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# NHK's Disaster Coverage and Public Value from Below: Analyzing the TV Coverage of the Great East Japan Disaster

By Takanobu TANAKA\*

## NHK's Disaster Reporting and Public Value

As the sole public broadcaster of Japan where earthquakes, volcanic eruptions, typhoons, and other natural disasters are all too common, NHK is expected to play a twofold role in emergency situations. In its usual capacity as a source of information, NHK reports on the damage caused and the state of the disaster-affected area. But it is also regarded as part of the infrastructure of disaster prevention and crisis management. This perception is stipulated in the Disaster Countermeasures Basic Act. By the law NHK is designated as 'public institution' to contribute, through its broadcast, to the prevention of the disaster. NHK must broadcast warnings of tsunami, or other dangerous weather conditions in order to promote precautionary measures and the mitigation of damage.

The Great East Japan Disaster, which struck the Tohoku region (Northern part of the main island of Japan) and the surrounding wide area on March 11, 2011 left nearly 20,000 people dead or missing. It was the largest natural catastrophe in Japan since the Great Kanto Earthquake of 1923 which devastated the Tokyo metropolitan area and prompted the establishment of the first radio station, NHK, two years later.

The earthquake of magnitude 9.0 occurred at 14:46 p.m. and "Earthquake Early Warning" was broadcast on NHK's all eight TV and radio channels. As in table 1, NHK broadcast the Early Warning in less than a minute after the occurrence of the earthquake. Then in less than two minutes, NHK cut out from the regular programming and devoted all its capacity to disaster reporting and started broadcasting information about the tsunami and earthquake and continued its around-the-clock broadcast for the first week as for the main channels of terrestrial and satellite TV and the radio.

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Table 1 Time line of the eNHK coverage during the first 1hour of the broadcast.

14:46	Earthquake occurred off the coast of Tohoku region of Japan
14:46:50	NHK broadcast Earthquake Early Warning System on all 8 channels
14:48:18	NHK switched off all the regular programming to disaster-related news
14:49	Major Tsunami Warning was issued and NHK focused on calling for evacuation
15:03	Live footage of Fire in Tokyo was aired on NHK and commercial stations
15:14	NHK cameras captured the arrival of tsunami along the coast of Tohoku region.
15:49	NHK helicopter started sending the live footage of massive tsunami in the residential areas

PSB serves a number of defined public purposes. For NHK, disaster reporting has been and will be one of the core missions. It started so partly due to the political request. In the early years after World War II, natural disasters that claimed thousands of lives were almost annual events. In the process of re-building the country and post-war rapid economic growth, the disaster management system to mitigate the damage became indispensable. Then in 1961, after Ise-bay typhoon which killed more than 5,000 people, the Japanese government established the Disaster Countermeasures Basic Act and NHK was designated to be public institution for dissemination of prompt and accurate information. Historically NHK's characteristics show that it was created more as institution to operate with the government, dedicate to social progress. So the dominating attitude of NHK in the past was more or less 'paternalistic' just as in European PSB, having played a vital part of the modernization of the country.

However, NHK's current disaster reporting goes far beyond the request from the government. NHK gathers and provides information that meets the needs of the people in the disaster struck areas such as rescue whereabouts of missing persons, lifeline recovery information, food, water and medical supplies and other wide variety of vital information for survivors.

PSB companies are mandated to spend the money they receive to fund their services. Certainly the Japanese public expects NHK to prepare for the disaster reporting even though it is costly to maintain 14 helicopters to cover all over Japan and 460 remote-controlled cameras along the coast line of the country and to train its reporters and technical staff to be able to cope with emergency situations.

On March 11, 2011, obviously NHK was the best prepared and equipped to handle the emergency situation from the lessons we have learned from the numerous experiences of the past disasters. However, it should be underlined that commercial networks also have many experiences and their own know-how of disaster coverage. Most of the commercial networks skipped CM for a couple of

days after the occurrence of the disaster and broadcast the related news 24 hours a day non-stop. Commercial networks in Japan, from its history of almost 60 years, have achieved certain level of quality in disaster reporting.

The author and his colleague conducted minute by minute content analysis of NHK and other commercial broadcasters to see the differences and similarities in their disaster coverage. The intention of it is not to introduce NHK's disaster reporting as a model for commercial networks to follow or to insist that NHK's is higher quality. NHK is aware that not all of its coverage was effective or helpful and has been working out plans for future improvement. As many media scholars point out, quality assessment is arbitrary. There are numerous approaches to quality assessment, among which there are some contradictory ideas. As McQuail's media performance studies focuses on social responsibility of media and its approach 'equates quality with characteristics of media content and media structure in relation to norms and values, under the rubric of the public interests' (Ala-Fossi 2005), the analysis focuses on social responsibility of public broadcasters and commercial networks by observing the differences and similarities in the disaster reporting.

With those backgrounds in mind, the author introduces some of the results of content analysis of the reporting of NHK and major commercial networks of 3.11 disasters. For this report, the author has mainly two questions in mind;

- 1) Are there any conspicuous differences and similarities in the contents of disaster reporting between NHK in pursuit of public interest and the commercial networks which are basically run on market drive?
- 2) Are there any signs that show the social responsibility of NHK's disaster reporting and its paternalistic characteristics have been changing? If so, how and which direction is the change heading?

## Methodology

The author and his colleague analyzed disaster broadcast by NHK General TV, its main TV channel and two of the five key commercial networks based in Tokyo, Nippon Television and Fuji Television during the first 72 hours after the occurrence of the earthquake. That is, from 2:46 p.m. on March 11 to 2:59 p.m. on March 14. Nippon Television is the Japan's first commercial Television station established in 1953 and Fuji Television is the station that got the second highest average rating, following NHK, for the first three days after the earthquake. Since NHK and the commercial networks continued its disaster coverage non-stop, we decided to conduct content analysis by random sampling. We recorded the images of TV screens and the sounds at the 22<sup>nd</sup> second of every minute. The 22<sup>nd</sup> second

is a randomly chosen point. In other words, we divide objects of continuous flow of time in a unit of one second, meaning we are collecting sample data at intervals of one-sixtieth of a minute, and add up the units, based on assumption that they can represent a whole picture.

## Findings

During the first 24 hours, the broadcasters reported on tsunami most prominently both in images and sounds. Then, information on tsunami gradually decreased. During the 24-48 hours, the nuclear power plant became heavily covered. All through the 72 hours, the broadcasters used more than ten percent of their airtime to report on “Information on sufferers and relief activities.”

The detailed results of our analysis are reported in ‘hoso kenkyu to chousa’ (Tanaka, T. and Hara, Y. 2011, 2012). Thus here in this report, the author would like to introduce several results of our content analysis for discussion, which quite typically showed the tendencies and the stances toward disaster reporting of NHK and the commercial networks.

### “Quiet Port in Tohoku” or “Fire in Tokyo”

One of the most striking differences was observed in the first one hour after the disaster in their focus of the coverage. NHK used 70% of its airtime for tsunami and 10% for earthquake and 11% for fire in Tokyo, whereas Fuji Television spent 28% of airtime for tsunami, 29% for earthquake and 19% for fire in Tokyo. When we check the areas covered, 64% of NHK reporting was about Tohoku region which was closed to the epicenter of the earthquake and hit severely by the tsunami and whereas 20% of NHK’s reporting was about Tokyo. In contrast Fuji Television covered only 26% about Tohoku region and 35% about Tokyo.

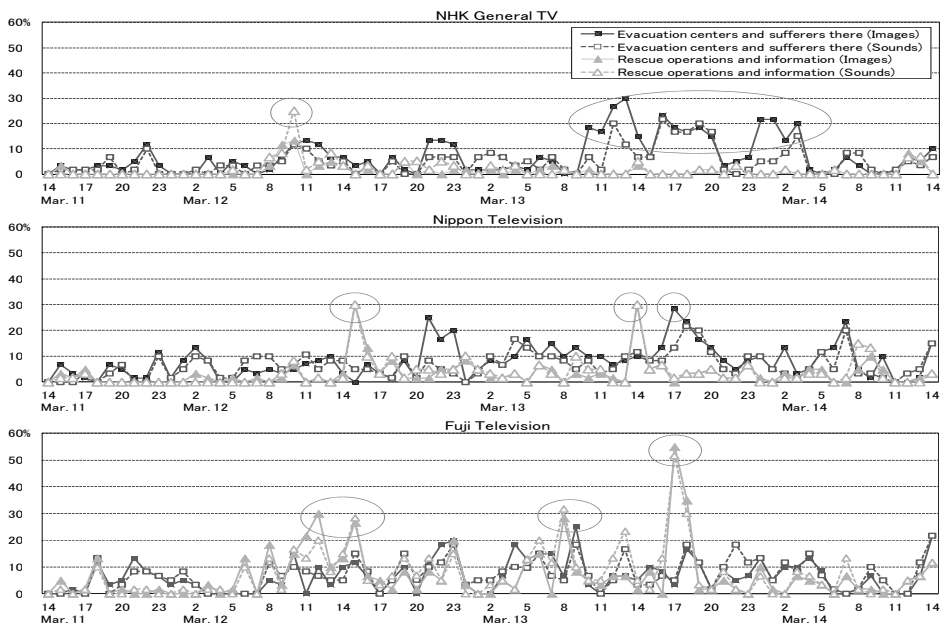
Especially, for the first 30 minutes after the quake, broadcast of NHK and commercial networks showed the clear contrast. During the period of time, no major tsunami has arrived yet and we were not sure if tsunami was actually approaching. Still, NHK was showing the live footage of ports in Tohoku region, to observe the changing sea level, calling for immediate evacuation. NHK put utmost focus on tsunami, whereas the commercial networks spent as much airtime for reporting about the earthquake with lots of video footage of the heavy shaking as the tsunami warning. There was another difference. About 15 minutes after the quake, helicopters and remote-controlled cameras caught a building on fire in Tokyo. NHK reported the fire rather briefly then turned back to port in Tohoku, as soon as it confirmed that there was no casualty in the fire. On the other hand, the commercial networks chose to report more on fire in Tokyo. After NHK broadcast

live footage from helicopter, showing massive tsunami hitting farmland and residential areas, the focus of all broadcasters was turned to tsunami.

### The Networks Divided over “Rescue Operations”

Another difference is the kind of information delivered for the first 72 hours after the disaster. Figure 1 shows how the three networks reported on sufferers and rescue operations. We examined what kinds of information the three networks delivered during the time frames when they are marked high on the line graphs with large circles. This is to determine the characteristics of news reports by each of the three networks.

Figure 1 Ratio of evacuation centers and rescue operations



At around 10:00 a.m. on March 12, NHK’s reports on “rescue operations” sharply increased. This is because it reported live on how people stranded on the roof of a building were rescued by helicopter in disaster struck area. But soon, NHK shifted its focus from “rescue operations” to “evacuation centers and sufferers there.” This is especially so on March 13. Reporters repeatedly broadcast live how sufferers were living at evacuation centers and what kinds of supplies they needed most. This was because NHK was able to set up a system of broadcasting

live from disaster-stricken areas by dispatching satellite relay vehicles.

Nippon Television increased its coverage of “rescue operations” on the afternoon of March 12. That is because it reported live on how people left on the roof of a building were rescued by helicopter. Also on the evening of March 13, it reported live and by video tape how rescuers were saving people from the roof of a building. Nippon Television increased its reports on sufferers on the night of March 12, by broadcasting human stories of survivors for a relatively long time, introducing how they were rescued. Its coverage on evacuation centers increased on the evening of March 13, as it aired a video-taped report in which a reporter accompanied some evacuees going shopping, to find out what supplies were needed most.

Fuji Television spent the most airtime among broadcasters on rescue operations during the entire 72 hours. Most of its reports were live coverage of rescue operations conducted by helicopter. On the morning of March 12, Fuji Television broadcast a set of live relays of rescue operations in several different locations. In addition to comments by reporters onboard the helicopters, newscasters and commentators in the news studio described the ongoing rescue operations, explaining about the difficulty of rescuing people while helicopters were hovering and such. Fuji television reported on the rescue operation repeatedly live or by video. And even on the third day, the evening of March 13, it devoted more than half the airtime to “rescue operation.”

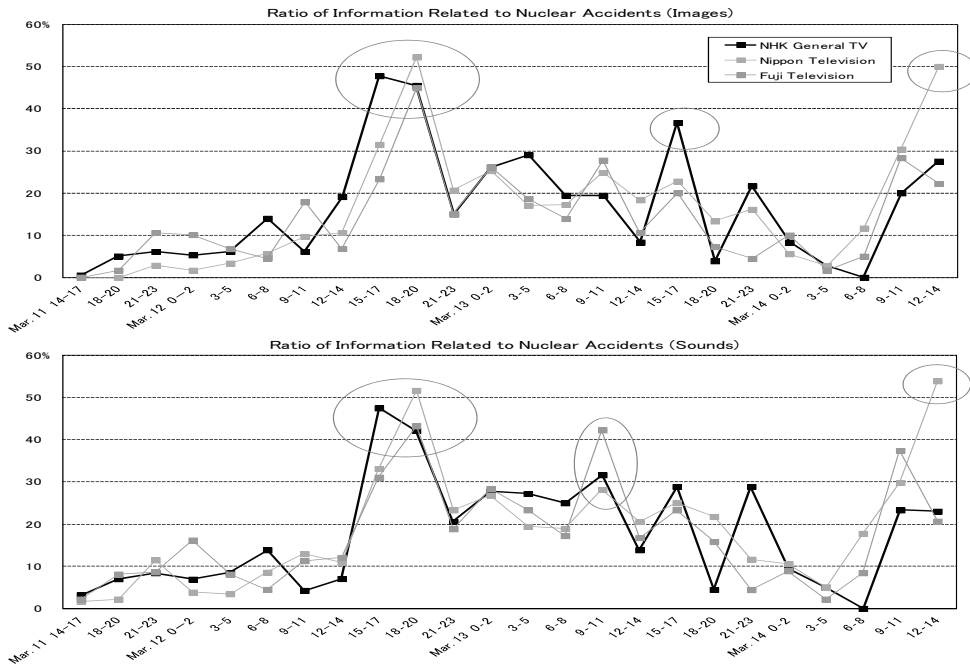
### **Similarities in Nuclear Accidents Reporting**

On the other hand, there is one similarity that stands out. That is the nuclear accidents reporting. Figure 2 shows changes in the volumes of news reports on the nuclear accident along with the time. It is to be noted that the three networks show similar timings in increasing and decreasing its coverage of the accident.

The peaks in the line graphs, which are marked with large circles, means some problems were reported. The first peak comes when a hydrogen explosion occurred at Unit 1 of Fukushima Daiichi Nuclear Power Station. The second peak came when the networks acquired information on the possible hydrogen explosion at Unit 3 and the third peak came when a hydrogen explosion actually occurred at 11:01 on March 14.

So what are the factors behind the similarity in line graphs that indicate rises or falls in the volumes of news on the nuclear accident among the networks?

Figure 2 Ratio of reports on nuclear accidents



The fact that news reports on the nuclear accident increased at the same time at the three networks means just one thing. The networks had to depend on the same news sources at the same time, that is, news conferences given by the government, Tokyo Electric Power Company, or such.

Then, why did news reports on this issue decreased as sharply at the three networks at the same time, just as they increased as sharply together?

The volumes of news reports on the explosion at Unit 1 on March 12 remained high until 21:59. The volumes dropped at 22:00 at the three networks. We infer that this has something to do with Chief Cabinet Secretary Edano's statement in a news conference at 20:41. He acknowledged, for the first time, that there was a hydrogen explosion. Then, he said the explosion had caused no damage to Unit 1's containment vessel, in which the nuclear reactor sits. From shortly before noon to afternoon on March 13, the volumes of news reports on the nuclear accident decreased, when the government said there would be no fear of hydrogen explosion at Unit 3.

After the hydrogen explosion at Unit 3 on the morning of March 14, Nippon Television increased its news reports on the explosion. It had the exclusive footage of the moment of the explosion. Fuji Television sharply decreased news reports on the explosion at around noon. NHK also tended to decrease them gradually. In its



news program at noon, NHK reported, as a statement by Chief Cabinet Secretary Edano, that after the hydrogen explosion, “the integrity of the containment vessel is maintained, and that the possibility is low that a large volume of radioactive materials has been scattered in the air”. Behind the decreases of news reports on the nuclear accident was the tendency that news media accepted information given by the government, playing down the risk of explosion without doubting it. This arguably delayed the media’s awareness of how serious the situations of nuclear accidents actually were.

### Limited Lifeline Information on TV

Table 2 shows how much the three broadcasters reported on information on lifelines during the first 72 hours. Here, the lifeline information refers to “information on blackouts”, “transport information,” “information on water and gas supplies,” “information on telephone and other communications services,” and “information on hospitals and medical services.”

Table 2 Ratios of Kinds of Lifeline Information Reported

	NHK TV		Nippon TV		Fuji TV	
	Images	Sounds	Images	Sounds	Images	Sounds
Areas under power blackouts and information on blackouts	0.9%	1.8%	0.5%	1.8%	0.1%	0.9%
Transport information	5.4	7.6	2.3	4.0	2.2	3.8
Information on water and gas supplies	0.3	1.1	0.2	0.7	0.0	0.5
Information on telephone and other communications services	0.4	1.0	0.1	0.4	0.1	0.3
Information on hospitals and medical services	0.5	0.8	0.3	0.2	0.1	0.2

100%=Entire 72 hours

The ratios of airtime given to lifeline information during the entire 72 hours were very small. Among the three broadcasters, NHK aired relatively more information on various kinds of lifelines than the other two. Looking into the contents of lifeline information, we can see that transport information was covered most. NHK gave 7.6% of its airtime in sounds to this information, Nippon Television and Fuji Television, about 4 %. Next, the three networks covered information on power blackouts. They also reported on water and gas supplies, telephone and other communications services, and hospitals and medical services. However, the ratios of their airtime for these areas were all limited.

Great East Japan disaster was a broad-scale, complex disaster that hit many people in wide areas in many different ways. It would be safe to say that this disaster is beyond the scope of general broadcasting that is possible for nationwide networks based in Tokyo. It is expected that to offer information fit to diversified needs of people, L-shaped space on TV screen, radio and other forms of media have their own specific roles to play. The internet is expected to be an important part of this picture, enabling individuals to search the kinds of information they need.

## Discussion

### Differences and Similarities

The results of the content analysis showed some distinct differences between NHK and the commercial networks. Two examples were in their choices between “waiting for tsunami” and “fire in Tokyo” and between “evacuation centers” and “rescue operation”. What’s behind the difference between public and commercial broadcasters? What was the rationale of NHK reporting tsunami, instead of spending much time on fire in Tokyo and of commercial networks reporting more about fire?

NHK is mandated to disaster prevention. In disaster reporting, NHK needs to consider the two options; news coverage which is mainly about damage reporting and information on disaster prevention. In what proportions and measured by which criteria we could say they are well balanced depends on contextual realities. NHK accounts for their choice that the bottom line of NHK’s disaster coverage is to save lives and protect the property of the people. On the other hand, commercial networks can focus on news coverage if they get higher rating for that. The target audiences were also different. NHK was mainly calling for evacuation to the people along the coast line of Tohoku region, even though people all over Japan were watching and listening to NHK, whereas commercial networks, trying to get as large audience as possible, understandably chose to report the damage in Tokyo, the most populous capital city of Japan.

What about the choice between “evacuation camps” and “rescue operation”? NHK’s decision was based on news value. NHK regarded voices of survivors in evacuation camps as having more news value than rescue operation, especially on the third day when the broadcasting satellite trucks finally reached the evacuation centers enabling the live broadcast on the ground. NHK regards the responsibility to help the sufferers in the disaster struck areas so that they survive. Behind the decision of the commercial networks can be speculated to be a consideration that reporting on rescue operations can bring higher ratings. Indeed, Fuji Television received the second highest average ratings for the first 3 days after the disaster

following NHK, and Nippon Television was the third. For Commercial networks, ratings are tried and true measures for evaluation of their programmes. These are also familiar tools for the measurement of audience satisfaction. Even though during the first 3 days, commercial networks skipped all the CMs, there must be the affect of organizational cultures and professional subculture connected to each TV station.

### **Audience Dissatisfaction with TV and Possibility of wider usage of Social Media**

Our content analysis shows that reports on the nuclear accident at Fukushima Daiichi Nuclear Power Station by the three networks showed similar timings in increasing and decreasing its coverage of the accident. Behind the overall tendency lies the fact that news media had to accept information given by the government. NHK knew that the public needed and wanted more information and NHK reporters commented repeatedly that the government and Tokyo Electric Power Company should provide residents and media with more essential information, signifying the irritation that all the news organizations were feeling . A limited number of sources were giving NHK and the commercial networks only scanty and insufficient information. Because of that, NHK received criticism about its nuclear reporting. Basically the criticism was based on the notion that NHK was a part of the government's plot to play down and hide the actual danger of the accidents.

However, there were different reactions to the NHK's coverage on nuclear accidents on social media. NHK news has three accounts on twitter. '@nhk\_news', '@nhk\_kabun' (kabun is abbreviation of kagakubunka-bu, meaning science and culture news department), and '@nhk\_seikatsu' (seikatsu is abbreviation of seikatsujyoho, meaning lifeline information). Among these, '@nhk\_kabun' took care of disseminating information on the nuclear accidents. At first NHK tweeted the short versions of TV news about what's going on and also some tips for residents in Fukushima such as "to avoid radiation exposure, change clothes and wash your hands and face when coming home from outside". Then some questions started to pour in to the NHK account such as "no immediate danger means there will be in the future?" "I need detailed explanation of the current radiation level of the Fukushima power plant". Then NHK reporters tweeted answers to those questions. Those question and answer sessions received lots of positive reactions from the followers.

Before the 3.11 disaster, the number of followers of NHK accounts was rather small, less than 5,000 for each account because NHK used twitter mainly for program propaganda, not for news reporting. Then at the end of April the number of followers of the three accounts jumped up to nearly 500,000. Especially, '@nhk\_kabun', which started to disseminate information about the nuclear accidents had 1.6 million page views a month, up from about 50 thousand a month previously.

NHK science reporters were mainly caught up with TV and radio reporting and could not spend enough time and energy for twitters but felt the importance and necessity of using the social media will surely increase in the future disasters.

According to the survey NHK conducted in the Tohoku region, the information that people needed but could not get from NHK TV was on lifelines such as foods, water or gasoline supplies and electricity or transportation recovery. As to information on lifelines, NHK made a point of periodically reporting on it in an organized way, following news reports related to the disaster. However, a broad-scale, complex disaster affecting wide areas in many different ways, TV alone cannot meet the diversified needs of people. The internet is expected to play an important part as to enabling individuals to search the kinds of information they need. NHK was slow to realize this demand and it was only 3 weeks after the disaster that it set up the search function on its website. NHK will improve its system of providing lifeline information on broadcast, Internet and mobile phones to meet the needs and wants of the public.

### **Human Security: Public Value from Below**

The move from PSB to PSM has not been smooth for NHK. There is some legal restriction for NHK to expand its activity fully on the Internet. However soon after the occurrence of the earthquake, one high school student began to live stream the NHK's TV coverage on U-stream, which is an illegal act. The U-stream called NHK to ask whether they should shut it down. NHK decided to let them continue the live streaming without getting permission at first from the government as it was supposed to. NHK's cooperation with Google also went smoothly to use their Person Finder function for setting up the search system to find missing persons in the disaster struck areas. Providing vital information at the time of disaster on all the media available, including Internet, caused no complaint or criticism at all. For the purpose of saving lives, which is the ultimate public value, everything else becomes secondary.

Here the author would like to use the concept of 'human security' as public value. Unlike security of a nation, the concept of 'human security', first appeared in the UNDP 1994 Human Development report, provides people-centered perspective. It is neither based on interests of a national government nor market fundamentalism. The author sees the analogy between human security and PSM. Traditionally PSB's functions were based on the framework of a nation and paternalism was the dominating attitude of PSB towards its audiences until the era of deregulation in the 1980s (Jauert, P. and Lowe, G.F. 2005). In the past, the public values provided by PSB were coming from above. While we are observing the decline of the national public and fragmentation of audiences, we need to pursue the public value from below. Human security is everybody's interest and collective

needs of the public. The author argues, though it might be difficult to generalize, that ‘human security’ is one important element of public value and one key area where PSM can find valued contents.

## Conclusion

The research work introduced NHK’s coverage of the Great East Japan Disaster in March, 2011 in order to examine some of the challenges for Public Service Media in the forces of commercialization and digitalization. On March 11, 2011, the responsibility for covering the unfolding disaster fell to the sole public broadcaster of Japan. NHK had a critical role to play in responding to the crisis; the public expected it to provide prompt, accurate, and reliable information to save lives and protect people’s property. Value of a public broadcaster is tested in an emergency situation such as natural disasters.

Findings by the content analysis showed some clear contrasts between NHK and the commercial TV stations. The commercial broadcasters had tendency of reporting the incidents with high-impact images such as fire or rescue operation by helicopter, whereas NHK focused more on keeping the public informed about safety and vital public services such as tsunami warning or information about evacuation sites, food and water supply, medical facilities.

The characteristics of media content depend in relation to set of values PSM or commercial TV companies have and the quality of media output is a composite of several different needs and wants of the people. NHK has a role to play as part of the country’s disaster management system to save the lives and property of the people. The commercial TV stations operate primarily to generate economic profit, which is a strong internal motive, shaping organizational culture.

The disaster boosted the utilization of social Media. Previously, NHK’s move from traditional broadcast to digital services has been rather slow. However, soon after the occurrence of the disaster, NHK set up web site for disaster reporting and used the twitter to provide updates, including the situation at the nuclear power plant. It also collaborated with Google’s Person Finder, so people could do on-line searching for their missing loved ones. Although Japan’s broadcasting law does not allow NHK to simulcast programs online, an exception was made for broadcasts of emergency news on live streaming sites such as U-Stream and You-Tube. All of those active uses of social media indicate that people are no longer satisfied with the traditional broadcast alone. In the broad-scale and complex disaster of 3.11, NHK was required to serve the public in all the astonishing variety and complexity. The traditional paternalistic ‘public value from above’ does not suffice to meet the needs and wants of the public. The disaster reporting is a vital social responsibility and a valued role for PSM. Certainly it has been so since the establishment of NHK but the experiences of disaster reporting of 3.11 imply that the meaning of ‘public’

has been changing. The author would argue that ‘public value from below’ is a direction the change is heading.

The topics concerning ‘human security’, including disasters, are valued contents for PSM. Unlike security of a nation, the Great East Japan Disaster, or massive flood in Thailand in 2011, or other numerous cases in the world have made all too clear that natural disasters can have astoundingly far-reaching consequences for the security of individuals and communities. Asian region in particular faces frequent occurrence of disasters. Disaster reporting is one of the key strength of public service media to be relevant.

In this era of globalization and digitalization, conditions for PSB are drastically different when compared to the past. Paternalism of PSB, helping shape a national identity and frames of reference, has given way to diversified society. Cultural cohesion is increasingly hampered by social fragmentation. When discussing what the public service means today and how it should be mandated for updating the public service remit, the changing attitude of NHK’s disaster reporting gives some insight into the direction PSM should be heading for.

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