

Tracing Individual Perceptions of Media Credibility in Post-3.11 Japan

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Abstract

The 3.11 disaster revealed many shortcomings in Japan's mass media organisations and government, the most prominent arguably being the poor handling of the disaster by central government and TEPCO, including miscommunication and delays in releasing accurate data on the dispersal of radioactive materials. The lack of transparency in mass media coverage of the nuclear meltdown and levels of radiation resulted in growing distrust among the public, who turned to online sources and social media to confirm or challenge information provided by the mass media.

Based on in-depth interviews with 38 Japanese individuals, this study explores individual perceptions of media credibility in a disaster context and in the present, elaborating how changes in trust in media intersects with the changes and dynamics in media use and how the 3.11 disaster continues to influence media use and perceptions of credibility today. The main findings of the study suggest that in the wake of the unprecedented national disaster, Japanese media users moved from using traditional mass media as their sole source of news to a personalised, inter-media environment which integrates both online and traditional modes of communication without replacing traditional media players. This further facilitated the practice of seeking and evaluating information and media credibility through new media forms of connectivity such as social media platforms and news websites.

Keywords: 3.11 disaster, communication gap, inter-media environment, mass media, media

credibility, social media

Information needs and communication gaps

The 3.11 disaster in Japan is the epitome of an unforeseen, catastrophic and intrinsically disruptive event. On 11 March 2011, the northeast coast of Japan was struck by a powerful earthquake, which caused a chain-reaction of events: a devastating tsunami, continuous aftershocks and tremors, and damage to nuclear reactors in the Fukushima Daiichi Nuclear Plant, resulting in nuclear meltdown and considerable dispersion of radioactive materials into the environment. In all phases of the disaster, Japan's media played a crucial role in how people communicated and coped with a complex catastrophe. Nine years after 3.11, social recovery, reconstruction in disaster-stricken areas and delays in decommissioning the Fukushima Daiichi Nuclear Plant, which could take decades, remain ongoing concerns for Japanese public.

Trust is a critical component of disaster communication, and it is often tested in situations such as natural disaster and crisis (Mehta, Bruns, & Newton, 2017), where citizens' demand for credible information increases. The exposure to inconsistent news and media reports can significantly alter people's perceptions of media credibility (Gaziano & McGrath, 1987). Furthermore, in a disaster situation, the fragility of media is

exposed (Endo, 2013) and people seek different ways to find the information they need and look for trusted media sources to reduce uncertainty and ambiguity (Lachlan et al., 2014a). During crises and natural disasters, many people rely on Twitter for its ease of access, timely updates and real-time information, and ability to identify users' specific needs and concerns. However, despite social media's critical role in communicating risk and disaster response, their fast and immediate dissemination comes with the risk of incomplete, misleading or inaccurate information. Another reason for questioning social media credibility is the shifting role of "gatekeepers" from producers to consumers (Westerman et al., 2014), which is why many people seek information from official and checked sources (Lin et al., 2016).

The 3.11 disaster was both a "natural" and a "man-made" disaster (Kingston, 2012). This overlap between natural and complex disaster setting, with high levels of uncertainty, amplified the critical need for credible, up-to-date and timely information on rapidly evolving events necessary for effective disaster management. Within the complex 3.11 media landscape, social media served as a new information tool and an essential medium for up-to-date, real-time news when other communication systems were not working, even as television remained a widely used medium in the first moments of the disaster (Jung, 2012).¹ However, the complexity of what came to be known as the "Triple Disaster," especially the nuclear meltdowns and the diffusion of radioactive materials, altered this significantly. The opaque nature of mass media reports and the communication gap between local and central government alongside contradictory announcements by Tokyo Electric Power Company (herein TEPCO)² and media institutions, and the contradictory or insufficient information from the government, contributed to profound public distrust towards government and mainstream media institutions (Funabashi & Kitazawa, 2012; Hobson, 2015).

Delivering information to the general public about levels of radiation was especially problematic shortly after the explosion in the nuclear plant. The inability of government, TEPCO, and national media to accurately communicate information and educate the public (Hobson, 2015) subsequently created confusion among citizens who, without prior knowledge on the levels of radiation, could not understand whether the reported levels of radiation were dangerous or not, or whether and how best to leave the area. This study has been driven by data collected from participants highlighting the lack of transparency in mass media coverage of the meltdown and levels of radiation, which led many to turn to alternative sources of information as the disaster was unfolding and to connect with a variety of sources and communities. In this context, individual perceptions of media credibility and confidence in Japanese media were significantly shaped and reconfigured by the 3.11 disaster and its changing media environment.

The erosion of public trust in Japan

In the years following the 3.11 disaster, Japanese people have been expressing declining levels of trust in media institutions and government. According to the 2018 Edelman Trust Barometer, public distrust at the global level is on the rise, with 20 out of 28 countries polled being categorised as 'distrusters.' The survey from Edelman shows that Japan belongs to the category of 'distrusters' with continuously low levels of institutional trust; the most recent report shows 32 percent for media and 37 percent for the government (see Table 1.1.). Japanese trust in social institutions, including NGOs, media, government and business institutions is 11 percent lower than the global average in 28 countries surveyed, 37 percent versus 48 percent, placing Japan at the bottom of the list

as the world's least trustful, after US (43 percent), Germany (41 percent), Australia (40 percent), Canada (49 percent), and UK (39 percent). The report also shows overall distrust in both mass media and social media in Japan, with an insignificant gap of 4 percent between trust in journalism (41 percent) and social media platforms (37 percent). Thus, it is necessary to highlight factors that led to such low media credibility in Japan.

Table 1.1. Trust in media and government institutions in Japan 2010-2018

Trust in Institutions: Japan		
	Media	Government
2010	36%	42%
2011	48%	51%
2012	33%	24%
2013	34%	27%
2014	38%	39%
2015	30%	36%
2016	38%	39%
2017	32%	37%
2018	32%	37%

Source: 2010-2018 Edelman Trust Barometer Global Report

According to the World Press Freedom Index reports released in the period 2010-2018, it is evident that media freedom in Japan has been on the decline since 2012. With regard to the changes in ranking over eight consecutive years, Japan fell from being 11th on the list in 2010, to ranking 67th in 2018 (see Table 1.2.). From the time of 11 March 2011, there have been significant developments and changes in Japan's government and political landscape, which also affected media institutions. Ever since the current Prime Minister Abe Shinzo's administration took office in 2012, media freedom in Japan has been declining (see Table

1.2.).

Table 1.2. World Press Index Report 2010-2018: Japan

World Press Freedom: Japan Ranking Index		
Year	Rank	Index
2010	11	
2011	22	
2012	22	
2013	53	25.17
2014	59	26.02
2015	61	26.95
2016	72	28.67
2017	72	29.44
2018	67	28.64

Source: [World Press Freedom Index 2010-2018, Reporters Without Borders](#)

According to the media advocacy group Reporters Without Borders, Abe's administration poses a threat to media independence by its interference in the editorial policies of Japan's public broadcasting service, and its dismissal of journalist reports that are critical of the ruling party, taking little account of the citizens' right to information. Since the State Secrecy Law was launched in Japan in 2013, "investigative journalism has declined in Japan, as the government became legally entitled to designate sensitive information (such as national defense and Fukushima-related issues) as state secrets. The public's right to information has become restricted." (Oishi & Hamada, 2019, p.116).

Numerous studies of the 3.11 disaster raise pressing issues in Japanese journalism including mass media's heavy dependence on government, thereby lacking independent and critical perspective in coverage of the disaster (Galbraith & Karlin, 2016; Gill, Slater, & Steger, 2013; Kingston, 2012; McNeill, 2013). After 3.11, due to the closed *kisha* club system,³

in which only professional journalists affiliated with the government are permitted to attend press conferences, freelance and foreign journalists faced many discriminatory measures taken by TEPCO and the Japanese government. They were prevented from attending press conferences and denied access to direct information (Segawa, 2011). Similarly, Pacchioli (2013) highlights the difficulty in understanding the risks and overall severity of the disaster because of lack of government explanation of the issues, while Friedman (2011) discusses the problem of a shortage of specialist reporters with technical knowledge about nuclear disaster and radiation risks. The lack of communication from the government's side led to the promotion of the view in mass media that the situation in Fukushima Daiichi Nuclear Plant was stable and under control (McCarthy, 2014, p. 185). Concerning this, McNeill (2014) argues that mass media sanitised news on the disaster to suppress panic and maintain a good image of the state, by limiting and often suppressing investigative reporting, to broadcast homogenised content. Furthermore, some studies argue that NHK did not report on nuclear disaster thoroughly, despite being the only television station with nuclear specialists among its journalists. Instead, it relied on TEPCO and government information sources, rather than utilising the expertise of independent sources (Ito, 2012; Yamakoshi, 2015). Although the focus of this study is Japan, a recent comparative analysis shows that Japan is not unique in respect to low media credibility and decreased trust in social institutions and media. Nancy Snow (2017) draws parallels between the post-3.11 Japan under the Abe administration and the post-9/11 propaganda and opinion control by the Bush administration to show how governments utilize manipulative media and public relations strategies to control opinion and rhetoric in times of national crises and wars.

Previous research has shown that levels of trust in media have significantly decreased since the

3.11 disaster (Aldrich, 2012; Newman, Fletcher, Levy, & Nielsen, 2016). A recent study by the Disaster and Media Research Group is one of the first attempts to assess the media's lessons learned from media coverage of the Great East Japan Earthquake through qualitative in-depth interviews with representatives from Japanese mainstream national media outlets (Okumura, N., Hayashi, K., Igarashi, K., & Tanaka, A., 2019). The extant studies on the 3.11 disaster focus predominantly on questions of how and why media lacks credibility, and the general lessons learned after 3.11 with regard to trust in government institutions and mainstream media, utilizing different types of data, but rarely examining users' perceptions of media credibility in the context of the 3.11 disaster and the present day. This makes invaluable investigation of individual media experiences through voices of media users in the context of the complex, inter-media environment that emerged with the 3.11 disaster. This study explores this issue through qualitative analysis of individual trust in mass media and social media concerning the 3.11 disaster and the present day.⁴

Furthermore, in addition to experiences gained by media executives and general surveys about trust levels in Japan, knowledge of how media users trust different media platforms and sources may have implications for how these media will evolve to better support disaster communication in the future. Having in mind that people heavily rely on media in the time of disasters and crises for timely and reliable information and that there is an anticipated risk of another major inland earthquake in the Tokyo metropolitan area, it is essential to utilise lessons learned from both sides, media representatives and media users, to prepare for future disasters.

Research Methodology

This study employs a qualitative approach to develop an in-depth understanding of changes and dynamics in participants' media use in the context of the 3.11 disaster. Open-ended, in-depth interviews were designed to prompt individual participants to reflect on their experiences, convey opinions and provide insight into specific matters (Creswell, 2013). Analyses of the individual experiences with using media garnered from the interviews is positioned within the context of the immediate 3.11 disaster and the point of reflection, thus enabling us to understand the dynamics of the individual's media usage.

Having in mind that the aim of this study is not to seek statistical generalisability, a snowball sampling method was used to select participants for the study. During two-months-long fieldwork in Tokyo,⁵ I interviewed 38 Japanese nationals, who were recruited by utilising my professional connections to reach some of the first participants, who subsequently provided referrals for further interviews. Drawing on the notion that the small sample size in qualitative research enhances data richness and a variety of participants (Moser & Korstjens, 2018), I intentionally selected participants differing in age (25–59), who could provide diverse perspectives on media use and credibility. Participants represented a wide range of occupations including managers, office workers, freelancers, consultants, dentists, students, professors and others. Table 1.3. shows basic demographic information about the interviewees, along with a brief overview of their main source of news during 3.11 disaster.

In the recruitment process, I avoided interviewing participants from the Tohoku region as it was directly affected by the triple disaster, and participants' media usage patterns were disrupted and limited by the severity of the disaster, loss of electricity, evacuation and displacement. Further, digital engagement of people in the severely affected

region was limited due to demographics and geography (Slater, Nishimura, & Kindstrand, 2012). I spoke to participants living in Tokyo, the neighbouring cities of Kawasaki, Yokohama, Saitama and surrounding areas who were less affected by the earthquake and tsunami than people on the north coast of Japan, but who could still feel the effects of the disaster, such as infrastructure disruptions, food and water shortages, electricity outages, mobile network failure and many others. Commuter trains, subways and bullet trains were all shut down due to the earthquake. Phone signals were mostly dead, preventing calls and messages from getting through for hours after the earthquake, so people formed lines in front of public phone booths. However, internet services were available in the areas with undamaged infrastructure, so people in Tokyo were able to use email, Skype, Line, Facebook or Twitter to establish contact with family and friends. Many Tokyo residents remain fearful about the impact of the nuclear disaster, as there were several hot spots with high levels of radioactive caesium in the metropolitan Tokyo area (Oishi & Hamada, 2019, p.114)

As the study uses the case of the 3.11 disaster to examine individual perceptions of media credibility, by looking at individuals' recounting of media habits and experiences in using different media forms: TV, newspapers and online media (social media, news websites), the main population of interest for the study is media users who lived in a densely populated urban environment in Japan at the time of the 3.11 disaster, and who actively used some or all the above-mentioned media forms. As shown in Table 1.3, most participants whom I interviewed are residents of Tokyo, the city with the highest population density in Japan (Statistics Bureau of Japan, 2019).⁶ Extensive reliance on a Tokyo sample allows for an adequate investigation of individual attitudes and perceptions of trust in a media-saturated environment and exploration of variations in individual media use in high-density urban

environments, and is driven by the notion that Tokyo is the city with Japan's highest rate of mobile phone subscription, the highest mobile Internet penetration (63.3 percent), and second highest Internet penetration rate (71.9 percent) (Slater et al., 2012, p. 98). Given their heavy use of text messaging and internet, mobile phones play a significant role in the dissemination of news and disaster-related information in Japan. This is consistent with the research aim of reaching Japanese individuals, who can provide evidence of their changing notions of trust and current attitudes towards diverse media forms, including new digital technologies and platforms.

Table 1.3. Basic demographic information about participants (name, gender, age, city/region where participants resided during 3.11 and at the time of interviews) and the media platforms that they used in the three main phases of the 3.11 disaster

Name (pseudonym)	Gender	Age Group	City (present-day)	City (3.11)	Media Use (3.11)
Hideki	Male	20-29	Tokyo	Fukushima	TV, Twitter, YouTube, 2channel
Toshi	Male	20-29	Tokyo	Tokyo	Twitter, Yahoo News, TV
Mei	Female	20-29	Tokyo	Kobe	Facebook, Twitter, Line
Kenta	Male	20-29	Tokyo	Tokyo	TV, Line, Yahoo News
Miyuki	Female	20-29	Tokyo	Tochigi	newspaper, TV, Yahoo News
Sana	Female	20-29	Tokyo	Tokyo	TV, Facebook, Twitter, Line
Takashi	Male	20-29	Tokyo	outside Japan	online newspaper, Facebook, Twitter, YouTube
Tomoki	Male	20-29	Tokyo	Nagano	TV, news websites, newspapers
Yumi	Female	20-29	Tokyo	Nara	TV, Facebook
Michiko	Female	20-29	Tokyo	Kanagawa	TV, newspaper, news websites
Ayumi	Female	30-39	Tokyo	outside Japan	Yahoo News, TV and online newspaper
Eiji	Male	30-39	Tokyo	Tokyo	Facebook, TV, news websites
Hiro	Male	30-39	Tokyo	Tokyo	Twitter, Facebook, Line, Yahoo News
Yoshi	Male	30-39	Tokyo	Fukuoka	TV, Yahoo News, Twitter
Naoko	Female	30-39	Tokyo	Tokyo	Line, TV, Facebook
Hiroshi	Male	30-39	Tokyo	Tokyo	TV, Facebook, Twitter, YouTube
Mayumi	Female	30-39	Melbourne	Tokyo	TV, Line, Facebook

Saki	Female	30-39	Tokyo	Tokyo	Yahoo News, TV, Twitter, Facebook
Shinji	Male	30-39	Melbourne	Tokyo	TV, online newspaper, Yahoo News, Twitter
Rika	Female	30-39	Kyoto	Kyoto	radio, TV, Facebook, Mixi
Wataru	Male	30-39	Tokyo	Tokyo	TV, news websites, online newspaper
Ayako	Female	40-49	Tokyo	Tokyo	TV, news websites, Facebook
Chieko	Female	40-49	Tokyo	Yokohama	Facebook, TV
Atsushi	Male	40-49	Tokyo	Tokyo	TV, Facebook, Line
Daichi	Male	40-49	Tokyo	Tokyo	TV, Facebook, news websites
Hana	Female	40-49	Osaka	Osaka	Yahoo News, Facebook, Line, TV
Naoki	Male	40-49	Chiba	Yonezawa	TV, news websites
Kensuke	Male	40-49	Tokyo	Tokyo	TV, Mixi, news websites
Masayuki	Male	40-49	Tokyo	Tokyo	Yahoo News, Facebook, TV
Takuya	Male	40-49	Tokyo	Saitama	TV, YouTube, Facebook
Kazuya	Male	40-49	Tokyo	Tokyo	TV, news websites
Fuji	Female	50-59+	Tokyo	Kawasaki	TV, news websites
Kenjiro	Male	50-59+	Tokyo	Gunma	radio, TV, news websites
Kaori	Female	50-59+	Tokyo	Tokyo	TV, news websites
Ryota	Male	50-59+	Tokyo	Tokyo	TV, news websites
Haruna	Female	50-59+	Tokyo	Tokyo	TV
Takahiro	Male	50-59+	Tokyo	Tokyo	TV
Momoko	Female	50-59+	Tokyo	Tokyo	TV

Note: In the 'Media Use' column, media sources are listed in the order of their importance to the participant as an information source in the immediate aftermath of the 3.11 disaster

This article aims to trace changes and dynamics in the individual's media use in relation to shifting levels of trust in media, in the context of post 3.11 Japan, through participants' retrospective reconstruction of their past experiences. To do this, I first examine participants' perceptions of the credibility of media they utilised in the context of the immediate and aftermath phases of 3.11, to understand the implications their perceptions have for shifts and changes in their media use habits. Then, I examine participants' current perceptions of media they use and changes in general information seeking. The comparison of the immediate phase with the

present-day phase reveals how participants' notions of media credibility fluctuate and intersect with everyday media use, and why participants assign higher credibility to certain media forms.

Rethinking media credibility and changing media use

Familiarity, gatekeeping and live images

The primary source of news for most participants immediately after the 3.11 earthquake was television, often complemented with social media and news websites, but occasionally used as a sole source of news. More than half of the total number of interviewed participants (38), recount using TV as their first source of news. Familiarity is one of the main reasons why it is considered highly credible, and most participants referred to TV as a common medium to which they turn in an emergency such as a natural disaster. The term “*shūkan*” (habit) was used to explain this. For example, one of the interviewees, Shinji,⁷ perceives TV as the primary medium for obtaining crucial information in a time of natural disaster:

*“At least it is my habit to first turn on NHK, and if there is an earthquake, it has become customary to watch NHK. For now, it seems that many Japanese people have this habit of turning to NHK.”*⁸

Another participant, Atsushi, similarly assumes that many people turned to NHK for the first news on the disaster: *“The primary source of information for most people at that time was probably TV.”*⁹

The notion of NHK as a familiar source of news in a time of emergency such as the 3.11 disaster, comes from the established role of NHK as official public institution mandated to report on major national events including

disasters and safety warnings and designated to contribute to disaster prevention and crisis management through its broadcasts. In addition to broadcasting national events, NHK has long been established as a national medium, providing a wide range of news at fixed times as well as well researched features. NHK significantly underpins the habitual use of TV in Japan (Yoshimi, 2003). The centrality of NHK in delivering timely and accurate news on the disaster as it unfolded strengthened participants' high levels of trust in the public broadcaster. In contrast, commercial broadcasters are only moderately trusted due to their perceived sensationalism and imbalance in reporting. In the context of 3.11, the focus of commercial broadcasters was primarily on sensationalist reporting which could bring higher ratings, such as screening high-impact images of the earthquake and rescue operations (Tanaka, 2013). NHK, as a public institution mandated to disaster prevention, focused more on keeping the public informed about safety measures, tsunami warnings, evacuation sites, to protect lives and property and help people in the disaster area (Tanaka, 2013).

In this way, besides prompt and balanced coverage of the 3.11 disaster, participants like Shinji and Atsushi refer to NHK as a habitual source for the first news and updates, which indicate that participants' perception of NHK as credible comes from a positive personal experience and trust earned over many years.

Another overarching theme emerging from the interviews is that participants express confidence in the credibility of traditional mass media sources over social media due to the gatekeeping process through which information is filtered for publication and broadcasting (Newman & Fletcher, 2017). In explaining the reason behind the preference for television as a source of information during the 3.11 disaster, Chieko compares TV and social media (Facebook):

*"Of course, Facebook provides information, but precisely because it is Facebook, I do not know whether the information is accurate or not because it is written by individuals. It is good as a communication tool, but I am not sure if it is appropriate for information dissemination. That is why I trust TV... The information dissemination is at least based on pre-established rules, so in such cases, I can probably trust it."*¹⁰

Some participants, like Sana, refer to the free flow of personally posted information found on various social media platforms, which significantly separates social media from traditional mass media forms in terms of source credibility:

*"Because something that's posted and shared on social media differs depending on the individual's perspective and feelings, I think mass media is more reliable for confirming the facts without involving emotions."*¹¹

While social media is considered useful for collecting local and personal information, more than half of participants associate the credibility of news with professionally produced information that is filtered, verified, accurate, clearly communicated and fair. This corresponds to professional integrity and work of media producers, journalists, and reporters, particularly from NHK and mainstream press. The convenience of and open access to social media means that the diffusion of rumours is more rapid than in traditional mass media. This can cause significant confusion, as was the case with the rumour tweets about the chemically contaminated rain that circulated in the wake of the great 2011 earthquake (Takayasu et al., 2015). In the disaster context, rumours on Twitter often contained ambiguous information and private opinions about various topics concerning safety and danger that induced anxiety or calls to action. When tweets with such content are retweeted, rumours spread (Umejima, Miyabe, Aramaki, &

Nadamoto, 2011). Participants like Yoshi associate the credibility of news with professionally produced information and the gatekeeping process, which is essential to prevent rumours and misinformation:

*"In terms of social media, after all, there is a flow of rumours, because there is no filtering... social media is not bad, but its negative side is indeed spreading rumours."*¹²

Similarly, Ryota discusses social media credibility referring to the information coming from unofficial sources, which are more likely to circulate opinionated and biased information and cause confusion:

*So there are heaps of individual opinions there, and people with different standpoints have different opinions, but because it is not organised, there are too many extreme opinions..."*¹³

Keeping in mind the problem of rumours and the absence of gatekeepers in social media to check the accuracy and quality of information, it is evident that participants have more confidence in mass media sources, television and newspapers than in social media. This is because they perceive TV, particularly NHK, as official sources of news, less open to manipulation, at least when it comes to facts obtained through live broadcast.

Besides familiarity, the power of visuals, raw videos and moving images was essential for perceiving television as a highly reliable medium (McLuhan, 1964). This is evident from the repetitiveness in the use of the word: "eizō" (映像) when participants explain their preference for television in the immediate aftermath of the earthquake, tsunami and nuclear explosion. The word "eizō" is translated as "video image" or "screen image." It was concurrently used across participants of varying ages, in the context of reliance on television and confidence in television's credibility.

One of the interviewed participants, Fuji, explains she mainly watched television for its live coverage of the evolving disaster, and the constant flow of information which she can easily access on TV. More importantly, Fuji notes that her preference for television during the 3.11 disaster over other media forms comes from the perspective that video can best capture the real nature of a disaster. As an example, she mentions live footage of a helicopter flying over the Fukushima nuclear plant shortly after the explosion on 17 March 2011, which helped her understand the situation immediately after the nuclear disaster:

*"Yes, I thought it was reliable. A video image does not lie. Rather than saying I believe it or not, I have to accept that video image is a fact. It is not that I can trust what people in the company are saying, but I took it as a fact because the person is in position to say that this kind of thing occurred in the nuclear power plant."*¹⁴

The helicopter footage was mentioned by other participants, like Takuya as one of the more effective ways to understand the evolving nuclear disaster:

*"The good side of television is still video image, isn't it? Real-time... Horrible images are coming in real-time..."*¹⁵

As Takuya's statement shows, live, closeup images of a hydrogen explosion and later of the helicopter dropping water on the nuclear plant, helped people visualise the disaster and understand its scope. The vividness of video images was often contrasted with a photograph, when discussing the role of TV in the immediate phase of the 3.11 disaster.

For example, when I asked Hana if she trusted TV during the 3.11 disaster, she explained: *"It was quite like a movie, how can I say... flowing, because the media conveyed what was happening, and not the instant picture."*¹⁶ In

case of such a complex disaster as 3.11, it is these "moving" video images and the immediacy of broadcast that gave participants the confidence to make sense of information overload and believe that what they are seeing is a true representation of the situation unfolding. Döveling et al. (2011) argue that the visual proximity of the camera can convey the emotional tone of a disaster, thereby reducing the uncertainty and perception of media as unreliable, or only moderately credible. Live performance and images on the TV screen are perceived as more "convincing" than text on something which has already happened, and the familiarity with events comes from the "reality effect" which live television facilitates (Gripsrud, 1999).

Immediately after the 3.11 earthquake, a live video stream from the disaster area was continuously broadcast in a small square at the top of the screen, while the main TV screen showed news commentators and presenters speaking in the studio. The continuous flow of disaster news enabled participants to visualise the disaster and evaluate live news as highly credible. As one participant, Ryota, explains:

*"I found it reliable because there was a real-time video stream as soon as the earthquake happened. One good thing was that close, real-time information was continuously appearing..."*¹⁷

These examples suggest that there was no suspicion of immediate live TV broadcast of the disaster, and no particular suspicion of newspaper and other media platforms at that time. Participants' scepticism in news arose later, in the aftermath of the 3.11 nuclear disaster, including suspicion of government statements in TV broadcasts and print publications. Further, participants' confidence in news and the high levels of trust come from the notion that the moving image and audio-visual material show actual information through the simultaneous reception of the same

news and the sense of witnessing the disaster as it happened.

Growing scepticism and selective media use

Following the 3.11 nuclear disaster, participants report a lack of trust in television and/or newspaper reports, stemming from the overall perception that the nuclear disaster was poorly covered and that unbalanced, partial, inconsistent reports and media censorship, were caused by the media's affiliations with the government and *kisha* clubs. Indeed, the reporting, or lack thereof, of the nuclear meltdown was the main trigger for a strong distrust towards mass media including NHK. Participants mainly refer to the lack of impartial coverage of the nuclear disaster, the poorly communicated information on levels of radiation, the censoring of information on the nuclear meltdown, and the propaganda that the situation is under control. For example, Atsushi, who was following TV news immediately after the great earthquake and tsunami, explains that it was hard for him to understand the news after the nuclear disaster: *"I watched TV, but I didn't understand anything. It has been explained, but with a long explanation, I didn't understand the meaning at all..."*¹⁸

While participants generally agree that television delivered useful, real-time, factual information on the earthquake and tsunami, their suspicions arose after the 3.11 nuclear disaster. Kenjiro used television as his primary source of news on the 3.11 disaster, perceiving NHK as extremely useful for its instant and live updates in the immediate aftermath of earthquake and tsunami. However, after the explosion at the nuclear plant, Kenjiro complemented television watching with internet and international media sources, because he felt that Japanese mass media was hiding critical information on the radiation

levels and overall risks of the nuclear disaster:

*"In the foreign media there was like a map showing where radioactive substances would be dispersed given the wind direction, but I wonder why Japanese media did not do the same. I think I lost confidence in Japanese media after that. Information was given in foreign media... Japanese media did not release information... everyone was really worried."*¹⁹

Although Kenjiro felt that NHK was neutral in covering the necessary information on the earthquake and tsunami, without the sensationalist dimension found on some commercial TV stations, he is convinced that the Japanese mass media, including NHK, did not utilise the SPEEDI system²⁰ to release accurate data on radiation levels, which could help people evacuate to safe areas. He concludes that the Japanese mass media failed to release critical data and fulfil their responsibility to provide detailed, unbiased and independent coverage of the disaster. This made him question its reliability and turn to alternative sources—international media and the internet:

*"The power of the state suppresses mass media ..., media is being watched carefully. If you report on something unwanted, you will be dismissed. There is no independence, which is dangerous."*²¹

Scepticism towards mediated information and gradual loss of trust and growing disappointment in Japanese mass media was also voiced by other participants, who felt that accurate and critical information was not adequately communicated to the public. Negative responses towards repetitive and biased coverage of the disaster led to participants' perception of mass media as only moderately reliable. Kensuke, who was following TV news from the start of the triple disaster, became sceptical of the mass media, due to repetitive and biased coverage:

*"I didn't trust information about the nuclear power plant. It seemed to be controlled. The bad thing was...there was a lot of anxiety about the nuclear plant, and I don't know which side of the story I received... (continues in English) (they exaggerated news on nuclear disaster, treating nuclear disaster as a political issue... I feel they didn't show the truth; the mass media has a position like left and right wing ... mass media belongs to the government side, it shows good news, people doing their job)."*²²

Consequently, participants' shifting perceptions of media credibility led to changing media use with utilisation of online media sources to complement mass media use due to uncertainty and gradual loss of trust in mass media.

The changing role of social media in the context of the 3.11 disaster is seen in its potential to provide new visual representations of the calamitous national disaster, with user-generated videos and images that could help viewers gain alternative knowledge of events as they unfold. In some cases, growing distrust towards mass media institutions resulted in higher social trust and/or increasing utilisation of different (online) sources which can provide critical information on radiation or nuclear disaster not provided by mass media. In such an environment, where participants feel that they cannot rely on mass media sources, especially at the time of the 3.11 nuclear disaster, social media provided some with an alternative channel which offered multiple views and perspectives on matters of life and death. In this sense, participants like Atsushi, perceive social media and the internet as a vital tool for safety and security. He notes that: *"At that time, there was Facebook and it was really useful."*²³

This notion of social media as alternative source of information is especially prominent in Hideki's reference to 2channel,²⁴ an online bulletin-board service, which helped him

evaluate the accuracy of local information by comparing other users' comments and reactions, as they offer a broad range of alternatives and views about his local community in Fukushima:

*Many people have comments about the people of Fukushima prefecture. They had comments which never appeared in the news, such as that people in Fukushima are exposed to radiation every day and that the food there is contaminated and cannot be eaten...That was what other people were thinking... I used 2channel to find out what other people think."*²⁵

Takuya started utilising Facebook to circulate information on radiation levels in his hometown in Saitama, a city located about 18 miles north of central Tokyo, that he measured himself with a Geiger counter. He says that Japanese mass media is biased and strongly linked to political parties and sponsored by advertising agencies, which significantly affects its impartiality and the neutrality of its content. Therefore, Takuya found it necessary to check information on different sources and decide which is credible, as he notes: *"There is nothing that can be done."*²⁶ This phrase *"shōganai,"* was used by another participant. Daichi, who felt sceptical about the news in media after the nuclear explosion:

*"TV was the most...I watched TV all the time. I was a bit suspicious, in particular, I was thinking whether the (situation in) Fukushima nuclear power plant was true. I didn't really know if what was said on TV was true, I didn't know if it was safe, if I needed to evacuate or if I shouldn't go outside."*²⁷

For Daichi, the most significant impact of mass media (particularly TV) was its unbalanced coverage of the disaster, which he found to be overwhelming, saying that he could not have a calm attitude towards media TV broadcast of the disaster, but like Takuya concluded that nothing could be done about it:

*"At that time, because I wasn't calm, I couldn't take a calm attitude towards the media. I watched TV, shocked, and there was nothing much to look at...There's nothing that can be done about the media."*²⁸

The phrase "*shōganai*" reflects the view that Japanese mass media is unlikely to re-think the focus of reporting and broadcast and provide fair and balanced coverage, which is free of government and corporate (TEPCO) influence, especially in a time of disaster when there is much negative content. The use of *shōganai* indicates that Takuya and Daichi resigned themselves to the limitations of traditional mass media, and that making radical changes in their media consumption patterns is beyond their control. However, the following section offers personal accounts of media utilization and opinions across wide range of age groups, as an evidence of progressive changes in the traditionally established patterns of media use in the aftermath of 3.11.

Building trust through inter-media use

The changing levels of trust in mass media and general scepticism concerning news in the wake of the nuclear disaster had significant implications for the participants' approach to media use and reliance on media. Within Japan's broader mediascape, a new inter-media environment emerged in the aftermath of the 3.11 disaster. Inter-mediality is defined as the interconnectedness of social media and traditional mass media, in which their role and influence develop in a complementary manner (Endo, 2013, p. 5). Inter-media use among participants in a wide range of age groups, from their 20s to their 50s, was caused by participants' sceptical attitude towards the credibility of mass media and online media, as they incorporated both traditional and social media to evaluate news content and develop independent judgment. Within this new inter-media environment, the generational divide is

gradually decreasing, as younger participants in their 20s and 30s increasingly migrate to new digital platforms for news, and older participants in their 40s and 50s slowly gravitate to online media as a back-up and additional source of news.

The first significant change in participants media use triggered by the 3.11 disaster is the reliance on cross-media use or combination of older and newer media for better evaluation of credibility, accuracy and up-to-date information. A minority of participants who find social media to be moderately credible are those who used social media as their primary source of news during 3.11, for real-time updates and facts or for checking on what their friends were talking about, to verify credibility of information. For example, besides watching television at work immediately after the quake, Toshi (age group 20-29) utilised a variety of official sources on Twitter. As he did not have a TV at home, Toshi accessed breaking news and mass media reports on the earthquake on Twitter, for its immediate and real-time nature and ability to provide instant updates and deliver accurate reports on earthquake intensity and aftershocks. Reflecting on 3.11, Toshi explains that he only trusted immediate, real-time reports on earthquake and tsunami, which he accessed on Twitter. He noticed changes in the way he used Twitter to continuously access updates and news from trusted news media sources on earthquake intensity, aftershocks and other critical information:

*"Twitter use, as I thought, has increased, and I looked at it for a long time...because it is fast and information immediately comes in...When the earthquake happened, I immediately looked at Twitter and saw that the earthquake was at that seismic intensity and that something absolutely terrible had happened..."*²⁹

Toshi relied on cross-media use to access credible and verified information and facts

about the earthquake, which could help him realise the severity of the disaster, indicating new media trends in Japan, as mass media use extended to digital platforms. Similarly, Hideki (male, 20-29), who was in Fukushima at the time of 3.11, started checking YouTube for real-time footage posted by other users, useful for understanding the situation and providing alternative sources of information on the complex disaster. Hideki positively acknowledges the real-time feature of this social media platform:

*"I started using YouTube videos to sort out what happened at that time. Since many people took videos with cameras from various places, I could find out what I did not know, so I started watching videos on YouTube. I think social media is really useful...After all, I think it is useful because we could receive information from social media when the TV station was damaged and couldn't broadcast..."*³⁰

In this case, user-generated and real-time videos of the disaster coming from "back-up" sources (other social media users) helped Hideki gain alternative information on the disaster and evaluate accuracy by comparing different sources. Furthermore, these unofficial communication channels, regarded as "backchannels" (Sutton et al., 2008, p. 625) served as a vital source of information, rather than merely an alternative source of information, for participants who could not access TV news.

However, the need for information was not the only reason for participants' reliance on online sources. I have argued elsewhere that, in the context of the 3.11 disaster, social media platforms served as a space where individuals can experience and express closeness in time of crisis, creating and maintaining new forms of affective communities in digital space through a combination of user consumption and production of media content (see Petrovic, 2019, p. 92). Another reason for participants'

reliance on social media, which emerged from interviews, is the familiarity of sources in online and offline space. Participants explain that they put their trust in the comments and feedback provided by their friends, or same-community users, as a guide to what is relevant and credible. People believe that interactivity around information facilitates their understanding of the reliability of stories, as others offer feedback and alternatives (Newman & Fletcher, 2017). The discussion and sharing of news among friends or more generally among other social media users' help participants understand the severity of the situation and realise whether the information is a fact or a rumour. After watching dramatic news reports, due to information overload, participants explained that they found it necessary to confirm what they had seen on television with others, and share information about earthquake intensity, the scope of the disaster and many other concerns. This could help them cope with uncertainty and anxiety. For example, Mayumi (30-39) recalls that she discussed the news from TV with friends and family, to understand the complexity of the disaster:

*"Even if it was said to be confusing, earthquake, tsunami, nuclear power plant... the opinion of friends and family was very valuable... well, the next week it was really quite difficult (to watch), just watching that, but because there was no other choice I turned on the TV and watched it..."*³¹

Most participants who were living in Tokyo at the time of 3.11 felt that Tokyo was in danger of being directly affected by radiation. Furthermore, the safety of food and water became real issues for Tokyo residents with the passage of time and concerns about radiation. All participants note that immediately after watching the news about the nuclear plant, they discussed the information they gathered from the media, either among family, friends and neighbours or in the digital community of

users who follow the same news or join the same online groups, as a guide to establish reliable information. The main concerns discussed in online or offline space were related to the nuclear plant: the seriousness of the disaster, the location of safe zones, radiation effects, and the safety of food and water due to radiation. When I asked Ryota (male, 50-59) whether he discussed disaster news with friends and others, he explained:

"We talked about the damage, and whether we could help in any way, and how the nuclear disaster would end... and because there was a story on radiation, where should we go and which food and vegetables are unsafe..."³²

Similarly, Saki (30-39) explains that even though she did not join any online groups or post information on social media, she was actively involved in a discussion with friends and family about the rumours and contradictory information on radiation effects they heard on TV:

"We talked about the accuracy of information and what to believe. In particular, information about the radiation is completely different depending on the medium and each day. I think about this even today. After all, I think it is controlled and that someone controls it. Especially TV..."³³

Another participant, Hana (40-49), who was in Osaka, talked to her friends from Malaysia who followed the same broadcast, discussing the difference between international and Japanese mass media coverage. After that discussion, Hana found it challenging to decide which coverage was more reliable:

"At that time, a friend living in Malaysia told me that the way of reporting is very different in Japan and overseas. In Japan, it is fragmented due to such damage, but there is no such thing abroad, it is quite different...I wonder which one is better..."³⁴

These participants' responses indicate that they turned to their friends, family or community of media users to establish what news is reliable and relevant. This demonstrates how discussing information with their immediate community of audience members or social media users contributed to the formulation of perceptions and evaluation of media credibility.

In the context of 3.11, participants conclude that trust comes from comparing multiple sources in the emerging inter-media environment and relying on personal judgment to determine its credibility. This indicates that the complexity of the 3.11 disaster triggered a combined media use in the form of inter-media, integrating both old and new media technologies to critically analyse and evaluate news content and develop independent judgment. These findings suggest an overall understanding that television is more professional and competent than online media in delivering accurate and reliable news, as participants tend to seek information from official and checked sources, still having confidence in the professional integrity of journalism and live broadcasts above the random sources and unregulated flow of information on social media. At the same time, findings of the study show that in the inter-media environment that emerged with the 3.11 disaster, the interplay of traditional mass media and online media spheres facilitates the evaluation of media credibility and development of personal opinion.

Present-day notions of trust in media

The 3.11 disaster altered some participants' views towards media and government institutions, changing perceptions of media credibility, which consequently led to changes in media use, mainly concerning the inclusion of online media, social media and news websites within one's media routine. Sixteen participants recall using online media, social

media or news websites, during and shortly after the 3.11 disaster. Interviews show a significant increase in participants who use online media, from 16 to 31, thereby showing that at the time of interviews, six years after the 3.11 disaster, online media, social media and news websites were afforded a similar level of importance as traditional mass media in participants' everyday media use.

Familiarity with the source is an essential factor in how respondents perceive the credibility of online media. Post 3.11, participants still tend to communicate with friends and people they already know, which gives them more confidence to regard the information that comes from familiar sources as credible. As one of the lessons learned from the 3.11 disaster, participants explain they became more cautious when accessing information posted by unknown sources and random individuals, as they perceived it as running a higher risk of being misinformation, a poor-quality message or fake news. For example, discussing his post 3.11 media orientation and news consumption, Takashi (age group 20-29) explains that if he is not familiar with the person who posted information, he cannot find it credible, because there is a risk of misinformation or rumours. He goes on to explain that:

*"Since there are times when I don't know the source on social media, it might be a rumour. On mass media, I try only to listen to facts."*³⁵

Similarly, Hiroshi (30-39) who often uses Twitter, tend to communicate with people he already knows, which gives him more confidence to regard the information that comes from familiar sources, or in the case of his explanation below, Twitter influencers, as credible to some extent:

There are many people on Twitter. There are some you can trust, and others that you definitely cannot. Some of them are acting as

*influencers, and what they say and the things they introduce, they've checked them out to a certain extent, so they have a track record. Rather than saying whether I can trust Twitter or not, there are people whom I can trust, so Twitter is suitable for making direct contact with them.*³⁶

Therefore, Hiroshi and Takashi's responses indicate that reliability depends not on the medium itself, but on the source. For example, familiarity with the source leads to credibility, in the case of family and friends. Sources of information that have a "track record" (*jisseki*) or that are "factual" (*jijitsu*) are also considered trustworthy.

Social media is still perceived as less credible than mass media, without significant changes in participants' levels of trust since the 3.11 disaster. Low trust in social media still comes from a perception of biased, incomplete, misleading or inaccurate information, caused by its unregulated flow of information, immediacy and unchecked sources. Although many believe that social media can to some extent overcome or complement mass media shortcomings, social media is still seen as less credible than television and newspapers. The minority of participants (three) who still turn to TV as their only source of news, refer to the habitual use and familiarity of an established pattern of television watching.

As mentioned earlier in the article, Kenjiro (50-59) believes there is a strong link between Japanese mass media and the government and maintains that greater independence in reporting is essential. Due to the poor television coverage of the 3.11 nuclear disaster, he said he lost trust in Japanese mass media, including NHK and commercial broadcasters. However, years after the disaster, because of his long-established habit of watching television, Kenjiro still perceives it is the most reliable medium for news. He especially credits NHK for its factual reports, but also mentions

that there are times when some issues and events are not reported:

*"TV watching has become a habit because the latest news is delivered at a fixed time. I don't think that is all, but I trust NHK to some extent. However, I think there are times when some things are not reported."*³⁷

One of the rare younger participants who choose mass media forms over social media, like Michiko (female, 20-29) and Miyuki (female, 20-29) both make a note that their perception of traditional mass media (television and newspaper) as credible, comes from habitual use:

Miyuki: *"I've watched it (TV) ever since I was little, so there is no need to doubt it."*³⁸

Michiko: *"I think newspaper is the most reliable media. When I was a child, I think my parents have taught me to read newspapers, and reading newspaper became ordinary..."*³⁹

These comments indicate that changing media habits in terms of incorporating social media in their accustomed media environment becomes difficult for three participants whose media habits still tied to traditional media and news that comes on TV at a scheduled time, or gets delivered directly to their home.

Most participants seem to agree that the major media outlets, such as NHK television news and national dailies such as the Asahi and Yomiuri, separate fact from fiction, but there are mixed opinions about whether such outlets are critical and transparent enough due to their tight link with political parties. When discussing their preference for online and international media sources, Toshi (male, 20-29), Kaori (female, 50-59) and Haruna (50-59) refer to a lack of critical coverage and transparency, as the primary reason for not trusting these sources. One of their comments was:

Toshi: *"It is difficult...I don't trust it at all. I*

*think that Japanese media has not done much of the critical articles in journalism, and I know the world's press ranking, I know it is low in Japan..."*⁴⁰

After the nuclear disaster, Atsushi (male, 40-49) started doubting news from mass media, realising it is biased and controlled, without providing alternative views and reliable information. For Atsushi, media bias that emerged post 3.11 nuclear disaster is the main reason for his distrust in mass media or as he explicitly says a few times in the interview: *"I hardly ever watch TV or read newspapers because it is full of lies!"*⁴¹

When it comes to media bias, the problem of political and institutional bias comes into consideration when discussing the credibility of Japanese mass media. Another participant, Wataru (male, 40-49), explains that his main decision to cancel his subscription to the *Asahi* and *Yomiuri Shimbun* comes from the view that major Japanese newspapers are tightly linked with political parties, and that this has significantly affected the coverage of 3.11 nuclear disaster.

Although there is a consensus that mass media forms provide verified and general information, online media sources are also thought to offer different perspectives on events, thereby suggesting that trust comes from a combination of multiple sources. One participant, Mei (female, 20-29), talks about how she views the information provided by mass media and online media as being different. She explains that mass media delivers official information at the macro level, while online media, especially social media, offers individual perspectives and opinions, which she sees as micro-level information. Mei stresses the importance of comparing both sources to see different viewpoints. Although she thinks Japanese mass media is not biased, she does say that it is essential to decide for yourself which source you will trust. In a similar way, Sana (female,

20-29) drew this comparison to highlight the importance of personal judgement in evaluating news content and the credibility of sources:

*After all, I think that mass media have high reliability because many people put effort into it and information is organised to some extent. On the other hand, because there are all kinds of people put together, information on social media is fast, but I think that it is necessary to judge whether it is reliable information by yourself.*⁴²

In this way, participants' comments suggest gradual changes in their media usage patterns, but more importantly, development in communication and civil society in Japan, where the user feels increasingly empowered to question, challenge and confirm the credibility from multiple media forms and sources. This opposes to the previously discussed notion of "*shōganai*," as participants refuse to accept traditional modes of communication as their sole source of news and favour sifting through and evaluating information from diverse platforms and relying on critical thinking and personal judgement.

Six years on from the 3.11 disaster,⁴³ fewer than ten percent of those interviewed rely on online and/or social media as a news source and trust them to deliver reliable and quality news. This group of participants in their 30s or 40s use curated (*matome*) websites as their primary source of news because they provide both sides of any issue, and rarely follow news on traditional mass media, due to the view that the information is biased and only partially reliable. Participants generally agree that the reliability depends on the source, especially when it comes to online media, and they make a clear distinction between random individual posts on social media platforms and news circulated on curated websites like Yahoo News and NewsPicks. Curated news websites aggregate top news stories from major media outlets, providing in-depth information and

allowing users to leave comments on news articles.

Interviews show that more trust is placed in news portals and curated (*matome*) websites than on social media, as all 13 participants who use them express high or partial trust and confidence, due to an overall feeling that the adopted news content from major news outlets is more credible than the individually posted information. Figures also show that low credibility is registered only among participants who use social media, with 18 of them who perceive social media as not credible at all and 6 participants who partially trust it. Within the broad category of online media, curated (*matome*) websites are perceived as more trustworthy than social media platforms, because they enable users to express their opinions, provide additional information, and think about each issue through comments provided by other users, which significantly contributes to the information validation process. Eiji (male, 30-39) uses both social media (Facebook) and news websites, but for credible news, he entirely relies on curated (*matome*) websites, particularly NewsPicks.⁴⁴ The main reason behind his preference for NewsPicks is the ability it affords him to see news of his interest in one place, but more importantly to read other users' comments on articles, which facilitate Eiji's judgment of whether the news is credible.

Similarly, Naoko (female, 30-39) first referred to NewsPicks when explaining which media form she enjoys the most: "*There is NewsPicks, where there is various news and where various people and experts comment on news... I think that is very interesting, so I read the news.*"⁴⁵

She continues to explain that she regularly uses NewsPicks, because she can see the comments of other people who frequently access news of similar interest, which helps her realise there are different perspectives on the story:

"Since it sometimes happens that I don't know

which information and news alone is right on NewsPicks, it is fun to be able to see news and how various people are watching it."⁴⁶

In other words, Naoko checks NewsPicks not only for its news content, but to read other users' comments and feedback on the news and compare information to decide what is reliable. The awareness of other users who share the same present and experience of the 3.11 disaster gives the user more confidence that rumours and fake news will be quickly corrected, and in the veracity of stories checked through other users' feedback and comments. More importantly, the interactive nature of online news portals enables participants to gain more comprehensive experience and general perception of news, drawing on other users' insights and different viewpoints to form their own opinion and evaluate media credibility. This suggests that aligning with a community of users who comment on curated news significantly contributes to their higher evaluation of its credibility. Furthermore, the increasing use of and reliance on digital news websites, complementing or coexisting with traditional mass media in inter-media environment which emerged with the 3.11 disaster, highlights that the internet in post-3.11 Japan, in addition to traditional mass media, plays a significant role in shaping public opinion.

Among thirteen participants who partially trust online media, ten of them belong to the 40–49 and 50–59 age groups and believe they can trust curated (*matome*) websites and get quick updates on information in their areas of interest. This group of participants still uses traditional mass media such as television or printed newspapers as a part of their media routine, complementing it with online news sources. When I asked Ryota (male, 50–59) to talk about his media use today and main source of information, he explained: *"I use internet as much as TV. After watching it (news) on TV, I often check it again on the internet."*⁴⁷ He

concludes that the careful selection of news is critical, which clearly explains why he uses both the Internet and television in his regular media routine. Participants' combined media use is driven by the notion that they cannot rely on any medium entirely, but through comparing traditional and new digital sources, they can receive different perspectives and evaluate medium credibility.

Comparatively, participants' low trust in online media mainly comes from the participants' general view that information on social media comes from different individual sources, often agenda driven, biased with personal feelings and sometimes too opinionated to be perceived as credible. Figures also show that the age of participants with low levels of trust in social media ranges from the 20s to the 50s. Thus, findings suggest there is a general awareness among participants that social media is not a credible news source.

Conclusion

Based on in-depth interviews, this article aimed to examine how Japanese media users perceive media credibility within the new inter-media environment that emerged in the aftermath of the 3.11 disaster. As my study demonstrates, where online and traditional modes of communication converge and intersect, individual notions of trust guide their engagement with different media platforms and information sources. This was highlighted as individuals began to question the credibility of television news coverage of the disaster amidst claims of bias and lack of critical reporting. While 26 participants mainly used television immediately after the earthquake and tsunami, sixteen people turned to online media in the wake of disaster, utilising different social media platforms or/and curated *matome* websites in combination with TV to search for supplementary information, and found the new media space also offered alternative sources of

knowledge on the 3.11 nuclear disaster. Trust in online media comes from the new visuality facilitated by user-generated images and real-time videos of the disaster, which helped participants gain alternative knowledge on the disaster, and a means of comparing different media sources. Whereas trust in the television image comes from habitual engagement with the NHK live news in a time of emergency, with 26 participants describing television as highly or partially credible, confidence in online media stems from familiarity with its sources. That is, participants explain they put their trust in the comments and feedback provided by their family, friends, or same-community users, as a guide to what is relevant and credible. However, the number of participants who trust online media is comparably low, with only three participants who explain they find social media or news websites to be credible source of news.

The 3.11 disaster exposed many issues concerning Japanese mass media: bias, lack of investigative reporting (Gill et al., 2013; Kingston, 2012; McNeill, 2014), the cartelised media system (Freeman, 2000) and others. Participants' responses show that the 3.11 disaster did not trigger radical changes in their media use, as the increasing use of online sources, have not replaced the traditional mass media. Even though recent statistics show low levels of trust in media institutions in Japan (Edelman Trust Barometer Report 2018), participants trust television more than online media due to belief in the authenticity of traditional news formats. High levels of trust and reliance on television come from the familiarity and habit of television watching, and the sense of liveness and immediacy provided by NHK. This is further buoyed by confidence in professionally produced and regulated news, fact-checking and sourcing, as opposed to the unregulated flow of information on social media. However, in a time of national emergency and mediatised disaster when bias and lack of critical reporting are highlighted, participants turn to online media in search of

diverse perspectives and alternative views. In these more volatile times, but also as time calms a bit post-3.11 disaster, these new media patterns remain intact as participants actively turn to a combination of older and newer media platforms and demonstrate personalised media use. In this study, as one of the main effects of the "triple" disaster on overall perceptions of media credibility, we see Japanese media users who are no longer confined to traditional media systems, but are predominantly active, media-literate, inquisitive, and critical media consumers, who are motivated to use new digital media, search for news and navigate their way through complex media environment. They rely on personal judgment in alignment with a familiar community of audience and users to evaluate media credibility. This has implications for our understanding of "trust" in news sources in the inter-media environment. I argue that trust comes from combined media use, in other words, the interplay of traditional and new modes of communication which facilitate an individual's evaluation of media credibility and guide his/her media engagement.

The participants' combined media use is almost evenly spread across four different age groups, suggesting that people of varying ages (20–59) are slowly embracing and adjusting to the new inter-media environment. Japanese media society is moving towards more community-oriented online communication, where the digital divide between older and younger generations slowly decreases. Since 3.11, younger generations—those in their 20s and 30s—have migrated to digital platforms and increasingly come to use online sources, while older generations—aged 40–49 and 50–59—recognised the significance and affordances of different online media, mainly *matome* websites and social media platforms, which they slowly incorporated into their media routine as one of the news sources. The increasing use of and confidence in *matome* websites, such as NewsPicks and YahooNews,

show that the internet in Japan, in addition to traditional mass media, plays a significant role in shaping public opinion. The examples of the changing dominance of traditional mass media and new media competition, presented in this paper, is an evidence of a general change in Japan, where after 3.11 people of different age groups utilise new platforms to evaluate traditional media sources, as a guidance for challenging media credibility. With the rise of online media and the individual's routine exposure to an abundance of opinions and information, the inter-media environment is becoming more complex and less controllable, in terms of its reliability and transparency of sources. Participants' experiences with using media in a disaster context demonstrate a great need for balanced reporting on a disaster, which in their opinion should be informational, affective, and more critical, to increase levels of trust in mass media. Considering that the mass media cross-ownership and lack of diversity in reporting made a significant impact on national media framing of 3.11 disaster and public perceptions of media credibility, it would be worth further unpacking individual perceptions of the credibility of different Japanese broadcasters, public and commercial, and newspapers (local, regional, national). This could be one avenue for further research.

Moving forward, having in mind the impact of perceptions of media credibility on individuals' media habits, our aim should be to examine how, alongside rapid changes in new media technologies and developments in the interplay of old and new media forms, both online and traditional mass media will evolve and reshape news habits and attitudes and contribute to disaster communication.

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Notes

¹ In a survey conducted by Nomura Research Institute in 2011, the majority of respondents (80.5 percent) found NHK television to be the most reliable source of information after the earthquake (Jung, 2012).

² TEPCO (Tokyo Electric Power Company Holdings, Inc.): Japanese electric utility holding company that operates the Fukushima Daiichi Nuclear Power Plant. TEPCO bears the primary responsibility for the incompetent handling of the nuclear disaster in Fukushima Daiichi Nuclear Plant, which happened on 11 March 2011, due to its failure to meet basic safety requirements in risk assessment.

³ Also known as “information cartels” (Freeman, 2000), because of the cartelisation process that results from the institutionalisation of the close relationship between official news sources and reporters, *kisha* clubs are the primary mechanism for news gathering in Japan. They are described as an institution that contributes to a deficit of critical reporting (Kuga, 2016) by controlling and regulating the information flow.

⁴ The study conceptualises the 3.11 disaster as three interrelated events: earthquake, tsunami and nuclear meltdown. It differentiates between three main phases of the 3.11 disaster for the purposes of analysis: the immediate aftermath of the earthquake and tsunami (11 March 2011), the immediate aftermath of nuclear explosion (12 and 14 March 2011) and the timing of the interviews in the period August–December 2017, which I refer to below as “present day,” or six years after the immediate aftermath.

⁵ The fieldwork extended from August to December 2017

⁶ Statistics Bureau of Japan, [Statistical Handbook of Japan, 2019](#). Accessed on 25th March 2020.

⁷ All names of participants cited in this paper are pseudonyms.

⁸ はじめにNHKをつけてるなんか少なくとも僕の習慣ではあって、地震があったらNHKそれは一つの習慣になって、たぶん多くの日本人はその習慣を持ってるん？ じゃないか、とりあえずNHK□All translations are the author’s except where noted.

⁹ テレビを見て、全部テレビを見て、初めてすごいことになって気づいて。主な情報源は多分日本人はほとんどテレビ、あの時は。

¹⁰ もちろん、Facebookは情報発信するけど、Facebookこそ正しい情報かどうか分からない、各個人が書いて発しているから。連絡でもツールとしていい、だけど、情報発信としては適切かどうか分からない。だから、テレビはある程度...一応ルールに基づいた情報発信されているもので、ああいう場合では多分信頼できたとそれしか信じることができない

¹¹ ソーシャルメディアは結構その人個人の視点とか思いによって、共有されるものは変わってしまうので、もう少しフラットに事実を確認するためにはマスメディアの方が信頼できるかなと思います。

¹² ソーシャルメディアというと、やっぱりデマが流れてくる、そこはフィルターかからないので...メディアが悪いんじゃないんですけど、そういうマイナスの側面はやっぱりどうしてもデマ

¹³ 個人の意見が山ほどのかってて色んな立場の人が違った意見でいうから、それがいいところあるけど、整理がつかなくなっちゃうので、過激な意見もすごく多くて言い過ぎて...

¹⁴ はい、信頼できると思いました。映像には、嘘はない。信じてるかどうかというよりは、映像としては事実を伝えている、そのでてくる、その会社の人たちがいっていることが信頼できるかということではなくて、この人がこういうことを言う立場にいる、原発でこういうことが起きてるって、ヘリコプターからのぶんとかはそれは事実として、受け止めました。

¹⁵ テレビのいいところはやはり映像ですよ、リアルタイム。結構リアルタイムで恐ろしい映像は入ってくる。

¹⁶ それはムービー結構、なんていう、ながれて、あのう瞬間的なお写真じゃなくて、実際に動いているものをメディア伝えられたので。

¹⁷ 起きた時はリアルタイムの映像が流れてくるので、そのことについては信頼できると思ってました。一つはいいところはリアルタイムの近い情報がどんどん出てきたこと□

¹⁸ テレビは見てたけど全然わからなかった。説明してるけど、長い説明をしながら全く意味が分からない。

¹⁹ そこで外国のメディアにはあのう… 風向きで放射線物質の飛んでる… こう予想図みたるのが出てるのに、どうしての日本のメディアはあれを出さないのか。あとに、日本のメディアに信頼を失ったと思います。外国のメディアは出してる情報…日本のメディアは出してる情報…皆本当に不安でした。

²⁰ A computer system utilised during a nuclear disaster to predict dispersions of radioactive substances and help people evacuate to safe areas. The government and mass media in Japan did not make use of SPEEDI, which consequently led to an absence of accurate information available to the public and people evacuating to places with high levels of radiation.

²¹ マスメディアは国家権力によって抑えられちゃう… だいたいそのコントロールされているよりは睨まれている。望まないような報道すると、首切られるよね。独立性はないよね。それは非常に危ないですよ。

²² 原発の情報、テレビのはあまり信用してなかった。なんかコントロールされているようにみえてました。あとね悪いところはもういっちゃんね…原発に関して、不安は多いニュースでした、それはどっちの話の話面受ける受けた、わからない…

²³ その時に、Facebook があったから、すごい役に立って。

²⁴ 2channel (Japanese: 2ちゃんねる) is an anonymous online Japanese textboard community that was established in 1999.

²⁵ 福島県人に対してのいろんな人がコメント持ってるんですね。あの人たちが被放射線されているんですが、あそこの食べ物おせんされてたべれないですとか、決してこうニュースで取り上げられないようなコメントが持ってるね…それがほかの人どう考えるか…他者がどう思ってるかっていう、知るために2channelを使った。

²⁶ メディアはしょうがないね

²⁷ テレビが一番…ずっとテレビつけてた。ちょっと疑ったね、特に福島原発は本当かなと思って見てた。安全なのか、避難した方がいいか、外に出ない方がいいとか、あまりテレビで言うてことは本当かどうかわからなかった。

²⁸ その時に、自分の冷静じゃなかったから、メディアに冷静な態度取れなかった。テレビを見て、ショックになって、あまり冷静見てあまりなかった。もうちょっと落ち着いてね。メディアはしょうがない。

²⁹ Twitterやっぱ、増えましたよね、見るしか長い見るし…速いからですね。すぐに入るから情報…震災起きたとって、あの震災はその震度、おおきな地震、その時は絶対やばい起きて、すぐTwitterみるし…

³⁰ あの時何があったのかっていうのを整理、自分でするためにYouTubeの動画を活用するようになりましたね。いろんな人がビデオカメラでいろんな場所をとってるので、自分が知らなかったことを知れたりするので、YouTubeの動画をみたりするようになりましたね。

³¹ わかりにくいといわれても私たちも地震、津波、原発… 友人と家族すごく貴重な意見として…次の週にさすがすごいづらくなってきたっていうか、そればかりを見てて、ほかのチョイスがなかったの、テレビつけるそれみたいな、…

³² 被害の状況だったりとか、なにかサポートができないだろうかとか、発電所の話はどうやって

結末... どこに逃げたらいいのか、あとは放射線の話があったので、どこの食べ物、野菜はだめだ...

³³ 情報のその正確さとか、何を信じるかみたいな話し合った。特に放射能の情報各メディアによっても、各その日によっても全然違って、今でもどうなのかなって思います。やっぱ、コントロールして、だれかがコントロールしてるって思います。特にテレビ...

³⁴ その当時、マレーシアに住んでいる友達がいたんですけど、映像のほう、報道の仕方が日本と海外やっぱり違う...日本って、そういうひがいがあってモザイクかかるんです、でも海外そういうものがない、けっこうまああたりにする、ちがう。それがどっちがいいのかなあ...

³⁵ ソーシャルメディアはソースがよくわからないこととかがあるので、うわさぐらいになっているできてます。マスメディアのほうが...マスメディアはマスメディアで事実しか聞かないようにしています。

³⁶ Twitterのなかでいろんなひとがいて、中には信頼できる人もいれば、全然そうじゃないものもあるとおもう。中には、本当にinfluencerとして活動していて、彼らのいうこと、紹介する情報はある程度とってやるからの、っていうふうな実勢の人もいるから...だから、Twitterが信頼できるかどうかというよりは、Twitterのなかで信頼できる人もいるので、そういう人とダイレクトにつながるにはTwitterが適している。

³⁷ 決まった時間に一番新しい時間ニュースをやってくれるので、習慣になってますね。それがすべてだとは思いませんけど、やっぱある程度NHKは信頼して、でも報道されないこともあるんとおもいます□

³⁸ 小っちゃい時は見てるから、あまり疑うことはない。

³⁹ 新聞が一番信頼できるというメディアだと考えていて...子供のころ、多分両親も新聞を読みなさいっていう風に教育してきたし、新聞を読むのが当たり前となった。

⁴⁰ 難しいところです、僕はあまり信用しない...そのジャーナリズムとかメディアで日本のメディアってあまりその批判的な記事をちゃんと出来ていないと思ってて、その世界の報道ランキングってあるじゃないですか、知っています、日本で低いんですよ。

⁴¹ テレビと新聞ほとんど見ないです。うそだから。

⁴² マスメディアはやっぱりいろんな人の手がかかって、情報が整理され、ある程度整理されて、発信されているので信頼度が高く、信頼度が高いなと思っています。一方、ソーシャルメディアはやっぱりいろんな人が合わせるので情報はすごく速いんですけど、ちゃんと信頼できる情報かどうかっていうのは自分で判断しないといけないという風に思っています

⁴³ The interviews with participants were conducted in the period August-December 2017

⁴⁴ NewsPicks was launched in Japan in 2013 as a social media outlet, created with a subscription-based model, featuring reporting from its own and Japanese media outlets, as well as international publications. As a curated news platform, NewsPicks allows users to gather news related to the topics of their interest and share articles along with their opinions, which are followed by discussion threads. One of the unique features of NewsPicks is that the user cannot interact with other users or reply to their comments but can only comment on a news article. In this way, each article has a stream of thoughts and immediate reactions of everyone who is reading the news story, which provides a variety of different opinions

⁴⁵ NewsPicksっていうのがあって、そこには色んな色んなニュースとかニュースに対して色んな人がコメントをつける名人とか...それはすごく面白いなと思って、読んでます。

⁴⁶ NewsPicksは情報、ニュースだけでは何が正しいかわからないこともあったりするのでそれをいろんな人たちがどういう風に見てるかみたいなのはニュースと一緒に見れるのが面白かったですよ。

⁴⁷ テレビ、インターネット同じぐらいですね。テレビで見た後、インターネットでもう一回調べるこ

とが多いからです。