

# The Regional Newspaper in Post-Disaster Coverage: Trends and Frames of the Great East Japan Disaster, 2011

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## Abstract

This paper illuminates post-disaster media trends and frames through an examination of local newspaper coverage in the aftermath of the Great East Japan Earthquake of 11 March 2011. After providing contextualization of how the media treat disaster events, the paper examines post-disaster news trends together with three highly different post-disaster frames through an examination of columns in the *Fukushima Minpō* of Fukushima Prefecture, the *Kahoku Shimpō* of Miyagi Prefecture, and the *Tōōnippō* of Aomori Prefecture. The results show a trend towards decline in the frequency of ‘mentions’ that the event receives as news, which is then replaced by coverage in the form of long-running special theme columns. The framing of the disaster-related columns in the local newspapers reflect, understandably, the local issue focus that emerged out of the event – the tsunami for Miyagi versus the nuclear accident for Fukushima. However, the Aomori *Tōōnippō* case presents a framing of the nuclear disaster specifically in a highly analytical and forward-looking manner, focusing on the potential of technology and policy that can accommodate the reality of geologic science and local governance. As such, the research raises several questions as to the implications of post-disaster media reporting trends that relate to media communication research, particularly as research that is long-term and multi-dimensional.

## Introduction

The media has a dual function relative to disasters—whether natural or of human origin. On the one hand, and before a disaster occurs, the media can highlight mistaken policy or lack of regulation, the type of human error that can lead to or exacerbate a disaster. On the other hand, in the post-event period, the media functions to supply information about the disaster. Such an immediate after-

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the-fact function has a high level of social utility, functioning to disseminate highly relevant information about the disaster and the accordant response. Related to the issue of information dissemination is the media role in near-term risk amplification versus attenuation. However, over the longer term, this post-disaster function emerges in the media framing of a disaster, which contributes to a complex combination of disaster-related public risk consciousness and post-disaster recovery information, which in combination, can contribute to the next wave of pre-disaster policy or regulatory oversight. This paper illuminates these post-disaster media influences through an examination of local newspaper coverage in the aftermath of the Great East Japan Earthquake of 11 March 2011, by examining post-disaster news trends and by portraying three highly different post-disaster frames.

## Background: Disasters and the Media

Wenham (1994) pointed out that the media are naturally drawn to the human-interest aspect of disaster; indeed, much of the immediate post-disaster reporting focuses primarily on the human element. However, the media play a much broader role in both pre- and post-disaster reporting. While the former would be ideally undertaken in a manner such that disaster can be averted (as in disasters of human origin) or the damage lessened (as in natural disasters), the longer term view of the media as it relates to disasters is usually most evident in the post-disaster reporting. Indeed, Vultee and Wilkins (2004) outlined five phases of disaster reporting that can be viewed on their proximity to the event itself: warning, impact, immediate post impact, recovery and mitigation. The first three speak to the disaster itself, but the last two reflect a longer-term process through which the media can exert a powerful influence not only on how the public perceives the disaster as an event, but in identifying the way forward after the disaster. This includes developing a narrative which defines the meaning of the disaster as well as identifying any contributing or mitigating factors that may have contributed to or influenced the nature or scale of the disaster but which are identified clearly post-event rather than pre-disaster.

While the main focus of this paper is the media function in this latter regard, in post-disaster reporting, an understanding of what constitutes a disaster and society's view of such events is important context. Disasters can be defined as acute, collectively experienced traumatic events which have origins both as a result of human activity (e.g., plane crashes, industrial accidents, terrorist attacks) as well as originating in natural processes (e.g., hurricanes, floods, earthquakes) and which, while usually occurring with a sudden onset, can also have precursors to their occurrence (Norris et al., 2002). In the case of natural disasters, warning is in some cases available (hurricanes and floods), while in others it clearly is

not (earthquakes). While we live in what is now termed a ‘risk society,’ where people feel threatened by a myriad of invisible risks that they know exist through knowledge alone rather than through experience, an ongoing disaster consciousness is fairly weak over most periods. Therefore, the perceptions of risk—in this case, disaster risk—that people feel emerges primarily through social construction of that risk (Beck, 1992). In this respect, the social definition that is constructed of a specific risk can be manipulated by the media, in a manner that either amplifies or that minimizes that sense of risk. And while, as referred to above, a pre-disaster sense of risk can be constructed around both human and natural-origin disasters, the present research focuses on post-disaster reporting of an event which encompasses both natural and human-origin elements.

Several key studies inform the present research focus on post-disaster media function. Vasterman, Yzermans, and Dirkzwager (2005) examined the role of the media in a post-disaster period specifically in terms of disaster-related health issues and disaster area residents’ consciousness and response regarding those health issues, finding that over-reporting of post-event health risks led to general fear and anxiety, which contributed to confusion over endemic health problems versus those truly related to their case study disaster. Miles and Morse (2007) looked at the role of the news media in natural disaster recovery, identifying how the media focused on specific forms of ‘capital’ in the recovery response, a post-disaster viewpoint that reflected a persistent pre-disaster risk profile and accordant policy making. Finally, Yin and Wang (2010) asserted that China’s press modified post-disaster media discourse to minimize rationality in the reporting, replacing it with myth, a process allowed by the central government as part of a national and international public relations campaign to show their governance capabilities, and Svitak (2010) found differences in the *New York Times* coverage of earthquakes in Haiti, which was framed as unorganized chaos resulting in massive deaths, and Chile, where the framing portrayed an earthquake response that was relatively organized, but inefficient.

Taking up these studies in greater depth, one key area of disaster reporting has concerned media hype and the resulting social amplification of disaster risk consciousness, along with the longer term framing of the event, in terms of both responsibility and recovery. Despite whatever media safeguards are employed within any media organization, and in part due to the complex and multi-faceted nature of the broad media marketplace, media hype of a disaster event can emerge, as the news coverage of the event takes on a life of its own, usually pushed forward by self-reinforcing processes within the media itself (Vasterman, Yzermans, and Dirkzwager, 2005). A news wave is created by news focus on a particular disaster event or aspect of that event, a focus which is then reinforced as the topic gains more public attention, which then generates its own demand for more attention to be focused on that particular topic, in what becomes a self-generated positive

feedback loop of news-making rather than news reporting. During the hype, this news-making occurs as the media generates content on the topic by reporting on comparable incidents, by reinterpreting incidents in the past and by evaluating details of the events and the performances of those involved, and by reacting to society's reaction to each succeeding news wave. If there is an ongoing element of risk that is part of the disaster, the hype will usually result in social amplification of the risk.

On a longer-term basis, after a disaster occurs, a variety of social agents—the government, interested business ventures, citizen interest organizations, and the media itself—engage in a struggle to define what happened and why, and what can be expected in the future. The goal of these agents is to frame the event, propagating a specific definition, interpretation and evaluation of the event, and response that corresponds to their respective political, policy, safety, informational and enterprise viewpoint and objectives (Entman, 1993). To the degree that these agents use the media, this leads the media away from mere information dissemination and toward social construction of themes, issues, problems, and, as will be outlined below, responses and policy related to the disaster event. In this regard, the media integrates, intentionally or simply through the sequences of reporting, any number of separate events that may comprise a disaster, yielding a broader narrative structure which can be identified in the patterns of phrasing that are used in reporting. As these narrative frames are constructed and disseminated, they are characterized on the basis of, and criticized for, their adherence to (or lack thereof) objectivity (the truth), impartiality (equal time to competing points of view and content details) and neutrality (for example, assessing blame) (Anderson, 1997). Thus, the narrative of the Haiti earthquake was, as Svitak (2010) found, one of chaos and death, a conclusion based on the fact that in his study, over 50 percent of the *New York Times* news content of the disaster was given over to content focusing on death and injury as opposed to just 20 percent on the response efforts. This is contrasted by the narrative that emerged of the Chilean earthquake as a sadly inefficient response, as 40 percent of the total coverage focused on the response efforts, with another 40 percent on crime, as opposed to much lower figures for death. While the actual death figures for the Haiti earthquake were much higher than for the Chile earthquake, the narratives that were created neglected the fact that the Chilean earthquake was drastically more powerful than the Haitian earthquake and that one of the main reasons for the high number of Haitian fatalities had to do with the state of the respective country's infrastructure—an element of the narrative that was largely ignored in the Haiti narrative, but highlighted in the Chilean.

Another part of the media function as it relates to post-disaster reporting concerns the frames of recovery that are perpetuated and the implications of their sectoral distinctions. Depending on the character of the disaster, a range of

resources will have been destroyed, with the initial disruption of services giving way leading to varying recovery periods and introspection and debate about the appropriate pattern of rebuilding. Research by Miles and Morse (2007) showed that post-Katrina Hurricane media coverage gave priority to risk perception and the post-disaster recovery of various forms of capital—natural, human, social and built—based on cultural, social, political and technical biases present in the media of interest. They found a focus on: built capital, which emphasized a timely restoration of services through rebuilding; human capital, which focused on notions of just distribution of resources for this recovery; and social capital, which focused on identifying institutions that support individuals in the event of a disaster. In other words, the media provided both general frames of recovery while also offering frames of introspection regarding the provision of support as it related to future disasters and the equitable distribution of recovery resources. However, they also noted a lack of media focus attributed to natural capital, that which would focus on the natural structures that provide ecosystem contributions to tropical storm protection, which would potentially reduce disaster impact in the future.

While this background review outlines the main research themes that will be the focus of the present paper—various elements of media framing in disaster event reporting—it also reveals where further research is needed. Perhaps one of the most important characteristics that research focusing on media and disasters is lacking is a multi-dimensional and long-term view. Viewed as a combinative construct, multi-dimensionality, the use of various viewpoints, is a function of a long-term view, one that looks at months, if not years, rather than weeks. Multi-dimensional media-disaster research also considers the media product in a more holistic approach, allowing for multiple evaluations of disaster reporting: as a simple reporting of a progression of social facts; as an example of agenda setting by social and media elites; as socially-constructivist narratives to be judged on the basis of objectivity, impartiality and neutrality; as well as a primary factor in disaster risk consciousness amplification and long-term public policy setting.

## Research Methodology and Findings

Disaster research requires a disaster: the research outlined above has been based on a plane crash, the 2005 Hurricane Katrina of the southwest U.S.A., earthquakes in Haiti and Chile and China's 2008 Wenchuan Earthquake. The present research also takes up a natural disaster, the Great East Japan Earthquake of 2011.

The Great East Japan Earthquake of 2011 can be viewed as three separate, but inter-related incidents—the offshore earthquake itself, the resulting tsunami and the nuclear power plant catastrophe that ensued thereafter. The earthquake occurred off the eastern, Pacific Ocean, coast of northern Japan at 14.46 JST on

Friday, March 11, 2011 and was one of the most powerful known earthquakes to have hit Japan, and one of the five most powerful earthquakes in modern history. The earthquake triggered enormously destructive tsunami waves, reaching heights of up to 40 meters and traveling as far inland as ten kilometers in some locations. In addition to the loss of life and destruction of infrastructure, the tsunami caused a number of nuclear accidents, the most significant the meltdown at three reactors in the Fukushima Nuclear Power Plant complex, necessitating the establishment of evacuation zones affecting hundreds of thousands of residents. The Japanese National Police Agency has confirmed 15,813 deaths, 5,940 injuries, and 3,971 people missing across eighteen prefectures, but concentrated on the three coastal prefectures of Fukushima, Miyagi and Iwate, which, along with three other prefectures (Aomori, Akita and Yamagata) constitute the Tohoku Region of East Japan. The earthquake and tsunami destroyed hundreds of thousands of structures, large and small, commercial and residential, and caused massive wide-scale damage to coastal municipalities, roads, railways and other infrastructure. Over four million households lost electricity for several days and 1.5 million were left without water. Early estimates place insured losses from the earthquake alone at US\$14.5 to \$34.6 billion. The nuclear plant catastrophe led to the evacuation of a large area surrounding the power plant site itself and resulting in radiation release into the nearby Pacific Ocean and into the air.

Against a structural background of the Japanese newspaper industry, consisting of five major national newspapers, the Kyodo news service, and what, for sake of simplicity, can be referred to as prefectural newspapers, the present research focuses on the reporting and representation of the Great East Japan Earthquake by three such prefectural newspapers of the disaster area: the *Fukushima Minpō* of Fukushima Prefecture, the *Kahoku Shimpō* of Miyagi Prefecture, and the *Tōōnippō* of Aomori Prefecture. These three newspapers can be expected to reveal a contrast of views, as much of the tsunami damage associated with the earthquake was on the coastal areas of Miyagi whereas the nuclear power facility disaster played out primarily in Fukushima. Against these two highly affected areas, Aomori was minimally affected by the triple disaster, and as such, can provide a viewpoint that is regional (i.e. not national or in another district of Japan) but yet not immediate to the earthquake, tsunami or nuclear accident.

The research adopts a multi-dimensional approach, starting with a numerical 'one-year keyword trend' based on the *Tōōnippō* newspaper database, before turning to the frames found in the disaster-themed columns of the three newspapers. In a methodology which followed that of Miles and Morse (2007) and Barnes et al (2008), keywords were searched in the *Tōōnippō* newspaper database (registration required; Japanese only). This method is also reflected in a short examination of Japan's post-disaster vocabulary showing that the Japanese terms for 'self-restraint' (*jishuku*) and 'reconstruction-recovery' (*fukko*) both reached

their peak appearance in five main Japanese newspapers in the first week of April, after having increased over the four week period directly after the earthquake (Ichise, 2011). After this peak, the frequency of references to self-restraint fell off sharply, while reconstruction-recovery continued to be used by the media in a fairly consistent pattern through to the end of the examination period in mid July. Ichise makes an elite agenda-setting interpretation in attributing this to the media adopting various positions espoused by political leaders in the immediate aftermath on the one hand, this even though the symbolic importance of respectful restraint as espoused by these media elites contradicted the economic need for recovery activities as offered by others. On the other hand, she also sees a cultural influence at work, contending that in the use of the 'restraint' vocabulary, the media was reflecting persistent Japanese ethic characteristics which both called for conformity, in the form of restraint, along with the unspoken specter of condemnation should one ignore the calls for restraint.

In terms of the keyword database search in the present research, the Japanese term *higashi nihon daishinsai* (Great East Japan Disaster) was used as the anchor keyword, with various terms added to identify the range and strength of certain combinative notions. The pair keywords included 'aid', 'recover', 'damage', 'economy', 'lifestyle', 'tourism' and 'policy.' An overall time period (12 March 2011 to 31 March 2012; 385 days) was used to establish a baseline for the frequency of keywords, which was followed by searches over the initial 12 March to 31 March period followed by a search for each month. The second component of the research methodology was a focus on the framing of the event on the basis of special newspaper sections and columns that were given over to earthquake coverage carried at periodic points after the disaster. The terminology of such special issues can be viewed as a significant part of the framing and narrative building that underlies the social construction of the post-disaster consciousness surrounding the event.

## The One-Year Keyword Trends

First of all, the anchor term Great East Japan Disaster (*higashi nihon daishinsai*) yielded 5200 hits for the *Tōnippō* newspaper over the base period (12 March 2011 to 31 March 2012). This translates into an overall average of approximately 14 references to the disaster per newspaper day for the entire period. For the immediate post-earthquake period, from March 12 to the end of that month, 765 'Great East Japan Disaster' references emerged, equaling 38 references per newspaper day (see Table 1). By April, this fell to 26, by May and June to around 18, by July and August around 11 and by September to nine references per newspaper day. The one-year anniversary (March 2012) saw the daily references rise to 12 per day.

Table 1: *Tōdōnippō* Newspaper: Key Word Combinations

	2011.3.11 2012.3.31	3.12 3.30	4 April	5 May	6 Jun	7 July	8 Aug	9 Sept	10 Oct	11 Nov	12 Dec	1 Jan	2 Feb	3 Mar
<b>Great East Japan Disaster</b>	<b>5200</b> <b>14/day</b>	<b>765</b> <b>38/d</b>	<b>767</b> <b>26/d</b>	<b>563</b> <b>18/d</b>	<b>510</b> <b>17/d</b>	<b>429</b> <b>14/d</b>	349 11/d	282 9/d	254 8/d	299 10/d	301 10/d	206 7/d	205 7/d	358 12/d
+ aid (shien)	<b>1727</b> <b>4.5/d</b>	<b>273</b> <b>14/d</b>	<b>274</b> <b>9.1/d</b>	<b>211</b> <b>7.0/d</b>	<b>171</b> <b>5.7/d</b>	130 4.2/d	105 3.5/d	81	96	102	103	56	69 2.5/d	99 3.2/d
+ recovery (fukko)	1485 3.9/d	<b>107</b> <b>5.4/d</b>	<b>211</b> <b>7.0/d</b>	<b>192</b> <b>6.2/d</b>	<b>131</b> <b>4.4/d</b>	<b>120</b> <b>3.9/d</b>	<b>122</b> <b>3.9/d</b>	95 3.2/d	73	87	100	73	70	116 3.7/d
+ damage (higai)	1303 3.4/d	<b>253</b> <b>13/d</b>	<b>215</b> <b>7/d</b>	<b>137</b> <b>4/d</b>	<b>123</b> <b>4.1/d</b>	100 3.3/d	67	56	61	51	75	51	43	90 2.9/d
+ economy (keizai)	771 2.0/d	29 1.5/d	<b>114</b> <b>3.8/d</b>	<b>96</b> <b>3.1/d</b>	<b>88</b> <b>2.9/d</b>	<b>72</b> <b>2.3/d</b>	52 1.7/d	50	32	63	45	46	38	52 1.7/d
+ lifestyle (seikatsu)	741 1.9/d	<b>191</b> <b>9.5/d</b>	<b>139</b> <b>4.6/d</b>	<b>75</b> <b>2.4/d</b>	<b>75</b> <b>2.4/d</b>	40 1.3/d	30	30	18	24	35	34	22	49 1.6/d
+ tourism (kanko)	600 1.6/d	<b>62</b> <b>3.1/d</b>	<b>108</b> <b>3.6/d</b>	<b>74</b> <b>2.4/d</b>	<b>64</b> <b>2.1/d</b>	<b>52</b> <b>1.7/d</b>	34 1.1/d	30	31	32	34	25	23	35 1.1/d
+ policy (seisaku)	603 1.6/d	<b>43</b> <b>2.2/d</b>	<b>98</b> <b>3.3/d</b>	<b>73</b> <b>2.4/d</b>	<b>68</b> <b>2.3/d</b>	39 1.3/d	48 1.5/d	40	38	46	48	21	18	40 1.3/d

Note: n = total number of references per time period.

Source: *Tōdōnippō* Newspaper database; *Tōdōnippō* website.

As shown in Table 1, there are two broad trends that emerged. First of all, the crossover point at which references went from being above the average for the year-long period versus being below was predominantly July. What this indicates is that, as a news reference, the event was above its average trend for April, May, June and July, after which the number of references declined to be below the average. Interestingly, this is the point at which many of the special theme columns dedicated to the event introduced in the next section were begun. The second trend concerns the primary themes that were associated with the disaster, with a high frequency combination being associated with ‘aid’ (*shien*), at 4.5 references per day overall, followed by approximately equal associations with ‘recovery’ and ‘damage’ overall, with 3.9 references per day for ‘recovery’ versus 3.4 for ‘damage’. Naturally the levels for ‘aid’ and ‘damage’ were higher than ‘recovery’ during the period directly after the disaster itself (14 and 13 references/day versus 5.4 for March, with a similar pattern for April), after which ‘aid’ and ‘recovery’ were generally higher for each monthly period thereafter.

The crossover aspect of references to the disaster can also be seen in reference combinations of ‘disaster-plus-nuclear power.’ As shown in Table 2, references to nuclear power (*genpatsu and genshiryoku*) over the period from 2011 March 12 to 2012 January averaged 5.0 per day for the former and 2.7 for the latter, with the crossover point in September and July respectively. When both of the terms are used with reference to the disaster, the average over the research period is 1.7

and 0.7 references per day, with the crossover point in July in both cases. Looking at the aspect of uncertainty or anxiety about nuclear energy and policy related to nuclear energy, based on these key word combinations, the overall averages are generally around one reference per day, with the crossover from an above average level of references to a below average level of references seen in July in all cases. Finally, Table 2 also reveals that terminological combinations between the event and nuclear power and the nuclear power industry were much more common in the news carried in the *Tōdōnippō* over the period from April to August than associations between the event and the government, in all cases by at least a two-to-one margin.

Table 2 *Tōdōnippō* Newspaper: Nuclear Power Combinations

	2011 3.12 2012 1.31	3.12 3.30	4 Apr	5 May	6 Jun	7 Jul	8 Aug	9 Sep	10 Oct	11 Nov	12 Dec
<i>genpatsu</i> (nuclear power) only	<b>1538</b> <b>5.0/day</b>	115 <b>5.8/d</b>	182 <b>6.1/d</b>	141 <b>4.5/d</b>	157 <b>5.2/d</b>	225 <b>7.3/d</b>	159 <b>5.1/d</b>	125 4.2/d	112 3.6/d	118 3.9/d	132 4.3/d
Great East Japan Disaster + <i>genpatsu</i>	<b>509</b> <b>1.7/day</b>	<b>66</b> <b>3.3/d</b>	<b>87</b> <b>2.9/d</b>	<b>54</b> <b>1.7/d</b>	<b>58</b> <b>1.9/d</b>	50 1.6/d	39	32		32	33
disaster inclusion in mention (%)	33	<b>57</b>	<b>48</b>	<b>38</b>	<b>37</b>	22	25	26	21	27	25
<i>genshiryoku</i> (nuclear power) only	<b>840</b> <b>2.7/day</b>	<b>62</b> <b>3.1/d</b>	<b>96</b> <b>3.2/d</b>	<b>88</b> <b>2.9/d</b>	<b>115</b> <b>3.8/d</b>	<b>98</b> <b>3.2/d</b>	48 1.5/d	59 2.0/d	21 2.1/d	71 2.4/d	86 2.7/d
Great East Japan Disaster + <i>genshiryoku</i>	<b>207</b> <b>0.7/day</b>	<b>26</b> <b>1.3/d</b>	<b>41</b> <b>1.4/d</b>	<b>35</b> <b>1.2/d</b>	<b>35</b> <b>1.2/d</b>	17 0.5/d	9	7	7	8	14
disaster inclusion in mention (%)	25	<b>42</b>	<b>42</b>	<b>39</b>	<b>30</b>	17	19	12	11	11	16
<i>genpatsu</i> + <i>fuan</i> (anxiety)	<b>324</b> <b>1.2/day</b>	<b>34</b> <b>1.7/d</b>	<b>43</b> <b>1.4/d</b>	<b>26</b> <b>0.9/d</b>	<b>38</b> <b>1.2/d</b>	<b>46</b> <b>1.5/d</b>	28 0.9/d	21	18	23	31
<i>genpatsu</i> + <i>seisaku</i> (policy)	<b>361</b> <b>1.2/day</b>	12 0.6/d	<b>50</b> <b>1.7/d</b>	<b>46</b> <b>1.5/d</b>	<b>38</b> <b>1.3/d</b>	<b>48</b> <b>1.6/d</b>	27 0.9/d	29	26	25	36
<i>genshiryoku</i> + <i>fuan</i> (anxiety)	<b>204</b> <b>0.7/day</b>	<b>16</b> <b>0.8/d</b>	<b>29</b> <b>1.0/d</b>	<b>21</b> <b>0.7/d</b>	<b>32</b> <b>1.1/d</b>	<b>28</b> <b>0.9/d</b>	13 0.4/d	11	11	16	16
<i>genshiryoku</i> + <i>seisaku</i> (policy)	<b>349</b> <b>1.1/day</b>	<b>23</b> <b>1.2/d</b>	<b>54</b> <b>1.8/d</b>	<b>47</b> <b>1.6/d</b>	<b>43</b> <b>1.4/d</b>	<b>35</b> <b>1.2/d</b>	20 0.6/d	27	26	15	36
Great East Japan Disaster +	2011 3.12~9.15										
+ Nuclear Power Industry	539; 2.8/day	66; 3.5/d	87; 2.9/d	54; 1.7/d	58; 1.9/d	50; 1.6/d	39; 1.3/d				
+ Government	158; 0.8/day	31; 1.6/d	37; 1.2/d	29 0.9/d	32 1.1/d	12 0.4/d	8 0.3/d				

Note: n = total number of references per time period.

Source: *Tōdōnippō* Newspaper database; *Tōdōnippō* website.

## Framing: The Three Newspapers

As reported by Rausch (2012a), the *Tōōnippō* presented a case of narrative framing in a series of special newspaper sections titled '*Tohoku Hatsu (Take Off) — Lively Japan Meeting*'. The first two '*Six Months After*' representations reflected first of all, descriptions of the disaster, followed by a focus on the level of destruction affecting industry and fisheries. This was followed by reporting on several locations throughout the larger Tohoku Region, but with a focus exclusively on local residents' initial response from a 'human-interest,' largely a 'continuity' narrative. The next three '*Tohoku Hatsu — Lively Japan Meeting*' representations revealed a transition from recognition of the disaster to the recovery efforts, again based on residents' stories in the six Tohoku prefectures. This is followed by a focus on the volunteer support that had been brought to the disaster areas, countered by the reality of the recovery efforts and the slow progress, all along with accompanying human-interest articles that were upbeat, highlighting interviewees working to restart businesses or support the recovery of industries.

As for the disaster-related columns of the three newspapers, the *Fukushima Minpō* of Fukushima Prefecture, the *Kahoku Shimpō* of Miyagi Prefecture, and the *Tōōnippō* of Aomori Prefecture, the framing that emerged understandably presented three very different views of the disaster and both its implications and the way forward. In the case of the *Fukushima Minpō*, based on the newspaper homepage and as shown in Table 3, there are 18 column titles related to the disaster. Of the 18, eight focused specifically on the nuclear reactor failure and the aftermath directly as evidenced by the column title, with these accounting numerically for just over 70 percent of the total number of columns. However, this 70 percent portion reflected one column comprising just under 90 percent of the columns on the reactor (*The Accident at the Fukushima First Plant*; 1387 columns).

Table 3 *Fukushima Minpō* Columns

Column title	Number of columns
3.11: One Year On	39
3.11 Disaster: Cross Section	209
3.11 Disaster: Investigation	24
3.11 Disaster: Fukushima and Nuclear Power	76
You Won't be Forgotten	16
The Chernobyl Nuclear Accident: Lessons for Fukushima	5
Radiation: Q&A about Radiation and Living Things	19
<b><u>The Accident at the Fukushima First Plant</u></b>	<b>1387</b>
Reporting from the Disaster Area	15
Column: Life Now	220
Column: Recovery 2012	44
Column: The Frontlines of the Nuclear Accident	2
Column: Nuclear Power and the Great Separation	41
Column: The Collapse of Nuclear Power	15
Ten Months after the Disaster	11
Nine Months after the Disaster	21
Eight Months after the Disaster	24
Seven Months after the Disaster	30
Number of columns: 18	Total columns: 2198

Note: as of 16 April 2012

Source: *Fukushima Minpō* website, undated.

For the *Kahoku Shimpō* of Miyagi Prefecture, while the number of column titles mirrored the figures for the *Fukushima Minpō*, the number of actual columns was both fewer while also being more evenly spread, which is to say there was no single theme that dominated as *The Accident at the Fukushima First Plant* column did for the Fukushima case. As such, the dominant framing for the *Kahoku Shimpō* was more dispersed, with the largest theme by percentage, focusing on testimonies of the event (*Testimony – Focus: The 3.11 Disaster*), accounting for approximately one quarter of the total. Another quarter of the total number of columns could be categorized as focusing on recovery, but this percentage block was comprised of ten different column titles. Another characteristic of two of the *Kahoku Shimpō* columns was the degree to which a general theme (*Course of Recovery, Living from now with the Disaster*) was subdivided into specific sub-themes, five in the former case and eleven in the later. A final element was the level of references to individuals, 40 in the case of the *Hometown Recovery* column, in the form of interviews, and cities and towns, 71 in the case of the *Course of Recovery* column.

Table 4 *Kahoku Shimpō* Columns

Column title	Theme	Column numbers
<u>Testimony – Focus: The 3.11 Disaster</u>	event	<b>230</b>
Connect: Step Forward	recovery	17 complete
Rebuild Sendai: Human Design	recovery	16
<u>Course of Recovery</u>		
1 <sup>st</sup> series: damaged towns, 3-months after	recovery	14
2 <sup>nd</sup> series: from local governments	recovery	10
3 <sup>rd</sup> series: discussions about recovery plans	recovery	14
4 <sup>th</sup> series: inspections and recovery plans	recovery	19
5 <sup>th</sup> series: damaged towns, 1-year after	recovery	15
		total 72 complete
<u>Living from now with the Disaster</u>		
1 <sup>st</sup> series: jobs	recovery	9
2 <sup>nd</sup> series: orphans	recovery	7
3 <sup>rd</sup> series: temporary living	recovery	10
4 <sup>th</sup> series: various ‘homes’	recovery	8
5 <sup>th</sup> series: heart and spirit	recovery	5
6 <sup>th</sup> series: strenght	recovery	10
7 <sup>th</sup> series: gaps	recovery	7
8 <sup>th</sup> series: region	recovery	6
9 <sup>th</sup> series: crossroads	recovery	7
10 <sup>th</sup> series: 18 years old, spring	recovery	5
11 <sup>th</sup> series: entrusting to	recovery	5
		total 79 complete
The Disaster in Sendai, Pickup from Citizens: That Day	event	32 complete
3.11 Memories: You won’t be forgotten	event	34
Rebuilding: Tidings from the Disaster Area	recovery	60
Support	event	102
The Tsunami: Therapeutic Drawings	event	75
Beginning the Work: Recovery Plan	recovery	5 complete
Disaster Progress Report: Half-year on	recovery	16 complete
From Now: Disaster Area Support	recovery	13 complete
Recovery Plan Disaster Area	recovery	5 complete
Perspectives on the Recovery	recovery	6 complete
Memories of the Disaster	event	26 complete
Documentary of the Disaster	event	22 complete
Volunteers and the Disaster	recovery	28 complete
Hometown Recovery: Hearing from the Mayor	recovery	12 complete
Hearing from Supporters		29 complete
Refugee Facilities Now	event	70
Number of columns: 20		Total columns: 949

Note: as of 27 April 2012

Source: *Kahoku Shimpō* website, undated.

Finally, in the case of the *Tōōnippō* of Aomori Prefecture, while there very few columns focusing specifically on the disaster, one did focus on the Fukushima nuclear power facility disaster. According to the *Tōōnippō* website, there were just two columns related to the 3.11 disaster: *Thinking of Aomori and 3.11: Views of Heart and Life* (14 columns) and *3.11 Lessons for Hachinohe* (6 columns). However, there was a more extensive column dedicated to the nuclear disaster: *Lessons from Fukushima*. The column consisted of the six sections as shown in Table 5. What emerges from analysis of the contents of these six sections was a picture of a column transitioning from the ‘reality’ of the catastrophe, to framings of ‘policy,’ ‘technology’ and ‘governance,’ a highly analytical and forward-looking treatment of the event.

Table 5: *Tōōnippō* ‘Lessons from Fukushima’ Columns

Section title	Thematic frame	Columns
#1 Going to the Site	Reality	1~5
#2 TEPCO Management Regrets	Policy	1~5
#3 Nuclear Energy that can Withstand Tsunami	Technology	1~3
#4 Objections of the Neighbors	Local governance	1~8
#5 Asking about the Safety of Prefectural Nuclear Facilities	Technology/policy	1~7
#6 Geological Fault Problem	Technology/policy	1~3
		31

Source: *Tōōnippō* website, undated.

## Conclusions

The research herein has looked at local newspaper coverage over the one-year period following the Great East Japan Earthquake of March 2011, tracking the keyword trends and framing in special theme columns in three Tohoku newspapers. The findings show overall an early balance in references between a focus on aid and damage giving way to a longer-term focus on aid and recovery. In terms of the nuclear facility accident, there was a balance between frequency of references to anxiety and policy on the one hand, and a focus on the nuclear power industry over the government on the other. Interestingly, any association of the earthquake and tsunami event with the nuclear disaster was overshadowed by the stronger and longer focus on the nuclear power issue alone. In addition, references to the events overall seemed to have a crossover from being above average over the research period to below average in July 2011.

The framing of columns in the three local newspapers reflect, understandably, the local issue focus that emerged out of the event – in the case of Miyagi, that issue

focus being the tsunami and subsequent social disruption and recovery, whereas for Fukushima, the issue focus was the nuclear accident. However, the Aomori *Tōōnippō* case presents a framing of the nuclear disaster specifically in a highly analytical and forward-looking manner, focusing on the potential of technology and the necessity of policy that can accommodate the reality of geologic science and local governance. On this basis, the research raises several questions as to the implications of post-disaster media reporting trends that relate to media communication research, particularly as research that is multi-dimensional and long-term.

Specifically, is this portrayal of the local newspaper in response to a disaster indicative merely of a newspaper deemed functional in a social utility sense, as a medium that reflects and reveals the inevitable, and to some degree predictable, progression of reporting that defines a post-disaster period—from immediate post-event attention to near-term recovery before, eventually, to a decrease in frequency of references to the event? The present research provides a year-long baseline for such comparative timelines. Alternatively, do the narratives that emerge out of this reporting contribute to an objective and truthful understanding of the events, in an impartial manner and with appropriate neutrality, contrasting the misrepresentations described by Svitak (2010) or any patterns of countering over-sentimentalization of the event? Or rather, does the news content, together with the narratives that are created, reflect an agenda setting function, in presenting, as Ichise (2011) asserted, underlying national characteristics deemed desirable by elites, which are promoted and reinforced through the media using ‘coined’ terminology, regardless of whether such reactions by affected citizenry would emerge spontaneously in response to such events or even whether such themes are ultimately beneficial in the response to the disaster? Further, does this agenda setting contribute to public anxiety on the basis of misinformation or misunderstanding and media-hype amplification, as pointed out by Vasterman, Yzermans, and Dirkzwager (2005) or rather to clear understanding and a sense of recovery, connection and policy, as seems to be the case herein? In this sense, does the reporting reveal a country’s political, social, cultural and/or technical bias, as outlined by Miles and Morse (2007), and in so doing point the way not only to recovery, an important part of the medium-term window of disaster reporting, but also to public policy formulation that is well informed and responsive to social sentiment, a possibility that is highlighted by Vultee and Wilkins (2004)?

The analysis of trend and framing seen in the three local newspapers seems to point to bits and pieces of all that is outlined above, but in a manner that is both balanced in overall view and grounded against extremism. The trend towards decline in the frequency of ‘mentions’ that the event receives as news seems countered by a long-term basis for new policy development. This is seen most clearly in the *Tōōnippō*, representative of an area not directly affected by

the events, rather than the other two papers, where ongoing focus on the events is roughly equal to the focus on recovery. The mechanism that allows for recognition of this trend is the shift from the event being covered as ‘news’ to the event being covered in the special theme columns. This view mirrors Rausch’s (2011, 2012b) assertions regarding the function of long-running special theme columns in ‘revitalization journalism,’ an analysis that points to columns as the basis of local identity creation and economic revitalization as a newspaper function for its host locale. Notwithstanding the three different views presented by the columns of the three different newspapers and the fact that the *Tōdōnippō* newspaper was not in the disaster areas directly, this picture of a local newspaper in its function regarding disaster coverage depicts a social institution that is meaningful in its information function, stable in its resistance to hype, and valuable in that it tells stories that contribute to the rebuilding of communities while also providing for dissemination of content relative to informed policy debates. And therein, one hopes, lies the meaning of a locally meaningful local newspaper.

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