

Insights into the Coverage of the Fukushima Nuclear Crisis in Japan's English-Language Newspapers

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The Asian Conference on Media & Mass Communication 2015
Official Conference Proceedings

Abstract

This paper presents the preliminary findings of a study into the reporting of the 2011 Fukushima nuclear crisis in Japan's two major English-language newspapers. Coverage in the print editions of *The Japan Times* and *The Daily Yomiuri* (now *The Japan News*) between 11 March and 12 May 2011 was examined to determine, primarily, whether it could be said to have been alarming, reassuring, or relatively balanced and neutral. This assessment was undertaken in response to conflicting criticisms that the media was sensationalizing the nuclear crisis while the Japanese government and Tokyo Electric Power Company (TEPCO), the utility in charge of the Fukushima nuclear plant, were downplaying the severity of the situation. A mixed-method content analysis, with both a quantitative coding component and a qualitative critical discourse analysis component, was used in the study and data meeting and going beyond the primary research objective were obtained. This paper focuses on findings pertaining to the framing of the nuclear crisis, use of sources, keywords, representation of the energy and political authorities involved, and the reporting of radiation information in the two newspapers. The implications of the findings fall beyond the scope of this cursory working paper, but a call is made for further analysis and research.

Keywords: Fukushima, nuclear crisis, radiation reporting, disaster coverage, newspaper analysis.

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Introduction

On March 11th, 2011, the northeastern region of Japan was struck by a magnitude nine earthquake that caused a series of tsunamis. More than 15 000 people were killed, with many thousands more injured (IAEA ..., 2011). Over one million buildings were damaged (Fukushima Accident 2011, 2013). The natural disaster also resulted in a loss of cooling capacity at the Fukushima nuclear power plant complex in Fukushima Prefecture, with the release of large quantities of radiation into the atmosphere and ocean. A nuclear emergency was declared and people within 20km of the plant ordered to evacuate (Fukushima Accident 2011, 2013). The nuclear crisis continued over the following months, eventually receiving classification as a Level 7 event - the highest level - on the International Nuclear Event Scale (Fukushima Nuclear Accident Update Log, 2011), putting it on par with the 1986 Chernobyl disaster.

While the Fukushima nuclear crisis raged, the Japanese government and Tokyo Electric Power Company (TEPCO) were accused both of withholding information (Słodkowski & Saito, 2013) and downplaying radiation data (Onishi & Fackler, 2011), with a subsequent loss of public trust. At the same time, the mass media were strongly criticized for alleged fear-mongering on the one hand, and being overly reassuring on the other (Harper, 2011; Tollefson, 2013; Brasor, 2012).

In times of disaster, the media play a key role in communicating information to the public, who are generally unable to access the area or facts on their own. Media reports may influence people's perceptions of and decisions about a crisis (Vasterman, Yzermans, & Dirkzwager, 2005). As a result, content analyses have been performed on the coverage of the 1979 Three Mile Island nuclear accident in the mass media (Rubin, 1987), Chernobyl (Friedman, Gorney & Egolf, 1987), and Fukushima¹ (Perko, Turcanu, Geenen, Mamani and Van Rooy, 2011).

Japan's English-language newspapers, while serving a large non-Japanese readership, have been largely ignored in disaster communication studies. It was thus deemed pertinent to examine their coverage to determine whether it could be said to have been alarming, reassuring, or relatively balanced and neutral. The results of this assessment are presented below, following insights from the large quantity of additional data that were obtained during the study.

Newspaper Profiles

Basic data on the history, structure and readerships of the two newspapers are necessary to provide contextual insight into the study, and are provided here.

The Japan Times was founded in 1897 and is Japan's oldest, as well as only independent, English-language newspaper. It is published by The Japan Times, Ltd (The Japan Times: About Us, n.d). Since October 2013, it has been printed and sold with *The International New York Times*. The circulation of *The Japan Times* is over 45 000 copies, with 62% of copies delivered directly to homes (The Japan Times/International New York Times Media Information, 2014). Actual readership

¹ A study of Belgian newspapers.

figures are two to three times higher, with one copy being read by several people. 72% of readers are non-Japanese.

The Daily Yomiuri was officially launched in 1955; a tabloid that evolved into the (non-identical) broadsheet sister publication to the Japanese-language *Yomiuri* newspaper. It was renamed *The Japan News* in April 2013. The newspaper has official partnerships with *The Washington Post*, *Los Angeles Times*, and *The Times* in the United Kingdom (The Japan News – the best ..., n.d). As of 2015, the circulation of *The Japan News* was over 24 000 copies, with 75% delivered directly to homes (The Japan News Media Data, 2015). The actual readership figures are estimated to be 1.4 times higher. 40% of *The Japan News* readership is non-Japanese. The *Yomiuri* is part of The Yomiuri Group, Inc, Japan’s biggest media conglomerate. The newspaper is viewed as having right wing, nationalistic tendencies (Gaulene, 2010).

	<i>The Japan Times</i>	<i>The Japan News</i>
Price	210 yen	150 yen
Slogan	"All the news without fear or favour"	None
Frequency	Monday - Saturday	Every day
Year Founded	1897	1955
Headquarters	Minato, Tokyo	Otemachi, Tokyo
Number of Staff	160	2 500 (Yomiuri)
Circulation	45 620	24 681
Readership	127 700	34 500
Associated Publications	<i>The International New York Times</i>	<i>Yomiuri, The Washington Post, The Los Angeles Times, The Times.</i>

Figure 1: Basic comparative data on *The Japan Times* and *The Japan News*.

Methodology

A mixed-method content analysis, comprising a quantitative coding component and a critical discourse analysis component, was used to examine the coverage in the two newspapers.

For both newspapers, all texts containing the term “Fukushima” in the date range March 11th, 2011 to May 12th, 2011, were retrieved from electronic databases. After eliminating duplicates and unrelated articles, 137 texts remained from *The Japan Times*, and 247 remained from *The Daily Yomiuri*. All of the these were read and coded for: area focus; issue focus; keywords used; units of measurement used for radiation data; radiation risk comparisons; focus of radiation risk coverage; sources; inclusion of criticism of TEPCO, the Japanese government, foreign media and foreign governments. Coding sheets and a guiding booklet were designed specifically for the study.

Hand-coding was used throughout, with the author coding all of the articles. To confirm reliability, two other people were trained and asked to code 50 articles each. This number is taken as the minimum sample size to be used when checking reliability (Neuendorf, 2002). Inter-coder reliability was then calculated using Krippendorff's Alpha, suggested as the standard reliability measure for content analyses (Hayes & Krippendorff, 2007). Krippendorff's Alpha was found to be 0.711, which indicates an acceptable level of inter-coder reliability.

The quantitative coding was followed by an extensive critical discourse analysis of the coverage. Following guidelines set out in the literature (Richardson, 2007; Wodak & Meyer, 2009; Van Leeuwen, 2013a and 2013b), repeated close readings of the texts (including headlines) were performed, with agency, descriptive language, emotive images, viewpoints, and framing the aspects focused upon. Criticism and praise were considered where present.

Findings

Of the 247 total texts from *The Daily Yomiuri*, 197 were classified as news articles, and 50 were opinion pieces (editorials and columns). 112 of the 137 *Japan Times* texts were news articles, with 25 opinion items. The main findings of the quantitative and qualitative analysis of these texts are presented, very generally and (due to publication restrictions, necessarily) in brief, below. These and other findings, not presented here, are discussed comprehensively in Finn-Maeda (2015).

Overall, *The Daily Yomiuri* was found to be slightly more moderate than *The Japan Times* in its framing of the nuclear crisis itself (that is, events at the plant). *The Daily Yomiuri* tended to use fewer threatening emotive words, and more formal and technical language, except in texts that featured a struggle/solidarity² narrative or were critical of the Japanese government. Interpretation and analysis was not common.

The language of *The Japan Times* tended to be more casual with more frequent use of threatening emotive language, and the texts generally included more interpretation and analysis, arguably rendering them more accessible to readers. *The Japan Times* also made use of shorter, albeit slightly more alarming headlines than *The Daily Yomiuri*, which favored longer, more technical headlines.

Each newspaper text was checked for instances of 12 categories of keywords: fear, calm, trust, distrust, threat, safety, control, chaos, struggle and support words, and the terms Chernobyl and Three Mile Island. Both chaos and threat words were identified

² Tollefson (2013) identifies and explains this as texts that emphatically highlight the difficulties faced by people directly affected by the nuclear crisis, such as evacuees, or have a rallying call urging support from the rest of Japan. These are problematic in that they silence expressions of anxiety and criticism and interpellate readers into a position of dutiful solidarity to their fellow citizens. This quote from an article about the hardships of emergency workers at the nuclear plant, that used only nameless sources, exemplifies the above: "The woman told her daughter, 'Dad chose to go because of his sense of responsibility toward his job. Now he's working for everyone.' The daughter smiled and replied, 'My Dad's great. He's a hero.'" (Goto, Mori & Maeda, 2011).

in a slightly higher number of news articles in *The Japan Times*. Chaos words were found in 62% and 49% of news articles in the two publications, and threat words in 83% versus 75%.

A struggle/solidarity narrative was prominent in *The Daily Yomiuri*, but almost entirely absent from *The Japan Times*. Related to this is that when looking at the geographic foci of the newspaper texts, *The Daily Yomiuri* was found to have a substantially greater focus on Fukushima Prefecture. A significantly higher percentage (27%) of *The Daily Yomiuri* news articles contained struggle words compared to *The Japan Times* (12%). This difference is reflected in to *The Daily Yomiuri*'s higher focus on the issue of affected people and their difficulties.

Incidentally, the words Chernobyl and Three Mile Island were mentioned in just 17 out of 112 news articles and four of 25 opinion pieces in *The Japan Times*, and 10 out of 197 news articles and eight of 50 opinion pieces in *The Daily Yomiuri*. Three Mile Island appeared in the body of five news articles and one opinion piece in *The Japan Times* and 10 news articles and four opinion pieces in *The Daily Yomiuri*. Where the words were mentioned, it was mostly in the context of distinguishing the nuclear events. They were not used as alarming comparisons except in a handful of headlines in *The Japan Times*.

Regarding the reporting of radiation, coverage in *The Japan Times* was found to be more frequent clear and thorough than *The Daily Yomiuri*. The percentage of news articles that in some way acknowledged a significant level of radiation-related risk was almost the same in both newspapers (just under 50%), but this risk was depicted more concretely and directly in a greater proportion of news articles in *The Japan Times* than *The Daily Yomiuri* overall. *The Daily Yomiuri* often characterized the risk in vague terms or backgrounded it entirely, resulting in a downplaying effect.

It was also found that *The Daily Yomiuri* characterized public fears about radiation as irrational, while *The Japan Times* did the opposite, expressing a sense of empathy in its articles. For example, *The Daily Yomiuri* said in an editorial: "The government should carefully explain the vital differences between the Chernobyl and Fukushima Prefecture accidents to prevent public anxiety from spreading and to control damage that could be whipped up by groundless rumors" (Nuclear accident's ..., 2011). *The Japan Times* were less inflammatory, making statements like, "trust in Japanese products and services won't be restored until Japan can be counted on to provide correct information about the crisis (Trusting imports ..., 2011)".

Examination of information sources found that both newspapers primarily relied on the Japanese government and TEPCO. 69% of news articles in *The Japan Times* contained Japanese government sources, compared to 57% of news articles in *The Daily Yomiuri*. TEPCO was quoted in 33% of articles in *The Japan Times*, and 35% of articles in *The Daily Yomiuri*. This reflects the global tendency of newspapers to primarily use government and industrial sources in articles (McCombs, Holbert, Kiouis, & Wanta, 2011; Freeman, 2000). Many of the articles in *The Japan Times* and *The Daily Yomiuri* used these sources exclusively, evidencing a high level of establishment bias (Singer & Endreny, 1993).

It was noted that *The Japan Times* included more alternative voices as sources, such as Greenpeace and WHO. These were absent from *The Daily Yomiuri*. The latter had more single-source articles that seemed like press releases from the Japanese Self Defense Forces, U.S. military, and technology companies.

The critical discourse analysis of *The Daily Yomiuri* revealed a strong pro-U.S. bias, the construction of a collective national “us” in editorials (through consistent use of the pronoun “we”), and support for the retention and further development of nuclear power. Editorials and even news articles were harshly critical of Prime Minister Kan³ specifically and, for the first few weeks, sympathetic towards TEPCO (thereafter becoming equally critical of the power company).

The Japan Times was found to be more broadly, and less emotively, critical; questioning TEPCO and the Japanese government as well as the broader nuclear industry. The newspaper also expressed support for alternative energy sources. The publication was found to be more liberal overall than the pronouncedly right-wing *Daily Yomiuri*.

Many of the findings stated above are, as can be observed, peripheral to the underlying research objective, which was to determine whether the coverage in the two newspapers could be said to have been reassuring, alarming or relatively balanced and neutral. Taking into account and going beyond the above findings, several conclusions can be drawn from the results of the mixed-method analysis.

As an extra part of the coding process, the newspaper texts were rated as alarming, reassuring or neutral by the coders, based on framing, word choice, headlines and overall impression. This rough classification found 38% of the news articles and 40% of the opinion pieces in *The Japan Times* to be alarming. Only 14% of news articles and two opinion pieces were categorized as reassuring.

In *The Daily Yomiuri*, only 16% of news articles and 12% of opinion pieces were found to be alarming. Similarly, 14% of news articles and 18% of editorials were classed as reassuring. These percentages were confirmed during the critical discourse analysis stage of the study.

Overall, it was found that both newspapers mostly occupied a relatively neutral, balanced middle ground. The higher frequency of threatening emotive words and more broadly sceptical, critical approach of *The Japan Times* resulted in a higher proportion of its texts being classified as alarming. However, the newspaper was consistently more objective, and sympathetic to readers concerns. Thus, the finding that the newspaper’s coverage had more alarmist characteristics does not mean that it can be immediately written off as sensationalistic, or otherwise poor, in its reporting.

The Daily Yomiuri was, as previously noted, found to be moderate in its coverage except where stories constructed a struggle/solidarity narrative or criticized the

³ Kan was the leader of the opposition Democratic Party. *The Daily Yomiuri* is aligned with the Liberal Democratic Party (Tollefson, 2013), which may have influenced the critical approach taken by the newspaper. *The Daily Yomiuri* described Kan’s management of the crisis as “bungling” (Kan must refrain ..., 2011) and called on him to either work with the opposition LDP (Public wants ..., 2011) or step down (Pressure grows ..., 2011).

Japanese government. Though the same proportion of texts in both newspapers was reassuring, it was found that the editorials in *The Daily Yomiuri* were more frequently and emphatically reassuring than those in *The Japan Times*, which were far more frequently alarming.

As mentioned above, *The Daily Yomiuri* demonstrated right-wing biased, nationalist tendencies in its coverage and downplayed the risks of the radiation from the Fukushima nuclear plant, depicting the public's nuclear-related anxieties as irrational.

The study noted that both newspapers were strongly critical of the Japanese government and TEPCO despite their reliance on them as sources, which could have positive inferences for the role of (at least one section of) the Japanese press.

While the potential implications of the preliminary findings stated here are manifold, consideration thereof falls beyond the scope of this working paper. Further analysis is necessary, and it is hoped will provide a valuable contribution to the (lacking) body of literature on the English-language media, and media in general, in Japan.

Conclusion

This short paper has presented the preliminary findings of a mixed-method analysis of the coverage of the 2011 Fukushima nuclear crisis in *The Daily Yomiuri* and *The Japan Times*. Insights into the framing of the nuclear crisis in the two newspapers, information sources used, criticisms expressed, and reporting of radiation risk have been shared in addition to the results of the guiding research objective, which was to determine whether the coverage could be said to have been alarming, reassuring or relatively balanced and neutral overall. As has been shown above, while the coverage was mostly relatively neutral, the answer is complex. Further analysis is not only recommended, but required.

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