan also set up National Disaster Management Headquaters with the Prime Minister directly in charge. But in reality, each national level ministry dealt with the 3.11 event ‘vertically’, and various ministries and other public agencies addressed only their own responsibilities, in this case of a wide-area disaster having multiple impacts. As intimated earlier, different agencies involved in disaster management after 3.11 - the SDF, National Police, FDMA and so on - operated under different chains of command. In essence, Japan’s government can be bureaucratic in its response and suffer from ‘sectionalism’, where actors tend to think in their own interests rather than understanding their role in a bigger picture of overall response (Joint Research Group on Resilience of Kyoto University and NTT, 2012). Yet, during catastrophes it is difficult for centralized systems to obtain and process all the information needed to make and execute deliberate decisions. So in this sense, there is merit in Japan’s decentralized disaster management system. However, the adoption of a North-American Incident Command System (ICS), together with the associated Emergency Operation Centres (EOCs), would enable emergency responders from many agencies and backgrounds (e.g. military, medical and local government) to collaborate more effectively when they come together under enormous stresses of a major disaster – whether earthquake, tsunami, severe industrial accident, nuclear power plant crisis, or infectious disease accidents (see Hayashi et al., 2013; Inouchi et al., 2005).[3]

Fourth, an amended disaster plan for Japan should provide for securing fuel and critical infrastructure, such as roads accessibility which was such as problem after 3.11, together with a communications security program. As shown above, due to the experiences of damaged or suspended administrative functions because of power failures and lack of communication, then setting up multiple communication systems as emergency back-up are required in prefectural and municipal offices, including satellite phones (rather than local 'cell' phones). An emergency stockpile of information technology (IT) tools is as important as those of fuel, medical supplies and food. Indeed, in their evaluation of the post-3.11 response, the Joint Research Group on Resilience of Kyoto University and NTT (2012) explicitly added functions such as 'secure supplies of fuel', 'secure road access' and 'secure telecommunications systems' to the various command and control functions for a Japanese-style Incident Command System that they proposed (see Figure 2).

Figure 2. Functions of a possible Japanese-Style Incident Command System



Source: adapted from Joint Research Group on Resilience of Kyoto University and NTT (2012:54)

Fifth, the critical importance of local government buildings should be recognized. If municipal offices can survive a catastrophe then governments can start response and recovery works earlier and they can spare spaces for their communities. Moreover, if local governments have 'business continuity plans' and appropriate back-up data on their community, they can start recovery work earlier. Local governments should prepare backup data and temporary offices so that they can use them when necessary (Seeds Asia, 2011).

Finally, as the first line of defense in dealing with disasters, prefectural and municipal offices in Japan need to develop training programs for their staff in disaster response, and conduct a larger number of drills with their local citizens, fire brigades and police, as well as with national agencies such as the SDF, FDMA, DMAT, JMAT and the Japanese Red Cross.[4] In the process of recovery from 3.11 it is important to mix hard infrastructure improvements, such as higher sea walls to protect communities from further tsunami catastrophe, with 'soft' measures, such as education, awareness and evacuation drills (Seeds Asia, 2011).

All of these measures will improve readiness for rescue operations in any disaster. Old assumptions were called into question by the experience of the Great East Japan Earthquake, which caused broad and serious damage, and made reassessment of past approaches an urgent

requirement. If a large-scale disaster, such as a massive earthquake along the Nankai Trough and the Tōnankai Trough (both located further south off-shore in the Pacific from Japan's Honshu Island) were to occur in the future, then there could be serious damage equivalent to or exceeding that caused by the Great East Japan Earthquake.

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Endnotes

1. The reports that were used in this section are Ishinomaki Fire Department et al. (no date); Sendai Planning and Coordination Bureau (2012); and Sōma Disaster Control Headquarters (2011).

2. Incident Command Systems (ICS) were established in North America during the 1970s following a series of fires in California, and today a standard ICS crisis management system operates that includes standardized procedures and a chain of command that is adopted by all emergency operations in the USA and Canada, and allows smooth cooperation among institutions in times of disaster. Before the introduction of ICS a great confusion was caused because of: (1) all reports were channeled to a single person who was in charge; (2) there was extreme variation in the first-response protocols of relevant institutions; (3) a lack of reliable information; (4) technical incompatibility of communications tools; (5) a lack of developed information systems allowing for institutions to communicate with each other; (6) an undefined boundary of authority and rights; (7) differences in use of terminology among relevant institutions; and (8) a lack of clear goals mutually shared and understood by relevant institutions. To solve these problems the wide-spread use of a common ICS was developed with the combined efforts of US federal and state governments as well as all levels of local government (United States Department of Labor, no date).

3. Hayashi et al. (2013: 17) note that the idea of a common incident-management system has been considered before in Japan but has made little progress. "It has proved no easy task to make diverse emergency response organizations acknowledge the need for such a system and to agree on its features. If a common system were to be adopted, moreover, that action would only initiate a difficult implementation process requiring change in a number of independent emergency response organizations identified in this paper – firefighters, police, emergency management officials, the Self Defense Force (SDF) – at the national, prefectural and city levels. The change must occur not only at managerial levels, but also for rank-and-file responders – driving significant reform to the roots of each response organization".

4. One of the most significant examples of how pre-disaster joint agency cooperation and lessons from training exercises can be successfully implemented afterwards took place at the Ishinomaki Red Cross Hospital. In addition to being the nerve centre of Japan Red Cross (JCR) operations following 3.11, this facility was also used as a temporary disaster management

headquarters by the SDF, especially so after the first floor of Ishinomaki City Hall, which had been designated for use as a disaster management headquarters in a large-scale disaster, was destroyed. A firm foundation for working together had been laid back in June 2010, when Ishinomaki Red Cross Hospital participated in helicopter transport training for a large-scale disaster. Miyagi Prefecture coordinated the training with the participation of the SDF, the police, several national ministries, and the Japan Coast Guard. Fifteen helicopters were utilized for the training. Because of such realistic training, all parties involved in the helicopter operation after the Great East Japan Earthquake were able to understand each other's responsibilities, limitations and organizational cultures well enough to smoothly carry out their mission with 63 helicopter flights coming in and out of the heliport of Ishinomaki Red Cross Hospital, transporting sick and injured survivors from all over the surrounding region. Further cooperation benefitted the hundreds of thousands of survivors who took shelter in evacuation centres. The SDF provided water and food support and organized baths while JRCS took charge of medical services, psychosocial support and the provision of non-food items, such as sleeping and hygiene kits (Markus, 2012).

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Telecommunications and Japanese Disaster Response

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Government officials and rescue workers rely on telecommunications to provide information to victims during a disaster. The circumstances of the Great East Japan Earthquake made internet-based mobile social media the primary means of communication. Smartphones and other newly developed technology allowed individual victims to directly contact rescue workers and government officials and independently document their experiences. A smartphone is a mobile telephone capable of accessing the internet and running programs. Although smartphone technology was originally intended for business, its spread throughout the general population facilitated the use and availability of social media such as Twitter. Twitter is an information and communications program that allows users to anonymously post short messages or link to internet sites, or share images using mobile devices. Posts on Twitter are publicly available. Twitter also allows users to subscribe to accounts, receiving updates when a specific user creates a new post. The Great East Japan Earthquake represented the first large-scale use of social media during a major crisis. Studying the use of Twitter and other social media during the March 11 disasters can improve understanding of the means of communication used by disaster victims and the type of information being distributed. This analysis will provide information regarding how Japanese society responded to the disasters and inform how mobile telecommunications and social media can be used to distribute information in future crises.

The authors of *Social Media in Disaster Japan* write, "If Vietnam was the first war fully experienced through television, March 11 was the first natural disaster fully experienced through social media."[1] Social media are "internet-based applications that enable people to communicate and share resources and information."[2] Social media is designed to support rapid information sharing. Text messages between individuals can be broadly distributed as messages on Twitter and internet blogs, leading to nearly-instant diffusion of information. Like other social media, most Twitter users use the program to share personal opinions and information. Experiences from previous disasters show Twitter users use the service to access and share important information. In Japan, this was facilitated by an internet penetration rate of 78.2 percent, and Japan's consumer tendency toward adoption of new technology. [3]

Since the March 11 disasters, governments speculated about the potential use of social media in disaster response. A United States Congressional Research Service (CRS) report claims government agencies and rescuers could use social media to warn the public and provide information about emergency services. Individuals in affected areas could use social media to directly contact rescuers to provide information about the location and condition of people in affected areas. The CRS predicted this new direct two-way communication between responders and affected citizens would influence future disaster response. This trend is expected to continue with the growth of social media. The CRS also mentioned that the use of social media in disaster response could also create new problems. These include the usefulness and accuracy of information provided, limitations of smartphone and mobile technology, potential malicious use, costs, and privacy issues.[4] The report mentions, "in the case of the March 11 Japanese earthquake and tsunami, tweets for assistance were 'retweeted' after the victims had been rescued."[5] This occasionally complicated rescue operations.

In 2011, Japanese consumers had access to a variety of cellular phones and other mobile devices capable of accessing the internet. The widespread use of text messaging meant messages could be rapidly converted into Twitter messages and blog posts. Additionally, Japan has a high number of social media users. In addition to international social networks such as Facebook, Japanese people use domestic networks accessible through mobile phones, including *Mixi*. Before the crisis, many local governments and media organisations established Twitter accounts as a means to contact and inform citizens. This established official communication networks and sources of information.[6] Japan's densely concentrated population meant individuals with access to social media would be present to witness and document the disaster. These individuals could use social media to report their situation and access information.[7] This facilitated the spread of information through social media to less affected areas.

Reliance on social media during the Great East Japan Earthquake partially stemmed from the particular effects of the disaster on Japan's telecommunications infrastructure. The earthquake and tsunami destroyed electric and telephone lines, making terrestrial landlines unusable. Additionally, increased call volume forced service providers to limit up to 95 percent of voice calls made through terrestrial and mobile phones.[8] The Japanese telecommunications firm KDDI estimates voice traffic increased to nearly 8 times the normal level.[9] In some areas, electrical failure prevented the use of desktop computers, television, and other devices used to access information. The sudden surge of text messages also created widespread delays. Although most messages eventually reached their desired recipients, users experienced delays of up to 1 hour. These circumstances often made smartphone-based social networks and radio the most important sources of information.[10]

Destruction to telecommunications infrastructure often prevented conventional voice and text communication. However, internet service continued with minimal interruption outside of Tōhoku. Tokyo and Tōhoku usually represent about 50 percent of Japanese broadband traffic. Although the earthquake affected 3 of Japan's 8 active underwater cables, a redundant internet infrastructure and emergency electric generators offset the effects of power disruptions. Workers restored internet service to most of the country minutes after the disaster. Because most telecommunications companies did not have major facilities in Tōhoku affected by the disaster, they were able to continue service to the rest of the country. While the disaster harmed internet traffic, service was only limited in directly affected areas. Where physical infrastructure was not affected, internet companies restored service throughout the country within four days. Electrical outages and transportation delays caused a 20 percent drop in internet traffic in Tokyo. However, internet usage recovered during the evening of March 11. Traffic on March 12 was 85 percent of the previous Saturday. The resiliency of Japan's internet infrastructure meant social media and internet-based communications remained available throughout the crisis.[11] KDDI reported that the lack of voice communications caused email traffic to increase to 5 times the normal level 15 minutes after the initial disaster. Additionally, internet-based voice services such as Skype and social networks such as Twitter and *Mixi* experienced twice their normal rate of traffic.[12] One hour after the disaster, social networks, including *Mixi* experienced nearly 3 times their usual usage rates, increasing to 8 times their normal rate of traffic. Social media became the primary means of receiving and spreading information as victims realised other forms of communication were unavailable.

Reports of the March 11 earthquake and tsunami on social media began minutes after the initial disaster at 2:45pm. Japanese Twitter users created 330 million individual posts, 1.8 times the usual traffic for that period. Seventy-two percent of posts discussed the earthquake directly.

An additional 8 percent mentioned the disasters' effect on the transportation system. Other social media experienced a surge in traffic. The first messages usually reported the earthquake itself. Other posts included emergency warning messages from government departments and official media outlets. When the effects of the disaster caused the closure of public transportation, the content of messages shifted toward the availability of overnight shelters.[13] Because Twitter is designed to facilitate creation and sharing of user-generated content, information was able to spread through Twitter and other platforms without input or guidance from government or conventional media.

Although victims of the crisis used social media to report and document their situations, the contents of posts varied according to the users' location. The concentration of smartphone and Twitter users in larger cities meant that the majority of reports discussed the disasters' effects in Tokyo and other urban centres. This is despite the fact that these regions were less affected by the March 11 disasters. The most affected regions, such as Tōhoku, had smaller, more aged populations and a relatively low 31.5 percent mobile phone penetration rate. These victims were unable to communicate after the disaster. Therefore, "geography and demographics limited the participation of those people who were most badly affected."[14]

Victims from more affected areas with access to social media tended to use the technology to share information about their situation, the condition of their homes and towns, and their activities. These messages were focused on information directly related to survival. They included warnings, requests for assistance, and reports about their condition and environment. Many users copied warnings from official government sources into their own Twitter accounts. This allowed users to share the message with followers. Requests for assistance included specific reference to locations and descriptions of situations intended to aid rescuers and facilitate response efforts. Some users used smartphone features to broadcast their location.[15] Individuals in affected areas depended on social media to receive new information and inform others of their condition.[16]

A unique feature of Twitter allows users to organise their posts by topic by adding markers called 'hash tags' at the end of their message. Following the disaster, users organised requests for assistance and disaster information using the hash tag 'j_j_helpme.'[17] Consolidating and organising information posted on Twitter allowed relief workers to locate victims, identify the most affected areas, determine what supplies were necessary, and monitor supply chains. It also provided a means for rescuers to coordinate efforts and share information with other relief agencies while communicating directly with victims. These efforts included large efforts covering the entire Tōhoku area, as well as focused efforts concentrated in specific neighbourhoods. The search engine Google established a network based on its People Finder service. Using a smartphone or other internet connection, victims could upload their name and situation to a searchable central database. Some users uploaded the names of people unable to access the internet into this database. This allowed victims without access to social networking to use social media to inform others of their condition.[18]

As self-reported accounts, Twitter messages reflected individual experiences of the disaster. Messages from less affected areas referred to the particular concerns and situation of individuals in those regions. Like users in Tōhoku, victims outside the main disaster zone also posted information regarding their situation, and occasionally used social media to request assistance. However, most Twitter posts from outside the disaster area concentrated on other areas of concern. In addition to assurances the individual posting the message was safe, posts also

included concerns regarding the effects of the earthquake on transportation, communication, and availability of food in stores.[19]

The personal focus of social media and mobile technologies allowed individuals in affected regions to share text messages, images, and video. Major news outlets used material originally published in social media in disaster broadcasts. However, social media offered consumers a new, more direct source of information. Closer contact between the producers and consumers of information created and posted on social media gave consumers the impression the information was more viable and authentic. The inclusion of material from social media in mass media broadcasts meant media consumers throughout Japan depended on social media for information about the crisis.[20] Analysis of posts from these regions shows less direct messages sent to followers. Instead, victims in these regions posted messages with information from the disaster, and re-posted messages from directly affected individuals.[21] For users in less affected areas, Twitter and other social media supplemented information from mass media. Mass media provided broad, overall reports of the situation in Japan. Twitter and other social media provided focused information on individuals and a means of direct communication.[22]

Users throughout Japan used social media and mobile communications in response operations. Individuals throughout the world used social media to distribute information regarding fundraising and relief.[23] Social media also provided the means to express support, condolences and solidarity. Examples for this include the *Ganbare Japan* and "Pray for Japan" campaigns. Communication with official Twitter accounts belonging to national and subnational governments provided opportunities for direct expressions of condolence. Unlike other disasters, the use of social media during the Great East Japan Earthquake provided the opportunity for government representatives to express thanks for outside support.[24] Direct communication through social media therefore facilitated solidarity between victims and concerned individuals outside the crisis zone.

The March 11 disasters show the usefulness of Twitter and other social media to disaster response. The different uses of the technology in the disaster zone and surrounding areas shows the versatility of the medium. In less affected areas, Twitter was used to express support for victims, and learn information about the disasters. However, within the disaster zone, victims used social media to inform others of their location and situation. Rescuers also used the service to create a more effective disaster response. Japan's response to the March 11 disasters was harmed by the limited use of the technology in the most affected regions. This lack of access prevented victims most in need of the technology from utilising its benefits. Therefore, the most important lesson stemming from the use of this technology in disaster response is to improve access to mobile social networks through smartphones and other technology. The technology survey company ComScore reported that the Japanese smartphone market grew by 43% since the end of 2011. This has increased the total number of users to 24 million, or 23.5 percent of the population.[25] Greater access to mobile technology could improve responses and communication in future disasters. The increased use of smartphones in Japan predicts that future disasters will include more documentation and use of social media by victims, rescuers, and governments. Because of this, Japanese disaster management has been developing new ways to integrate these technologies into crisis response.

Although the use of social media in response to the March 11 disasters was partially an accident, disaster management strategies have begun to incorporate these technologies. KDDI and other mobile service providers have recognised the resilience of Japan's internet infrastructure. The experience of the disasters has prompted the development of services to send

official warnings and disaster information from government sources to users in specific areas. This will allow the government to create a more organised response by providing more specific, focused information to victims in targeted areas. KDDI has also developed an Emergency Voice Mail Delivery Service. This service will allow victims to use internet-equipped phones to send short voice messages. These messages will allow voice communications when conventional mobile networks are unavailable. Mobile providers have also created an integrated smartphone application that allows users to document experiences, broadcast their location, learn the location of emergency services, and receive information and updates through radio and social media.[26] In September 2012, the Japanese government announced trials for a similar online portal to connect users with internet-based emergency services. These include forums to broadcast their situation and official updates on the availability of relief services and emergency supplies. The portal also includes links to government Twitter accounts.[27] Twitter, Yahoo and other information technology companies have also considered how social media can facilitate responses to a future crisis. Twitter believes governments can use the program to inform users about the onset of a disaster, and spread information regarding evacuation routes and the locations of victims.[28]

The Great East Japan Earthquake included the largest recorded use of social media in a major natural disaster. The importance of mobile communications and social media were facilitated by the particular condition of the Japanese mobile phone market and the destruction of conventional telecommunications infrastructure. Because of these circumstances, Twitter and other social media became the most important means of communication. The use of new communication platforms promoted new forms of bilateral communication between victims, government and rescuers. Analysis of the use of social media by users in Tōhoku and surrounding areas shows that social media and new communications technology has an important role in disaster response. The March 11 disasters demonstrate the need to promote the integration of this technology. Twitter and other telecommunications technology fulfilled an important need for coordinated communication and distribution of information between victims, government officials, and rescue workers. This communication has prompted changes to official methods of disaster response, and given ordinary citizens a new role in reporting disasters. These technologies will lead to a more focused response to future crises.

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"*WE SHALL NOT FORGET*": Rendering, Remembering, and Commemorating Tōhoku's and Japan's 3.11 Triple Disasters in Local Cities and Communities

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INTRODUCTION

It has already been three years; it has only been three years. The processing of the rubble and debris heaped along the shoreline after being cleared from the devastated areas is underway. Planners discuss ways to reconstruct infrastructure, reinforce shorelines, and raise ground levels. However, a time table for the re-inventing of human lives is not as clear. Many of those living in the towns, cities, villages, and communities who experienced it are still enmeshed in attempts to reconstruct their life narratives, and re-imagine their personal trajectories after the rupture.

It happened at 2:46 p.m. local "Japan" time. The largest earthquake ever recorded in Japan (a "9" on the Richter scale) since Japan began such recording, rocked the coastal areas of the Tōhoku region, with an epicentre in the waters off the Tōhoku shoreline. It would be followed by a great tsunami bringing waters rushing inward that would in turn take houses, vehicles, other forms of debris–and people–outward to the seas, and would also be followed by the meltdown of two nuclear plants in Fukushima resulting from the quake. The date, of course, was March 11, 2011, a date that has come to be known as 3.11 and associated with Japan's triple disaster (earthquake, tsunami, and nuclear meltdown). Since March is graduation season in Japan, graduation ceremonies had already occurred on that day in some of the elementary, junior, and senior high schools in the coastal towns and cities of Tōhoku. For some students, their school graduation day would also be the last day of their lives. In the course of the triple disaster brought upon the Tōhoku area, an estimated 20,000 people died (those known dead and those whose bodies were never recovered nor whereabouts afterwards known), and a further estimated 200,000-250,000 people still remain "evacuees"; initially homeless they now are in "temporary" dwellings three years later, and may continue to be so for many years to come. For those evacuated because of the Fukushima nuclear reactor meltdown–the biggest number of evacuees–there is some question whether many may ever be able to return to the places which for them were "home". The nuclear reactors, while seemingly calmed down, are neither yet fully stabilized nor fully under control.

MEMORY WORK AND THE PROCESSES OF HUMAN RECOVERY

In this essay I will approach the issue of what has been happening since the disaster in terms of the people who were living out their lives in Tōhoku towns, cities, and communities; which they know not just as bureaucratic jurisdictions or landscapes, but as "memoryscapes". In anthropology, the idea of memoryscapes points out that place is more than just a location for those with close connections to it. It involves and embraces their understandings of life linked to

place, and to the people associated with place. Thus, there can be very different perspectives or trajectories of recovery by those within affected areas, and those attempting to deploy policies of re-development from outside the areas, even if within Japan, such as those in Japan's central business and governmental core, Tokyo.

I base this discussion on two visits to cities and communities in the affected Tōhoku areas, one in 2011 in the first year following the disaster and another two years later in 2013. Both visits were in August to coincide with what under "usual" circumstances is the time of the *Obon* visits "home" to one's "homeplace," corresponding memorials to the dead, and festivals associated with this season in Japan. While in affected communities, I attempted to look at the on-going work–emphasizing that it should be considered work as much as reconstructing infrastructure– that people were involved in to create or re-create their life narratives after experiencing 3.11 as such a rupture to it. Some of these included setting up memorials, often near schools or "ground zero" of areas most affected by the earthquake or the resulting tsunami, putting up small gardens where houses or neighbourhoods had been, gathering in story-telling or knitting groups to be able to tell their experiences of the disaster and relate memories of loved ones now gone from this life, or salvaging and restoring photographs that had–along with houses, other buildings, ships, cars, and people–been taken off with the tsunami and eventually returned to land, but not necessarily from where they had come.

In one case, this last activity came to be known as the *yorokobi* ("rejoice") project. As photographs began to be recovered, initially people did not know who went with the photographs. Communities set up drop boxes, and volunteers spent hours trying to track down which photos went with which families or people. Other volunteers were involved in washing them or recovering images by techniques used to do this. Often extensive work, energies and efforts went into this. In some cases, the images of people in the photographs could not be recovered and those working on them would "apologize" to them. For example, photographs in which images could not be re-captured had to be abandoned to a box on which was written; "*gomen ne*"–"I'm sorry," or "forgive me". Often the photographs served as a mediator through which people could indirectly work out their linkages to those gone and their feelings about the sense of loss or severed relationships, along with frustration about not being able to recover them.

COMMEMORATIVE RESPONSES OF TŌHOKU COMMUNITIES

My discussion will follow the emphasis on communities or local place by presenting these via the specific communities and locales. In 2011, the areas I went were chosen in part to reflect the three aspects of the triple disaster: Sendai–affected mostly by the earthquake, Ishinomaki–one of the coastal towns hard hit by the tsunami, and Fukushima–the area experiencing the nuclear meltdown. I returned to these three areas in the 2013 visit, along with Kamaishi, Kesennuma, and Yuriage.

Sendai: from Tanabata Festival to the Determination Not to Forget

One of the issues struggling areas faced in 2011 was whether to hold the annual summer festivals, usually held in July and August, while still wrapped up in the drama of recovery only a few months after the disaster, and also given a cultural idea that activities thought to be festive may not be appropriate when many people are experiencing grief or sad circumstances. While some communities either could not mount festivals or decided not to, Sendai made a conscious

decision to go ahead with its annual Tanabata, or "star festival". Sendai is one of the most famous, perhaps the most famous location in Japan for Tanabata. It also holds its festival by the older Lunar Calendar, so in August whereas in most parts of Japan it now occurs in July. The decision to hold Tanabata was part of a decision to "carry on," and also embrace a sense of Sendai identity, strongly tied to the Tanabata festival.

As one of the large cities of Tōhoku, Sendai set up–nearly immediately following the disaster–an archival center to record the disaster, and people's experiences and memories of it. This was named the, "*Wasuren*" Centre, with the vernacular, *wasuren* used to emphasize the idea, "we shall not forget." Sendai had a newly established community centre and focal city building called "Sendai Mediatheque" which had not yet been opened for a full year. The architect, Tōyō Itō, had been scheduled to fly to Sendai on March 11, 2011 to give a talk in the coming days for its one year anniversary, but could not due to the disaster. Since the building was new, there was an area that could still be allotted for the implementation of the Wasuren Centre. From its commencement, those involved in the Wasuren Centre have been involved in filming and documenting stories of those from the area who survived the earthquake, and their stories of those who did not.

Ishinomaki: The Wrapping of Space Amidst Memories of Loss

Prior to the disaster, one of the things the coastal town of Ishinomaki was famous for was its Manga Museum, highlighting heroes of Japanese manga and anime. Ishinomaki was one of the coastal towns strongly affected by the tsunami, where houses, cars, and people were washed out to the seas, and the land flooded with water for weeks to months afterwards. By August 2011, the water had subsided and most of the debris had been shifted from the town itself to areas along the coast. Rather than just a showplace for anime heroes, a different kind of heroism was being enacted in Ishinomaki–the heroism of trying to enact "normal" and going through the paces of usual daily life. Most people knew someone who had died. The city had been "wrapped," with banners proclaiming "*gambaru*" or "*gambaroo*"–with just this one word people were both encouraged and instructed to "persevere" or more mutually reminded, "let's persevere." These banners were found in the train station, city offices, community centres and of course schools. In 2011 the wrapping of space in Ishinomaki with what were both encouragements and admonitions to "carry on" reflected how a cultural template involving one word, *gambaru*, could be mobilized to get survivors to keep on surviving amidst the challenge to meaning in the aftermath of the disaster. I will return to the discussion of the spatial wrapping of Ishinomaki later in this essay.

Fukushima: A Disaster that Was Not Supposed to Happen and a People's Project

While Japan is a country where earthquakes are common, and the coastal areas of Tōhoku in 2011 experienced a huge tsunami for the fourth time in 130 years, Fukushima experienced the disaster that was never supposed to happen, and which prior to it area residents had been told never would happen–the meltdown of two nuclear power plants and resulting release of radiation, largely in the form of radioactive water. I had heard about the nuclear reactors in Fukushima while attending a Tōhoku area wide civil society gathering in Sendai in 2008. Groups from the Fukushima area were there to discuss and educate others about the nuclear reactors in Fukushima and express their opposition to them and their concerns that despite guarantees of safety by the government no one could really guarantee they would always be safe. They felt that if anything did go wrong, it would be themselves and others living in Fukushima who would

suffer or suffer most, not government leaders in Tokyo or other central cities. Three years later the nuclear disaster in Fukushima made them sound a bit like visionaries, rather than fools as those in favour of the nuclear reactors sometimes seemed to present them.

A newly introduced Fukushima city wide series of events was taking place in August 2011, under the rubric of what was entitled, “Project Fukushima!”. This included a city wide, “Folk Jamboree” and other events such as musical performances, theatrical presentations, and art displays. While the events were intended to be grass roots displays of a festive nature for what usually was a festive season, they also represented a call for social involvement by average Fukushima dwellers, and a call for local and national governments to listen more to these average residents. Those involved in initiating the project explained its purpose as trying to encourage and incorporate the voices of Fukushima people into the future of Fukushima. The project logo, appearing on banners and T-shirts, was a big red ball similar to the red circle of the Japanese flag, but with a ‘tag’ on the ball transforming it into a speech bubble. Thus, while evoking the symbolism of the Japanese flag, it shifted the symbolism to the voices of the people via the speech bubble rendition.

I mentioned my earlier encounters in 2008 with the groups protesting the nuclear reactors to one of the Project Fukushima! orchestrators. He smiled. He then indicated he used to think they were silly, saying that such groups were always against the reactors and claiming someday they might be shown not to be safe, but that the reactors had been there a long time and the government assured them they were safe so he, too, prior to 3.11 thought they were safe. The nuclear disaster of 3.11 may have changed his mind. I will also return to the discussion of the Fukushima nuclear accident and its possible meanings for Canada and the world in addition to Fukushima and Japan at the end of this essay.

Kamaishi: Community Continues at “Everyone’s House”

By the summer of 2013, for government and policy planners the initial phase of disaster relief had moved towards an emphasis on reconstructing and returning life “back to business as usual”. Many community dwellers were focused more strongly on remembering and commemorating what had happened and their dead, and readjusting their sense of life toward the future at more personal and community levels. Given the large number of “evacuees” from the disaster, initially many were sheltered in emergency settings such as school gymnasiums. By 2013, these people were housed in “temporary” dwellings which themselves were becoming new forms of residential communities. Tōyō Itō, architect for the Sendai Mediatheque building, had begun what became known as *Minna no Ie*, or “Everyone’s House”. This involved small buildings put up in areas that housed temporary dwellings to allow a gathering place for people. One such example was in Kamaishi. Here there were tables for people to sit at and chat together over a cup of tea, a piano for group singing with music, a television for collective viewing. The “Everyone’s House” project was an attempt to balance desires for privacy and collectivism, by allowing separate spaces for community interaction by those now living in the housing projects set up, many of whom were used to more community interaction in the places from which they had come.

Kesennuma: Matter Misplaced–People in the Water, a Ship on Land

In many of the affected areas people remembered and attempted to embrace life through art and garden projects. During the *Obon* season of August 2013 an “art park” was constructed with

outdoor art installations at the “ground zero” area of Kessennuma, another coastal community hard hit by the tsunami. In addition to visiting usual grave sites for *Obon*, people in Kessennuma came to visit areas and place flowers where there had once been residential neighbourhoods, which had been reduced to rubble by the disaster, and the rubble by then removed. In one of these former neighbourhoods was a huge ship that had become an iconic symbol of the disaster. The ship, in anthropological terms, represented, “matter out of place.” Seen from a distance the ship might appear to be on the ocean. However, it was blown inland by the tsunami and thus sat in a spot where houses used to be. In an area not far from the ship, someone had planted a garden of sunflowers that were in full bloom. Near the sunflowers was a handwritten sign, asking people to leave them alone, with a notation saying that the person had planted them there because she or he had planted them in that spot every year for the past 27 years. The sunflowers appearing on field and rubble, near a ship that did not belong there, overlooked what used to be an active residential community neighbourhood.

About two days after visiting this spot in Kesennuma and seeing the ship that became a symbol of 3.11, news articles from around the world reported that the people of Kesennuma had “voted” on whether to keep the ship and transform it into a commemorative site or dismantle and destroy it. Those favouring its destruction won. In terms of explanation for the decision, such news reports gave comments from people indicating that seeing it there continued to fill them with sadness.

Yuriage: A Place for Remembering, A Monument for Commemorating

Another area that suffered greatly from the tsunami was the village of Yuriage on the outskirts of Natori city. Yuriage had been referred to in news reports as the town that disappeared or the town that was washed away. About 750-800 people, roughly 10% of its population, died from the disaster, and the majority of the rest, nearly all, were forced from their homes. The Yuriage “*Kiroku*” or “record” Centre was set up in a docked mobile trailer near what had been the Yuriage Junior High School–a site that became a pivotal point of commemoration for Yuriage dwellers. The Kiroku Centre became a focus of people’s activities dedicated to commemorating others, and dealing with their own responses and recovery to the disaster. One of the volunteers working at the Kiroku Centre was a woman from Natori. She decided to volunteer the day after the disaster when hundreds of people evacuated from Yuriage began coming into the school near her home where they were to be sheltered in the school gym. She, of course, knew the disaster had such effects, but was shocked that it had occurred so close to her in nearby Yuriage, even though Natori City itself was intact.

The Kiroku Centre allowed people a chance to discuss their memories over knitting and embroidery groups (largely for women), tea chat groups (for men, women and mixed adult groups), taiko, other musical and theatrical groups (for youth), and art groups (for children). Often the voices of children are underrepresented in attempts to understand such disasters and how they affect people. The Kiroku Centre reflected what children were thinking, and allowed them to express their thoughts and feelings. While policy planners planned reconstruction of Yuriage, one Kiroku Centre art project allowed elementary school aged children to themselves consider and make models of how they would re-build Yuriage. One girl who had experienced the disaster designed a building on tall “stilts” to allow waters to pass through under the base residential area, with a tall tower on the top of the house that people could escape to in a disaster. At the top of the house tower she put a helicopter landing pad.

In the year following the disaster, people of Yuriage had devoted efforts to building a memorial that was placed at the junior high school, where several of the students had died. Over the *Obon* season people came to the spot to leave flowers. Many ran their fingers along the engraved names of the dead in the monument inscribed there, perhaps to enact a sense of more direct contact with those gone. By 2013, despite this monument having been the focus of village dwellers attention following the disaster, the school was set for demolition on the grounds that it was now damaged and potentially unsafe. The decision was not necessarily one reflecting the desires of Yuriage dwellers. Another plan had been set in motion to raise the land level of the Yuriage area. Again, this was not a plan necessarily desired by Yuriage dwellers; many had protested it and many continued to complain about it. This was also the case in several other communities which had been designated for this treatment. While such plans may involve shoring up the shorelines for additional support in the case of a future tsunami, local dwellers had concerns about other problems that might result from this action, such as danger from landslides or shifting lands.

STEPS BEYOND SURVIVAL, STEPS TOWARDS THE FUTURE

This essay has suggested that the intense efforts of people to remember, to commemorate, to record their experiences and their feelings or thoughts about those departed and communities disrupted, should be considered an important part of the work of recovery, both of individual lives and of area locations. Through such work, people were able to carry on when that in itself was difficult, and were beginning by 2013 to be able to contemplate a future. I indicated I would return to the wrapping of space in Ishinomaki and I do so to show this point. In August of 2013 much of Ishinomaki was still wrapped with variations of *gambaru* (persevere), including the more collective *gambaroo* (let's persevere), and the Tōhoku dialect version, *gambeppe*. However, I noted that the wrappings along the outer corridors connecting wings of one school in Ishinomaki had changed. In the same place, where the banners of 2011 had admonished, *gambaroo Ishinomaki* (persevere Ishinomaki*),* they had been replaced with the banners of 2013 proclaiming, "take a thought about what is desired, Ishinomaki" and "take one step towards the future, Ishinomaki" (*mirai e ippo, Ishinomaki*). Rather than simply being encouraged or admonished to persevere, students were now being informed it was okay to dream, and to contemplate their future and that of their community. The banners also suggested that it would be okay if this was a slow process that took some time for individuals and for the community.

IN PLACE OF CONCLUSIONS: LESSONS FROM FUKUSHIMA FOR THE FUTURE–FOR CANADA AND THE WORLD

While individuals struggle to remember their dead, and rebuild their lives, another issue that actually remains not fully resolved is that of the nuclear reactors in Fukushima. The immediate threat of the nuclear meltdown has subsided, but the reactors are not fully under control. Meanwhile, in the aftermath of the radiation aspect of Japan's 3.11 triple disaster the country has been wrapped in discussions about whether to disband or continue nuclear reactors (often with citizens' groups against them, and government leaders wishing to re-instill them). Recently at a major Canadian airport, I encountered promotional advertisements for nuclear energy. These advertisements proclaimed that if people were serious about wanting to address climate change they should embrace nuclear energy. Why? Because according to the advertisements it was "safe, reliable, affordable". Not long after, a Canadian academic who knew I worked on Japan asked

me if people in Canada had learned the lessons of 3.11. The first thing I thought about were the pro-nuclear energy advertisements.

Although there are many different opinions and stances on which energy sources should be used in the future, “After-Fukushima”, I find it difficult to accept that nuclear energy can be declaratively characterized as “safe, reliable, affordable”. Some people (not those working in or on Japan) have even begun to describe Fukushima as a “good” example of a nuclear accident–meaning one that the response to was “fairly good” and the result “not so bad”. I find the concept of a “not so bad” nuclear radiation accident not an easy one to accept. Although there might be some in Fukushima who do think of it this way or want others to, I also find it difficult to imagine that many, those evacuees from the designated “unsafe” zone of Fukushima, or those dwelling in the area beyond it with concerns for risks over time, or parents with concerns for their children, could accept that it was a relatively good disaster. If nothing else, what happened in Fukushima draws attention to the reality that one cannot say for sure that nuclear reactors will be safe, and stands as testament that nuclear accidents can happen and happen in habitats of human civilian dwellers.

As indicated, I heard of the Fukushima nuclear plants when in Sendai in 2008 doing other research in Japan. To reiterate, groups from Fukushima were attending the event I was attending in Sendai. The groups were opposed to the nuclear plants in Fukushima, and trying to educate people about their concerns. They talked with me at length, indicating that the government always said the nuclear reactors were safe, but that they thought one could not absolutely guarantee such a thing, and if anything went wrong, they–as Fukushima dwellers–not people in Tokyo, would be the ones to suffer or suffer most. Three years later, they were shown to have been correct. If “After Fukushima” I had first heard these sorts of comments from Fukushma area dwellers, I might have wondered if people were only afterwards convinced that prior to the disaster they had been reassured the reactors were “safe”. However, they told me this three years before any of us know that someday we would be referring to 3.11.

Not only were the reactors eventually not “safe;” in not being safe they were not “reliable” and they have not yet been rendered into a completely “reliable” condition, as concerns remain whether even more radioactive water might escape. The nuclear disaster aspect of 3.11's triple disaster, also questions whether nuclear energy is “affordable” or an inexpensive (or less expensive) form of energy. If the expenses of dealing with that aspect of the disaster, clean-up costs, costs from the destruction of much of the land (some of which may not be habitable again), the costs of keeping large numbers of evacuees in “temporary” shelters, and the medical costs that may accrue over time are considered–it is shown not to be such an “affordable” option. The costs of the disaster are so high, that as of January 2013, Japan introduced a new tax, called *Tokubetsu Zei*, or the “special tax” that everyone has to pay on top of existing taxes already being paid, levied as a way of dealing with the expense of addressing the Tōhoku triple disaster. The new “special tax” has been put in place, to be deducted from each pay allotment, for the next 25 years; thus the people of Japan will be paying to pay off post disaster expenses for the next 25 years. It is another financial strain on a populace many of whom are already struggling given Japan’s two decades of economic difficulties. In this regard as well the nuclear meltdown disaster in Fukushima challenges the concept that nuclear plants are “affordable” or inexpensive, just as it questions they can be “safe” and “reliable”.

What does this all mean for Canada (in addition to the realization that nuclear accidents ultimately effect everyone through global air flows)? Perhaps there are those who think it is unlikely that any sort of nuclear accident could happen in Canada. Canada might experience an

earthquake, but it is not an earthquake prone country such as Japan; it tends not to experience–or experience to the same extent–tsunami, typhoons and other such natural phenomena commonly experienced in Japan. Does this mean that Canada is “safe” from any sort of nuclear accident? Should Canadian residents be willing to accept being “relatively safe” from nuclear accidents? Prior to 3.11 Fukushima could have (and was) said to be “safe” from possibilities of nuclear accidents; it may have been “relatively safe”. For those who think it unlikely that a nuclear plant accident could happen in Canada, it might be good to note that the world’s first civilian nuclear plant accident occurred in Canada, in 1952 at the Chalk River facilities in Ontario, Canada.

The nuclear disaster in Fukushima also provides pause to think of the many ways in which humans are negatively affecting the environment–something which in turn will negatively affect humans. In terms of 3.11 the earthquake and tsunami are often conceptualized as “natural” disasters, while the nuclear reactor accident bears the designation of “human-made” disaster, at least more strongly. However, scholars and environmentalists increasingly question whether a strict distinction between “natural” and “human-made” disasters is still appropriate. Even in terms of frequency, so-called “natural” disasters occur more often and with greater severity, and underlying human impacts on the environment are thought to be contributing factors. Thus, perhaps one means of learning from, while also commemorating the 3.11 triple disaster, for everyone is also to contemplate a desired future that is informed by the voices of people and understandings of lives as lived in local communities, and aiming towards less destruction of the environment.

The *Anglosphere* and the Construction of Anti-Whaling as an Anti-Japan Discourse

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Summary

In light of the recent Western anti-whaling discourse that targets Japan, I consider the idea of "Japan as barbarian" in various English-language media. This discourse is widely popularized although it was the large-scale whaling for oil by the UK, the US and Germany, and not Japanese whaling, that reduced whale populations to near extinction (Epstein 2008). I consider the anti-whaling/anti-Japan discourse an expression of the global power of the Anglosphere (here referring to the US, the UK, Canada, Australia, and New Zealand) and even as a form of oppression closely linked to capitalism and neo-colonialism, which incites to diverse new forms of violence against racialized 'Others'. To illustrate my argument, I examine digital anti-whaling and anti-Japan social and ecological activism by groups such as *Greenpeace*, *Global Ocean* and *Avaaz* which work to subordinate Japan - as racial Other - in international relations, while erecting a 'new' idea of the 'West', allowing the Anglosphere to mask its racism.

Introduction

While Japan is sanctioned for its scientific whaling, in the past two decades Norway, another major whaling nation, is never even mentioned, although it has never suspended its scientific whaling over the same period. The Japanese, however, are presented as primarily responsible for the slaughter of whales and thus made into prime targets of anti-whaling actions. The denial of Western involvement in whaling at large is a linchpin of the anti-whaling discourse (Epstein 2008). The recent development of Western anti-whaling discourse against Japan, has proliferated the idea of "Japan as barbarian" in various English-language media. This despite of the fact that it was the large-scale whaling for oil by the UK, the US and Germany, and not Japanese whaling, that reduced whale populations to near extinction (Epstein 2008). Whaling has been framed as solely a Japanese practice; *a* historically in the world, and the story-line of the anti-whaling camp accuses Japan as the main culprit for the whales' near extinction, inciting hatred toward the Japanese people.[1] In elaborating on the decision-making processes within the International Whaling Committee (IWC) — where English-speaking countries are dominant — Catalinac and Chen write that "Japan is portrayed as an economic animal and environmental outlaw, with its traditional custom being painted as barbaric, uncivilized and archaic, something that is out of tune with an environmentally sensitive 'world'" (2005, p. 133-34)[2]. In fact, up until the 1960s, most of the European countries engaged in whaling for oil. Until the discovery of fossil oil, European nations depended on whale oil; then more recently, they found its superb qualities in space engineering, building stock piles for the next hundred years (Epstein 2008). Evidence shows that the American Navy used whales in the Arctic in shooting target exercises slaughtering tens of thousands of whales during the 1950s (Epstein 2008). On the other hand, Japan, particularly in its coastal communities, has a tradition of whale culture that goes back 5,000

years. Similar to the Canadian Aboriginals, the costal people of Japan have long cherished the coexistence of whales and humans; they consumed a whale in its entirety, unlike European, American, and Australian whaling which was more 'wasteful' as it only focused on the extraction of oil.[3]

The racialization of Others has existed in the English-speaking world in the modern period (Arendt 1944). The anti-whaling discourse is a 'new' form of racialization using as weapon the language of morality and social justice.[4] Anti-whaling is embedded in the already existing discourse of animal welfarism, which makes whaling people appear as 'cruel' and 'ignorant' (Epstein 2008). Typically, this discourse is dismissive of industrial farming and consumption of cows, pigs and chickens as irrelevant; because they are not as *intelligent* as whales are.

In this article, I am focusing on anti-whaling as an anti-Japan discourse, diffused by those with power in a specific socio-political context aiming to control peoples' minds and actions (Foucault 2008). Kuehls' 'eco-politics' (Thom Kuehls 1996) is the technologization of discourse (Fairclough 1992), a deliberate, political discourse. Since anti-whaling ecological NGOs (hereafter eco-NGOs) originate in the Anglospheric countries, I consider them the source of the anti-whaling and anti-Japan discourses. Given the hegemonic power of the Anglosphere today, the dissemination of the anti-whaling discourse is a form of oppression, which is closely linked to capitalist competition and is inherently 'colonialist' in that it aims to control a traditional cultural practice of the Japanese. In this sense, anti-whaling as an anti-Japan discourse is a form of violence against a racialized 'Other' (Foucault 1978) — Japanese whaling being targeted for verbal and physical abuse in the name of anti-whaling.

To illustrate my argument, I examine digital as well as social and ecological anti-whaling/anti-Japan activisms by Greenpeace, Global Ocean and Avaaz, and although many NGOs in the world are still true to their name as 'non-governmental' organizations, which the major eco NGOs of the Anglosphere are not. They are often composed of highly educated professionals — engineers, lawyers, veterinarians, biologists, to name a few — and work under the name of "civil" society while receiving much financial support from national and international institutions as well as powerful private donors. As part of the anti-whaling campaign, the major Anglosphere eco-NGOs are now granted importance usually accorded to a country; thus "environmental NGOs have successfully pitched themselves as the direct representatives of the new 'global and universal human interests'" (Epstein 2008, p. 209). NGOs are skillful players of "information politics" (Keck and Sikkink 1998, Epstein 2008), for they systematically provide otherwise unavailable information to the public, thereby positioning themselves via the conventional media as alternative authoritative sources of information. The Demos, the UK conservative think tank, illustrates this situation: "We have global assets. A global language. *Global businesses and NGOs*. And *global networks*" (Vucetic 2011, p. 146-7, emphases added). If NGOs began as part of civil society to challenge established state power, Marcuse's concept of 'containment' may be fitting these major eco-NGOs.

I focus on the webpages, because what is often called "digital activism" (or clickism) has become recognized as a source of political power (Amin 2010, p. 65) and eco-NGOs' use of digital tools is not an exception. They employ technologies such as mobile phones and digital cameras to relay images to their own websites, and to Web 2.0 social networking sites like YouTube, Facebook, and Twitter. These tools are notably a "free" and easy-to-use platform to post multimedia content, which is then instantly accessible to anyone who has Internet connection or mobile phone device (ibid.).[5] Often younger generations are the most frequent

users of these technologies, and Anne-Marie Slaughter, who later became a policy advisor to U.S. Secretary of State Hillary Clinton, asserts that "a networked world gave America a distinct 'edge' thanks to a combination of liberal appeal, economic prowess, youthful demography, cultural diversity, and other factors that no other society in the world can match" (Vucetic 2011, p. 147). Blogging alone can provide another powerful function in distributing information among the users, as it may create a "shared identity" among individuals with different ideologies and backgrounds (McAdam and Paulsen 1993). As well, as the form of 'social proof' (Frederick 2011: 53), the posted comments can be extremely influential on the viewer's mind. In 1970s, many anti-whaling environmentalist groups emerged in the UK and the US. Among them, Greenpeace with their spectacular demonstration of anti-whaling saw their business grow exponentially into a successful multi-million dollar "protest business" based on anti-whaling alone (Epstein 2008; Kawashima 2012). In inciting anti-whaling demonstrations, they created the image that all whalers were Japanese. Since 1977, Watsons' Greenpeace and Sea Shepherd campaigns took on a visibly violent turn. While they targeted various ships at the outset — for example, in 1980, Sea Shepherd bombed a Japanese whaling ship; in 1986, it destroyed an Icelandic whaling ship; in 1994, a Norwegian ship — in recent decades, it has been mainly Japanese ships. They threw molotov cocktails, bombs, threw wires into the ships' screws which permanently damaged the ships, and often committed Kamikaze-like attacks on the Japanese ships (Kawashima 2012).

> A criminal according to one country's legislation [Holland], Watson never served his sentence, and his widespread popularity remained untainted. In April 2003 he was elected to the board of directors of the Sierra Club. The anti-whaling campaign not only rewrote whaling as "illegal," but it succeeded in establishing its more criminal deeds as "acceptable" (Epstein 2008, p. 145).

Successes of the Greenpeace, Sea Shepherd and other anti-whaling eco-NGOs depended on, and owed to, the continuous supporting media coverage by the English-speaking major mass media. For example, in the famous "Shooting Watson", a film of 2008, Sea Shepherd orchestrated a concocted scene, in which a 'Japanese whaler' shot Watson, the leader of the Sea Shepherd. Despite it being a film image played by actors, *Animal Planet* showed this scene as its part of "whale wars"; as well, as if it were truthful, the Australian ABC news aired it immediately after "the event" (Kawashima 2012, p. 304). English-speaking mass media coverage of the eco-NGO activities are also selective. While they consistently air eco-NGOs' anti-whaling campaigns at the prime time news, the media hardly show other — perhaps more pressing — ecological social activism such as anti-GMO stunts or anti-Boreal forestry demonstrations. When the 'documentary' *Cove* was generated focused on the coastal Japanese community whose traditional life depended on whaling, Hollywood awarded it the highest honour, the Academy Award, granting believability while other notable environmental documentaries were ignored.[6]

The Anglosphere is a racialized political movement, claiming its political 'unity' (or kin-like brotherly alliance) among English-speaking countries — the US, the UK, Canada, Australia and New Zealand (Vucetic 2011, Belich 2009, Bell 2007, Bennett 2004, 2007).[7] Spawned by the belief in Anglo racial superiority and natural leadership in the world (Vucetic 2011, p. 25), the Anglosphere's ultimate goal is "imperialist expansion" as the force of self-claimed democratic and justice leaders of the world (Vucetic 2010, 2011). For Vucetic, "[t]he

grip of Anglo-Saxonism was so powerful that British 'race patriotism' implied not only a "race alliance" with America but also a 'federation of race'" (2011, p. 29), and it is "an imagined community of Anglo-Saxons at a global scale" (Vucetic 2011, p. 50).

> Centered first on London and then on Washington, D.C., the Anglosphere has dominated international politics for the world for the past 200 years, perhaps longer. Its agents — companies, empires, states, nations — colonized and industrialized large states of the planet and moved millions of its inhabitants, often by force. They also acted as the market and lender of the last resort, the guardian of the reserve currency, and the bulwark against various revisionists and revolutionaries. As a result, the world has now gone *An*global. Though Australians, Americans, British, Canadians, and New Zealanders make up less than 7 percent of the world's population today, the standard triumphalist argument is that "their" language is the global language, "their" economies produce more than a third of the global gross domestic product (GDP), and "their" version of liberalism in society and economy defines most human aspirations. (Vucetic 2011, p. 3).

Using metaphors such as 'global voice', 'international community', or simply 'we', and since the "international community" *is* the Anglosphere (Vucetic 2011), the anti-whaling movement presents a revealing example of the intimate working of the Anglospheric formal state authorities and their 'civil' NGOs. The production and diffusion of the anti-whaling/anti-Japan discourse is possible, primarily for its racializing Us-Them dichotomy; "the old Japanese enemy", and "the newly established People's Republic of China" occupy the two ends of "the far side of the continuum" of the Anglosphere's racialized identity politics (Vucetic 2011, p. 59).

Eco-NGOs and the Claim for the "global village"

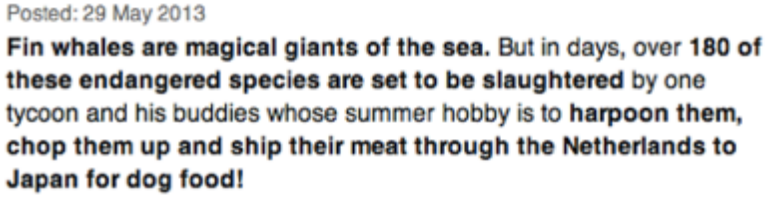
Alluding to the collusion among eco-NGOs, capitalists and the anti-whaling states, Neves and Igoe summarize their activism as "neoliberal conservation" in which "economic investors, politicians and conservation organizations now celebrate the economic use of nature services as the solution to the world's most pressing environmental problems" by "turning conservation into a profitable commercial activity" (Neves and Igoe 2012, p.165).

> [A]n amalgamation of ideology and techniques informed by the premise that natures can only be 'saved' through their submission to capital and its subsequent revaluation in capitalist terms, what McAfee has aptly labeled 'selling nature to save it'.

As capitalizing entities, eco NGOs' activism is highly selective, in that they rarely confront the existing politics and corporations that continuously allow pollution of oceans that results in a negative impact on ocean ecosystems, including cetacean populations.[8] Instead, eco-NGOs advocate whale watching as a "safe alternative", now a billion dollar business, and are practically silent about its severe noise pollution harmful to the cetacean ecosystems (Igoe, Neves and Brockington 2010, Neves 2010).[9] Therefore, for Neves and Igoe (2012), anti-whaling eco NGOs' conservationism echoes Tsing's (2005) idea of the global economy of appearances: "dramatic performance has become indispensable for financial performance.", or the successful use of performance for generating profit as spectacular accumulation … in the realm of conservation." (Neves and Igoe 2012, p. 176).

While referring to Japan as the 'sole' and deplorable whaling nation, Greenpeace International's website (accessed Sept. 27, 2013) has "scientific research" as "a poorly disguised commercial operation".[10] In so writing, the web article takes elaborate discursive strategies; in short, they build three types of *personification*, i.e., the Japanese government, Japanese industry and the Japanese people, or the archetypical three characters that anyone can easily associate with, namely, bad people, victims, and good people ("we", Greenpeace, as the moral authority, standing for the welfare of the Japanese public). In creating a *story-line*, they *frame* Japanese whaling as the fault of the "corrupt" government and cold-blooded industry, "driven only by economic gain", and alluding to Japanese people as victims of their manipulation. The use of a storyline is a well-known strategy for the production of "powerful writing" specifically aimed for persuasion, *regardless of the truth*, mostly promoted by contemporary professional editors and writers (Frederick, 2011) — as Sophists admitted, 'truth' does not matter for persuasion. Scripted in a conversational tone in literally less than 150 words, Greenpeace created a drama that anyone who may be uninformed about the whaling debates can be easily influenced by. The web article includes the graphic image of Japanese men in business attire (symbolizing corporate Japan) holding a piece of whale meat and their 'story' lands in the minds of the reader as a visual evidence of 'corporate' cruelty.

Global Ocean – UK – launched its anti-whaling website on Jan. 1, 2010 (accessed Sept. 27, 2013). Different from Greenpeace, this website accuses Japan of hunting "porpoises", claiming this is an "illegal" and "secret" practice by Japanese, despite that it is 'legal' under the agreement with the IWC. It reports that Japanese fishermen left for harvesting in the dark "secretively". This website contains a two-minute video clip produced by a news company from China (CCTV). The article asserts "Japanese hunting" is "continuing, despite growing international pressure". The news reader in the video clip emphasizes words such as "carcasses", the number of "kills" every year and "going on continuously for around 50 years".[11] Yet, after a series of what is felt as bullying by the English-speaking eco-NGOs, it may not be surprising if in fact, these fishermen did act 'secretively'; as they were certain that English-speaking eco-NGOs were hiding and watching them in order to subsequently publicize the 'news' to the 'international community,'[12] regardless of facts. By employing terms as "hunt", "carcasses" and "kills", Global Ocean and CCTV proliferate the image of Japanese cruelty and aggression. The interview clip within the said video shows a white woman who asserts that "Japanese" porpoise hunts are "almost a secret in Japan and around the world". Although she comments that "the IWC's ban on whaling but not on porpoises", the juxtaposition of whaling and porpoises, frames the latter in the anti-whaling context and makes it sound illicit and illegal, or at least, it characterizes porpoises harvesting as something to be frowned upon. In this way, by their secret filming and depiction, with no comment on traditional Japanese diet and culture, Global Ocean creates a dramatic 'storyline', playing on the already established Orientalist racial prejudice of Japanese corruption and immorality. The white woman, representing caring and nurturing in the cultural symbolism, adds a sense of truthfulness to this distorted storyline.

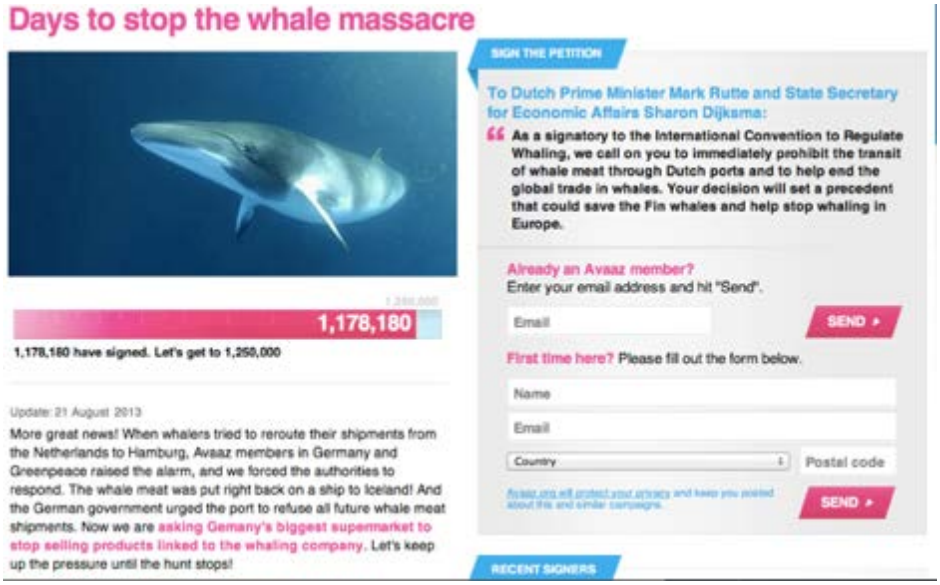

Posted: 29 May 2013

Fin whales are magical giants of the sea. But in days, over **180 of these endangered species are set to be slaughtered** by one tycoon and his buddies whose summer hobby is to **harpoon them, chop them up and ship their meat through the Netherlands to Japan for dog food!**

These UK-based eco-NGOs are already well-known for politically capitalizing on the anti-whaling discourse (Epstein 2008). Avaaz is a newly established UK-based organization, while not an 'eco-NGO' *per se*, uses the anti-whaling issue in their "social movement" activism. Launched in Jan. 2007, its membership reached over 36 million in 194 countries in 2014. It maintains simultaneous and sophisticated web pages in 16 languages – a feat unmatched by average digital activist websites.[13] Avaaz aims to "close the gap between the world we have and the world most people everywhere want," calling for action (clicking) on issues such as climate change, human rights, animal rights, corruption, poverty, and conflict worldwide. Major leftist UK news media outfits such as *The Guardian*, and others, call Avaaz "the globe's largest and most powerful online activist network" (Mar. 12, 2012) and praise it for "reinvent[ing]" political activism (The Guardian, Jan. 2013).

There is one way to stop the hunt before it starts -- you can't dock a boat full of illegal whale carcasses just anywhere. German and Finnish authorities have shunned the shameful trade. Now, the Dutch are the linchpin. They care deeply about their reputation as environmental leaders, and are hoping this bloody trade won't get any global attention. But if we expose it now and demand **the Dutch authorities refuse the transfer of whale meat in their port, we can stop the whale massacre!**

We have to act fast -- the whaling ships are due to start the hunt next week. Sign now and tell everyone to join -- let's build a one million strong campaign to Prime Minister Mark Rutte now warning him that we will create a media storm with giant whales on his doorstep unless he stops the transfer in Dutch docks.



A closer look indicates that the multilingual pages often reveal their *race-specific approaches* in calling for moral and just action.[14] For example, issues on human rights, corruption and poverty deal exclusively with regions and states that are in the global South,

i.e., mainly Africa, the Middle East and South East Asia, but not European and North American societies, where much poverty and corruption exist, too.

The Japanese language site was most striking. On Sept. 12, 2013, Avaaz initiated 12 campaigns for immediate action, almost all – 10 out of 12 – calling for action against the Japanese government. In no other language was there incitement against a national government. Avaazs' anti-whaling campaign targets European viewers, speakers of English, French, Italian, German, Spanish and Portuguese. In other words, the anti-whaling campaign is absent in the Japanese, Chinese, Korean, Arabic and other non-European languages.

Although Avaaz encourage 'members' to suggest topics, how it selects global campaign topics is hidden from the public. In other words, which topic to select, which audience to address, and how to frame the issues, are all in control of Avaaz. As it typically informs an entire topic in under a hundred words, each campaign reads like an advertisement.

Avaazs' first anti-whaling call came in 2010, and it was titled "Whales under threat!" It included the graphic image of a whale being captured and bleeding heavily next to a Japanese ship as the obvious culprit. In merely 83 words, the Avaaz campaign framed whaling as evil, by using the phrase "whale hunting" instead of commercial 'harvesting,' scandalizing whale consumption as part-of a traditional diet among various peoples and calling for "[a] massive global outcry".[15] The second anti-whaling campaign came on May 29, 2013. Avaaz decried the fate of 180 fin whales, those "magical giants of the sea" soon to be "slaughtered by one tycoon and his buddies whose summer hobby is to harpoon them, chop them up and ship them through the Netherlands to Japan for dog food!" "[T]he Netherlands" - a European state is treated neutrally, compared to "Japan," a deplorable nation, which sells the "magical giants" for "dog food." The text continues: "German and Finnish authorities have shunned the shameful trade," implying that the "Japanese authori[ties]" – the racialized Other - allows these "shameful" acts. In short, in this campaign, Avaaz prjects an image of the Japanese as ignorant, cruel, deceitful, and "economic-animals." Avaazs' binary approach characterizes white European authorities as just and fair compared to the evil and sly "Japanese government" colluding with "Japanese industry".

These anti-whaling/anti-Japan discourses are evidently persuasive. Responses posted on YouTube videos and articles of the electronic version of the *New Scientist,* harshly criticize Japan and the Japanese people who "drove whale into near extinction,"[16] nothing but hate speech and outright racism (see Mantilla 2013; Erjavec and Kovačič's 2012). In particular, YouTube videos were especially hateful and insulting to Japanese, calling them 'stupid' and 'ignorant', threatening them with another nuclear attack and wishing them another Tsunami disaster. Such racialized hate may be pre-existing, however, the anti-whaling discourse evidently encouraged the stereotyping and hate toward Japanese among the English-speaking viewers. Comments in the *New Scientist* expressed disdain toward 'Japanese,' often without any reference, to the content of the articles themselves. Here are some examples of those 'responses' to the magazine article "Secret Start to Japan's Whaling Season" (Nov. 2008) which reports the beginning of the whaling season in Japan:

> *"I think Japan's weak excuse for 'research' so they can eat whale meat in their restaurants is morally sick. The world governments HAVE to start rallying together to stop this cruelty of our whales."*

"They wonder why they're making smaller hauls every year, the thought that they may be pushing them into extinction doesn't seem to have crossed their minds yet."

"It's just like the Tuna, they're going to fish them until they're either all small or they're all gone. Just for a plate of 'exotic' meat. It's sick."

"As long as they have the motivation of selling the meat for profit, they will continue to use lethal methods."

It is a Foucauldian idea that in a power discourse the superior side both defines the problem and establishes the truth, thus perpetuating an existing power relationship. If for DeSompre (2001) the anti-whaling US acted as 'bully' in the IWC interaction, the anti-whaling/anti-Japan discourse and practice (including Sea Shepherd's violence) is equally oppressive to Japanese, by rejecting their traditional diet which includes whale meat. Furthermore, as Foucault argues, the power discourse can even regulate and control behaviour — through self-surveillance so as not to be criticized (see Bordo 1998). In this way, the eco-NGOs and their networks in the Anglosphere, can successfully set up new norms for Japanese — what Japanese should eat, how they should behave in their daily lives; to avoid attacks on their cultural traditions. Because eco-NGO's are organization and not governments, they think that their actions should not be a matter of 'international' conflicts. Epstein (2008) reasons that the US, UK, Australia and New Zealand are all cow meat producing and exporting countries; and thus further asserts that increased whale meat consumption may pose a potential economic threat to them. She continues that the US anti-whaling campaign began and targeted Japan when its economic power began to surge in 1970s. She also believes that anti-Japanese racism coincides with the US's trade deficits and the anti-whaling NGOs' demonstrations. Therefore, according to Epstein, by the 1980s, the US viewed Japan as more threatening to the US than the Soviet Union. In other words, in the eyes of the US authority and power, Japan was the number one threat (Epstein 2008: 176; see also Epstein 2010). Historically, one has to be aware of the meaning of pre-existing anti-Japanese sentiment in the US, demonstrated in its exclusionary immigration policies in the 20th century, followed by the wartime internment of Japanese-Americans. Epstein (2008) suggests that *racism* is the core of the anti-Japan sentiment derived from the trade conflict with the US, UK, Australia, and New Zealand. The next section elaborates the meaning of 'racism,' Anglo-Saxon nationalism and the politico-economic and cultural underpinnings of their anti-whaling/anti-Japan discourse.

Anti-Japan, the Anglosphere and Race Thinking

> Monopolistic closure is the processes and practices, often institutionalized, whereby members of the in-group have access to the scarce valuable resources, whereas non-members (the out-group) are excluded. (Satzewitch and Liodakis 2013)
>
> "I told you so long ago: If we are together, nothing is impossible" (quoting Churchill, Vucetic 2011)

In her article "Race Thinking Before Racism," Hannah Arendt explains how 'racism' emerged separately from 'race-thinking' as part of class struggles between the nobility and the rising bourgeoisie in Western Europe.[17] The idea of an "élite", individuals who were "well-bred", led to the belief that in their veins ran the noble "blue blood". This class-conscious upper-class group claimed their superior origin and then superior rights to reign (Arendt 1944, p. 58). From the 17th century on, however, a specific brand of English race-thinking emerged; they were obsessed with inheritance theories and preservation of blood lines, which was, for Arendt, the modern equivalent to eugenics (Arendt 1944, p. 62). Arendt calls this idea "Saxondom", a type of nationalism, of which the idea of "grandeur of race" was so impressive as the "nation that no longer was held together by a limited country." And, "[b]ecause English colonists had spread all over the earth," Arendt writes that "[this was] the most dangerous concept of nationalism" (Arendt 1944, p. 69-70).

> [Unlike Germany] England as a nation had to devise a theory of unity among people who lied in far-flung colonies beyond the seas, separated from the mother country by thousands of miles. The only link between them was common descent, common origin, common language (1944, p. 69).

In short, "Saxondom" is not just the belief in racial superiority, but also an idea of *expansionism* with "the idea of "national mission," believing the "Anglo-Saxon" to be "the supreme guarantee for humanity (ibid.)." This mission can be accomplished through "the only reliable link within a boundless space" (Arend 1944, p. 69-70). This idea was inherited by the modern England and continues today (Vucetic 2011).

The contemporary rising of the "Anglosphere" is a race-conscious *brotherhood* among the UK and its former colonies – the US, Australia, New Zealand, and Canada – which share *all* security intelligence information (Vucetic 2011). This race-conscious alliance is also "expansionist" (Vucetic 2011), as anyone who is not 'Anglo-Saxon' is a racial Other (Vucetic 2011, Hitchens 2004, Arendt 1944). For example, the racial identities of these countries were the primary motivation in forming international alliances on equal terms only amoung themselves — to the extent that Australia actively denied Japan and other Pacific countries being be part of the Pacific alliance with the US, and the US accepted Australia's request (Vucetic 2011, see Shimazu 1998, see Umetsu 2004).

In the context of the racialized anti-whaling discourse, the Anglospheric NGOs and mass media, continually bash Japan based upon the "brotherly" collective identities of the Anglosphere. It is by this *performativity* (Butler 1990) of concerted racialization, I argue, that the Anglosphere reasserts the 'new' race-order in the world (see Vucetic 2010).

As Vucetic explains in detail, the declining UK has a stake in forging a strong alliance with the powerful US, while Australia and New Zealand will gain politically and economically by being in the close union with the UK and the US (Vucetic 2010, 2011). If the dominant US acts as if Japan is an enemy, so will the UK, Australia, and New Zealand (Epstein 2008).

The construction and dissemination of anti-whaling/anti-Japan discourse by the eco-NGOs, therefore, are in line with the Anglospheric racialization movement. I do not argue that the Anglospheric political Right conspires with the Anglo-dominant eco-NGOs, nor that the Anglo-dominant eco-NGOs are 'racist'. What I argue here is that the continued anti-whaling discourse can be the *common* site for political campaigns by these two types of ideological institutions — one that seeks to form international alliances by way of the racial concept of the Anglo-Saxon superiority (the Anglosphere) and the other that strives to put down the

moral integrity of racialized Others. Since eco-NGOs are already Anglo-dominant, their anti-whaling/anti-Japan campaigns fit broader Anglospheric interest. In this very sense, I call the Anglo-dominant eco-NGOs, as *Anglospheric eco-NGOs*.

Although former President G.W. Bush at least once used the term "the Anglosphere" in his speech on the alliance with the UK in Iraq (Vucetic 2011), and Canada's Prime Minister Harper is known as an ardent follower of Churchill and the Anglo-alliance (Vucetic 2011), this term is not publicly used. But is it necessary that the Anglosphere be *hidden* in political discussions? What connection does it have with the idea of the 'West'? A reply is attempted in the final section.

Technologization of Discourse and the Construction of 'New' Western Identity

Epstein (2008) encompasses the success of the anti-whaling discourse within the rising animal rights debates in the West. True, regardless of the 'West' being fundamentally carnivorous, the animal rights discourse has a universal appeal. In her use of the term 'West', we can assume that Epstein means western European societies and the Anglo-dominant English-speaking countries. In this sense, the concept 'West' homogenizes otherwise multiple cultural and historical spheres (Said 1978) and it also homogenizes multiculturalism within each society of the 'West.' In order for the anti-whaling discourse to be successfully (or persuasively) disseminated among multiple cultural societies, the best possible way would frame the discourse within the already familiar concept, especially if neither 'anti-whaling' nor 'anti-Japan' was a familiar concept.

Engineering of the discourse, or 'technologization of discourse' (Fairclough 1992, 1995, 2003, 2006, Jørgensen and Phillips 2002), is not a new tactic in imperial America. Consider, for example, the dissemination of Christian religion through missionaries; often through synchronizing with the pre-existing indigenous belief systems of the supernatural, and not by replacing them, Christianity was successfully diffused. A better example is the dissemination of scientific medicine in colonial politics. In his book, *Rockefeller Medicine Men: Medicine and Capitalism in America*, Brown (1979) details the process in which scientific medicine was actively promoted among the regions to be colonized: the visionary Abraham Flexner, who worked for the powerful Rockefeller family, recognized that because good health was in everyone's best interest, scientific medicine would be a powerful colonizing vehicle. Upon distributing American medicines to the sick and injured, the colonial power would be regarded with respect, thereby allowing for more manageable colonial submission. In other words, the colonial US consciously "employed" scientific medicine as a powerful ideological tool to gain obedience and subjection to the colonial 'racially superior' power (Brown 1979). Just like 'health concerns' would indeed touch everyone's heart and mind, among pet-loving societies of global North, 'animal welfare' can touch their hearts and minds. In this very sense, what Epstein invokes makes sense: As anti-whaling eco-NGOs discursively framed anti-whaling within animal welfarism, both discourses can work as a useful identifying ideological vehicle. What is more, I argue, such constructions will recreate a better, hence 'new', 'Western self', ridding off the once tarnished self-image of its own by its colonialism, slavery, and Opium wars, culminating in Nazi Germany and the US' use of atomic bombs and chemical weapons against civilians. This newer imagery of 'West' is, like animal welfarism, ripe with charity, kindness and justice; or a kind and gentle form of governmentality (Foucault

2008).[18] What is more, eco-NGOs' anti-whaling campaigns are constructed around animal welfarism with Japan as diametrically opposed.

This re-assertion of the 'moral' superiority of the 'West', is through the Anglospheric eco-NGOs' animal welfarism. Here is the fundamental contradiction between the *new* 'West' and the *new* alliance of the Anglosphere. The Anglosphere obviously must be hidden under the clothes of the 'West'. Through animal welfarism, eco NGOs speak "we", masking their Anglosphere racialized connection to damage the image of Japan. It is for this reason that Avaaz broadcasts the anti-whaling/anti-Japan discourse *only to European and English-language communities*. The anti-whaling/anti-Japan discourse has been a discursive tool to establish a 'new (or morally just) Western identity; while this term blurs the actual heterogeneity among what this name speaks for, more importantly, the 'West' hides its Anglospheric identity. Now, although the anti-Japan/anti-whaling discourse is primarily a racialized perfomativity among the Anglospheric countries, they must hide their racial domination under "we", the (multi-'racial') West.

Conclusion

The technologization of discourse seen in the anti-Japan and anti-whaling movement coincides with the continuous process of "military state building" of "Anglo-dominant US" (Enloe 1981). The hate towards 'Japan' continues in the context of post 9/11, where racialized others are constant suspects (See Razack 2007 for Islamophobia, for example). Avaaz symbolizes all of the aforementioned. They take control of the agenda while guiding the methods of solving the problems of primarily Othered states. Erecting discursively the superiority of European states in the areas of human rights, animal rights and accountability, their "social movement" is ultimately conservative, neo-liberalist, and racializing. Although the virtue or value of conservatism and neo-liberalism should be taken up in another work, this political agenda is not transparent to the general audience, or 'members' of the "global village" who may uncritically click the button.

This article is to address an area of discourse, which speaks of the ideological warfare that we live in today as the world powers compete to seize the minds of the mass for discursive warfare is imperative preceding sites for actual military strikes. Because in democratic societies, *real* power is ultimately in the hands of the masses, it may be foolish to believe that they can be fooled forever.

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[1] Racialization is a socially constructed process by which negative racial meanings are used to differentiate a group of people or their activities; the strength of this concept lies in its emphasis: unlike 'race,' racialization focuses on the perceptions and motivations of those powerful enough to impose race labels on others so that they can control or restrict their opportunities (Satzewich and Liodakis 2013). Like racism, racialization is propagated by the capitalist system in order to deflect workers' attention away from the true source of socio-economic problems and threats (Satzewich and Liodakis 2013).

[2] Looking at UK and Japanese whaling articles in daily newspapers, Murata conducted a linguistic analysis in 2007, and she concluded that the UK press is in fact "one-sided", reporting only anti-whaling voices, singling out Japan and painting it as the sole agent of the deplorable and vicious act of hunting (2007: 747).

[3] The oldest archaeological evidence shows that Japanese coastal people harvested whales 5,000 years ago (Savelle and Kishigami 2013; Kalland 2005).

[4] What Shull (1993) calls "kinder, gentler form of racism", Liodakis (2013) defines as the new racism "The New Racism," by Barker (1981) who argues that, negative evaluations of racially defined groups came to be masked in racially neutral language to make them more politically acceptable in public discourse. Conservative segments of British society developed a code language that allowed them to talk about "race" in a way that would allow them to deny that they were being racist. Barker gives the example of Thatcher's speech targeting Pakistani immigrants that focused on the negative evaluation of cultural differences, which he considers no less pernicious than old racism."

[5] Such digital activism and its uses were abundantly prevalent in the recent Egyptian uprisings. It is said that 54 out of 70 street protests between 2004 and 2011 substantially involved online activism (Budish 2012: 749-50). For example, Kony 2012 was an enormously popular YouTube video, raising awareness about Kony's crimes in Uganda. Interestingly, whatever the political outcome and despite of the "factual inaccuracies" (Budish 2012: 759), this much edited video reached an astounding 100 million viewers on YouTube in the first six days of airing (Budish 2012: 755). The success of Kony 2012 and what Budish calls its "Americentrism" (ibid. 756), combined with factual inaccuracies, angered Ugandans whom the video was purported to "help", since most viewers were not Ugandans, but North Americans who have access to the Internet - who then did not follow up on the question of how the video reflected the "truth", nor on the way Ugandan people reacted to the video. One thing is unmistakeable: the social

media dramatically increase the publicity and the diffusion of information instantaneously to regional and global audience (Budish 2012: 759).

[6] This film silenced coastal people's own voices in support of their own traditional lifestyle, making them feel ashamed of their traditional diet.

[7] Vucetic (2011) details the reasons why, among the Anglosphere countries, Canada's position on whaling differs from that of the US, the UK, Australia and New Zealand. See also Haglund (2005).

[8] Bührs and Christoff (2006, p. 229-30) report the following: " [at] 27.9 tonnes, Australia is the world's highest per capita producer of CO2 equivalent emissions Australia, with only 0.3% of the planet's population, is its 10th largest producer of total CO2 emissions (1.4%) Both Australia and New Zealand increased their total CO2 emissions by 22% between 1990 and 2002. This was well above the OECD average increase of 7%. Australians are among the world's most wasteful overall, second only to the United States. In keeping with international trends towards growing and inefficient resource use, the volume of waste has been increasing over the past three decades in both countries, despite the growth of recycling."

[9] Neves writes as follows: "Given that many of these E-NGOs have actually participated in critical studies of whale watching, the omission of potential negative impacts of whale watching can only be understood as a strategy that is meant to avoid sending mixed messages to the public about the good and bad of this activity (Neves 2010, p. 723).

[10] This judgment echoes in the recent IWC's slamming the Japan's scientific whaling. I will refer to the debatable structure of the IWC later.

[11] At the annual meeting of the Japan Studies Association of Canada where this work was originally presented, a disgruntled Canadian woman retorted that other countries' 'history' has no importance. This attempt at silencing exemplifies the power of anti-Japan.

[12] For example, DeSompre, wonders if the inability to resolve the issue of consumptive uses of whales is "a simple difference of opinion subject to a democratic process" or if "there [is] something more troublesome underlying the difficulties" (DeSompre 2001: 184); she attributes to the current difficulties in the IWC to "the membership and voting structure of the organization and the ways in which membership has become a tool through which to influence whaling polity" (2001, p. 184).

> The use of membership as a tool has two components. The first is the process, undertaken primarily but not exclusively by the United States, of bullying states into the agreement, or into changing their policies within the agreement. The second is the effort undertaken by a number of states and nongovernmental organizations (NGOs) to "bribe" states into the agreement, by paying their dues or representing them at meetings, or offering them foreign aid to join or take certain positions. Both strategies have led to an IWC in which membership practices and policies advocated did not represent the real views of interested parties. When states initiate or support certain provisions, not because these provisions are consistent with their own beliefs about how whaling should be conducted but because they have been coerced or bribed into advocating these measures, governance problems already difficult may become insurmountable (2001, p.184-5)

[13] The languages are English, French, German, two Chinese, Korean, Russian, Romanian, Yiddish, Arabic, Spanish, Turkish, Portuguese, Italian, Polish, Dutch, and Japanese.

[14] Drawn from my observation of Avaaz web site and campaigns of March 13, 2013 and Sept. 30, 2013.

[15] A study shows that the overwhelming majority of the populations among 'non-whaling" states responded in a positive manner to whaling 'if' it is sustainably harvested among the peoples who consume it (Epstein, 2008).

[16] The New Scientist is a popular science magazine that claims three million on-line readers. Of course, not every viewer or reader posts a comment, and the same person can write comments under different aliases. With these limits in mind, I still look at the comments for an indication of viewers' opinions. I use YouTube since it attracts general audiences, while the New Scientist may attract educated and science-interested individuals among primarily English speaking populations.

[17] She traces racism to Count Arthur de Gobineau, scion of the "frustrated nobility", and his Essai sur l'Inégalité des Races Humaines, a kind of standard for race theories in the modern period: "Step by step, he identified the fall of his

caste [nobility] with the fall of France, then of Western civilization, and then of the whole of mankind. Thereby he made that discovery for which he was so much admired by later writers and biographers, the discovery that fall of civilizations is due to a degeneration of race and that the decay of race is due to the mixture of blood. This implies that every mixture produces bad races and that the lower race always is victorious" (Arendt 1944, p. 57) See Also Kristeva (1991) for her discursive tracing of the history of the "race" concept.

[18] Some critics argue the emergence of the new version of racism that is kind and gentle in appearance in the past decades. My discussion here parallels with their attention. See Shull (1993); Barker (1981); Taguieff (1999); Rodriguez (1999); Sanchez (1999) for new racism.

Appendix A: Conference Programme

The COMMEMORATIVE 25TH ANNUAL CONFERENCE of the

Japan Studies Association of Canada / Association canadienne d'études sur le Japon

カナダ日本研究会

Carleton University, Ottawa, October 11th-14th, 2012

Pending minor changes, following is the

SCHEDULE and PRESENTATIONS' LIST

Note: In order to have a fruitful and enjoyable conference as well as to ease on the task of session chairpersons, colleagues are asked to craft their presentations-regardless of format- to last no longer than the allotted 20 or 30 minutes each [please see programme] and - to the extent possible- use clear language and terminology accessible to all, for the benefit of all. Brief relevant information on presenters will be available. ***Session chairpersons*** *are only responsible for presentations and Q&A sections being conducted within their allotted time. To enhance direct communication between presenters and audience,* ***there are no commentators****. ALL SESSIONS ARE HELD IN* ***ROOM 2017 DUNTON TOWER*** *– THE TALLEST BUILDING ON CAMPUS.*

The Organizing Committee of the 2012 JSAC Conference welcomes you all to Carleton in October!

THURSDAY, October 11th, 2012

*from 3PM – Registration at the

Travelodge Ottawa Hotel & Conference Centre 1376 Carling Avenue
Phone: 613.722.7601 ext. 4236
Fax: 613.722.7737 Direct to the Hotel: 1.800.267.4166 ext. 4236

FRIDAY, October 12th, 2012

9:00AM- 9:15 AM - ***2017 Dunton Tower***

Carleton University Conference ***Welcoming Word***:

Professor **John Osborne**, ***Dean of the Faculty of Arts and Social Sciences.***

9:15AM-10:30 AM – ***2017 Dunton Tower***

The 2012 JSAC 25th Annual Conference Commemorative Keynote Address by

Professor Masashi NISHIHARA [President of the *Research Institute on Peace and Security*, ex-President of the *National Defense Academy*] on "**JAPAN** in ***the 'ASIAN CENTURY.'"***

10:30AM-10:45 AM **–** *Coffee Break*

10:45AM -12:30 PM - *2017 Dunton Tower*

SESSION # 1: ***3/11/11 in an Overlooked Region***

Chair: Prof.Thomas Waldichuk [Thompson Rivers University]

***Presenters*:**

*****Mr.**Michihiro MASHITA** [Tsukuba University, Japan]: *Ibaraki – the forgotten disaster area.*

*Prof.**Tomoko KUBO** [Meiji University, Japan]: *Local community response in Hitachi and Kita Ibaraki.*

*****Mr.**Toshiki YAMAMOTO** [Tsukuba University]: *Developing disaster prevention maps :the case of Hitachi City.*

*Prof.**ThomasWaldichuk [**Thompson Rivers University**]:** *Residential experiences in 3/11/11: the case of Hitachi City.*

12:30 PM -1:30 PM- LUNCH: 2017, ***Dunton Tower***.

1:30 PM -3:30PM - *2017 Dunton Tower*

SESSION # 2: ***3/11/11: Some Immediate Reactions***

Chair: Prof. Jackie Steele [*Tōdai Shaken*- Tokyo University, Institute of Social Research]

Presenters:

***Prof. Anthony Rausch** [Hirosaki University, Japan]: *Post- 3/11: the view from local newspapers in Fukushima and Aomori prefectures.*

Ms. Rie SHIRAKAWA** [Huron University College] & **Ms. Sachie SATŌ** [Shiroishi High School, Miyagi Prefecture]**:** *A new post-3/11/11* ***Kizuna *among language learners in Japan and Canada.*

* **Mr. Daniel Baker** [Carleton University]*: Telecommunications and the response to 3/11/11.*

***Prof. Cary Shinji Takagaki** [University of Toronto]**:** *Challenging the stereotype of Japanese stoicism when facing disaster.*

3:30PM-3:45PM - *Coffee Break*

3:45PM-5:45 PM - ***2017, Dunton Tower***

SESSION # 3: ***3/11/11: Aftermath and Reconstruction***

Chair: **Prof. Ken Coates**

Presenters:

Prof. David Edgington** [UBC]: *Response and recovery after 3/11/11.**

***Dr. Yuko Shibata** [UBC]: *Connected World: Post 3.11.11*.

***Prof. David Telfer & Prof. Atsuko Hashimoto** [Brock University]**:** *Reconstructing tourism post 3/11/11*.

***Prof. Brian Pendleton** [Langara College]: *Architectural responses and housing needs after 3-11: practical designs or imaginative dreaming?*

5:45-6:00-*Special Video Presentation* - **Sachie Sato**: *Interviews with 3/11/11 Miyagi Survivors.*

FRIDAY EVENING - 6:15 PM: JSAC's ***25th Anniversary Commemorative Dinner***

Keynote Lecture by Prof. Jackie Steele [Tōdai Shaken; Global COE on Gender Equality and Multicultural Conviviality in the Era of Globalization, Tōhoku University, Japan]: "*Navigating the Surreal in Northern Sendai: No Communications, No Heat, No Lifelines... but Blessed by the Bonds of Community"* Location: Carleton University Faculty Club [Baker's Grill].

SATURDAY, October 13th

8:30AM-10:30 AM - ***2017 Dunton Tower***

SESSION # 4: ***HISTORY***

Chair: Prof. Jacob Kovalio [Carleton University]

***Presenters*:**

***Prof. Michael Laver** [Rochester Institute of Technology, USA]: *The great Meireki fire of 1657 and its aftermath: response and recovery- a Dutch view.*

Dr. Shiho, MAESHIMA [UBC**/Hōsei University, Japan**]:Social crisis and popular maternalism in interwar Japan: Ishikawa Takeyoshi's views on "Home" in the 1920s.*

***Mr. Scott Harrison [**University of Waterloo**]:** *Indigenous history in Asia Pacific through the lens of the Cold War and the San Francisco Treaty.*

***Mr.David Rangdrol [**University of Ottawa**]:** *The Japanese Constitution and article 20: 65 years of secular ambiguities.*

10:30-10:45- *Coffee Break*

10:45AM-12:30PM - *2017 Dunton Tower*

SESSION # 5: *Business /Trade/Sustainable Development*

Chair: Prof. Ian Lee [The Sprott Business School, Carleton University]

***Presenters*:**

***Prof. Teri June Bryant/Prof. Vernon Jones** [Haskayne School of Business, University of Calgary]**:** *Foreign CEOs in Japan: watchdogs or window dressing?*

***Prof. Ken Coates &Prof. Caryn Holroyd** [University of Saskatchewan]: *Collaborative governance and environmental sustainability: regional ecological innovation in Japan.*5

12:45PM -2:00 PM: Lunch- 2017 Dunton Tower.

2:00PM -3:30 PM - *2017 Dunton Tower*

SESSION # 6: *Anthropology/Sociology /Cultural Studies*

Chair: Dr. Yuko Shibata [UBC]

***Presenters*:**

***Prof. Sheri Zhang-Leimbigler** [University of Ottawa]**:** *Japanese culture, Asian values and Chinese tradition.*

***Mr. Robert Mamada** [University of Hawaii at Mānoa]: *Becoming a MANGAKA* [漫画家]

***Prof. Mark Rowe** [McMaster University]: Raising Buddhists - The *Seshu Mondai* in Contemporary Japanese Buddhism

3:30PM-3:45 PM - *Coffee Break*

3:45PM-5:30PM - *2017 Dunton Tower*

SESSION # 7: **Film Studies: *Education and the Visual Media in Postwar Japan***

Chair: Dr. Mitsuyo Wada-Marciano [Carleton University]

***Presenters*:**

*Dr. **Yasuo DEGUCHI** [Kyoto University]: *Nakai's logic of media and social education in postwar Japan.*

***Ms. Bianca Briciu** [Carleton University]: *Peace education and war films: lessons in compassion or the fascination of violence?*

Dr. Jo Gwan-ja** [Seoul National University]: ***Zainichi Chōsenjin **(**Korean residents in Japan**)**'s *ethnic education and the documentary film* ***The Child of Chōsen*** **(**朝鮮の**) .**

*__Dr. Mitsuyo Wada-Marciano__ [Carleton University]: *Postwar educational film as the social* 6 *system*__:__ *the film* ***Record of One Mother.***

SATURDAY EVENING – Free.

SUNDAY, October 14th, 2012

8:30AM -10:00 AM - ***2017 Dunton Tower***

SESSION # 8: ***Linguistics and Digital Humanities***

Chair: Prof. Norio Ota [York University]

***Presenters*:**

***Prof. Kumiko Inutsuka** [York University]**:** *Teachers' assumptions and students' performance in language tests.*

*__Prof. X. Jie Yang__ [University of Calgary]**:** *Links between medieval words and pictures in the context of developing digital resources.*

10:00AM-10:15 AM – *Coffee Break*

10:15AM-11:30AM - ***2017 Dunton Tower*.**

SESSION # 9: ***The Future Japan*** [Session title inspired by 将来の日本, the 1886 best-seller by Tokutomi Sohō, translation by Prof. Sinh Vinh, University of Alberta]

Chair: Prof. Fumiko Ikawa-Smith [McGill University]

***Presenters*:**

***Prof. Norio Ota** [York University]:

*Bipolar perceptions of Japan's future***.**

***Prof. Jacob Kovalio** [Carleton University]:

Japan, China, Chindia: remarks on the "impending Asian shift."

11:30AM -1:00 PM – *2017 Dunton Tower*7

SESSION # 10 - ***ROUNDTABLE*** by the *Japan Futures Initiative Group* on *Japan's Policy Horizons*.

Chair: Prof. David Welch [Balsillie School of International Affairs, University of Waterloo]

***Presenters*:**

***Prof. Ken Coates** [University of Saskatchewan]

***Prof. Kimie Hara** [University of Waterloo]

***Prof. Caryn Holroyd** [University of Saskatchewan]

***Prof. Seung Hyok Lee** [University of Waterloo]

***END of the FORMAL PROGRAMME of the 25th ANNUAL CONFERENCE of the* JSAC.**

12:45 – *2017 Dunton Tower*: Lunch and JSAC AGM opened by President Ken Coates.