The Fukushima Disaster and the "Clash of Risk Cultures": Japanese and German Journalists' Perceptions of a Nuclear Crisis

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Abstract: The article examines how nuclear risk was perceived by German and Japanese journalists covering the Fukushima Disaster. Drawing from the theoretical framework of Beck's *World Risk Society*, the journalists' personal risk perceptions are reconstructed from narrative interviews, adding an important variable to the understanding of journalistic communication on risk and disaster. The results indicate that German correspondents in Japan were highly concerned about their personal safety while Japanese journalists hardly showed any anxiety with regard to the nuclear disaster. The varying perceptions also widely applied to the journalists' professional experience of the disaster, although further influences like organizational culture came into play as well. The article concludes that historically shaped discourses are an important macro factor for media reporting on risk and disaster.

Keywords: Nuclear disaster, journalism, crisis communication, risk communication, risk society, comparative research

Introduction: National perspectives on a global disaster

As we know from the works of Beck (1992, 2009), risks can be either dramatized or downplayed depending on the norms[1] that decide about what is known and what remains unknown in a given society. Especially when it comes to risks that are scientifically hard to determine, such norms come into play and often lead to fundamentally different assessments across societies. This is precisely what Beck (2009) called the "clash of risk cultures". According to the author, the role of media in the representation of risk (and, consequently, disaster) is crucial and has far-reaching political implications. One of the unresolved problems in this context is that while

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[1] This paper follows the definition of Hechter (2001, p. xi) in that "Norms are cultural phenomena that prescribe and proscribe behaviour in specific circumstances. As such, they have long been considered to be at least partially responsible for regulating social behavior." Unlike legal norms, which are codified rules, social norms are often informal and dynamic representations of accepted behavior. They are subject to ongoing social negotiation processes, with the result that "contradictory norms will emerge, or the group with the strongest interest will succeed in having norms that benefit it will prevail." (Horne, 2001, p. 17)

many of the risks and disasters we face today do not adhere to national borders (e.g. climate change, terrorism, nuclear accidents), the nation-state framework continues to shape traditional media discourses (Cottle, 2009, 2014; Pantti, Wahl-Jorgensen, & Cottle, 2012). This holds true even in case of the Fukushima Disaster, a "transnational media event" (Rantasila, Sirola, Kekkonen, Valaskivi, & Kunelius, 2018) that triggered nuclear phase-outs in Germany, Switzerland, South Korea, and Taiwan. International studies revealed remarkable differences with regard to how the disaster was reported, in particular different national views on the gravity of the nuclear disaster and risks related to radiation (Hayashi, 2013; Hayashi & Chung, 2013; Kepplinger & Lemke, 2014, 2015; Kowata et al., 2012; Schwarz, 2014; to mention a few). The comparison of news coverage in Japan and Germany yields one of the most outstanding examples of this phenomenon. While Japanese media initially focused on the earthquake and tsunami disaster (Tanaka & Hara, 2012; Tkach-Kawasaki, 2012), German news outlets concentrated on the crippled power plant from the start (Hayashi, 2013; Kowata et al., 2012). Concerning the nuclear hazard, media coverage in Japan largely followed the official line and focused on avoiding panic and so-called "harmful rumors"[2] (Itō, 2012; Yamada, 2013), paying relatively little attention to health-related risks (Schwarz, 2014). On the contrary, many German media outlets were criticized for erroneous and exaggerating reports of the nuclear disaster (Coulmas & Stalpers, 2011). Kepplinger and Lemke (2014, 2015), who had found a strong anti-nuclear bias in German news coverage as compared to other European media, even accused German media of instrumentalizing the disaster and behaving like anti-nuclear "activists" (2014, 149).

How can the different ways of reporting be explained? First, it is important to note that foreign coverage of disasters is often more negative and emotional than reporting of a domestic disaster (Pantti et al., 2012, 66–67). This explanation, however, does not seem to be sufficient given the fundamental differences outlined above. The analysis has to go deeper because media messages are influenced by a variety of factors on macro, meso, and micro levels (Shoemaker & Reese, 2014).

Following this logic, Meissner (2019, 51–113) showed in a systematic literature review that Japanese and German journalism is characterized by several important differences. To mention three key aspects: 1) The Japanese media system has comparatively close ties to the political and the economic systems. This is manifest in a network of so-called 'reporter clubs' (*kisha kurabu*) in ministries, companies etc., where a primary goal of Japanese reporters is to establish close relationships with decision-makers, often resulting in collusion and uncritical reporting. 2) With regard to the style of reporting, media coverage tends to have a more subjective slant in Germany than in Japan, where reporting is known for its strict focus on officially confirmed facts. 3) On the micro level, the political leaning of journalists in Germany tends to be left of center. Surprisingly, there is no useful data on the political orientation of Japanese journalists, but it is important to note that the reporters of the

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[2] The original term *fūhyō* here refers to the anxiety of consumers concerning radioactive contamination of food products in particular.

big media organizations in Japan, especially the newspapers, typically come from the same elite universities as the political and economic leaders of the country.

While the so described journalistic cultures should be considered an important context factor for the mentioned differences in reporting the Fukushima Disaster, they still do not entirely explain them. This paper therefore aims at exploring another crucial aspect: how journalists' perceptions of the disaster were shaped by discourses on nuclear power in their country of origin. Secondly, the paper is aimed at a related and not less important aspect: how journalists conceived their role in the political debate about nuclear risk.

To clarify a key term of this paper, 'risk' refers to the possibility of a disaster, implying potential harm to human life and/or damage to property. In risk sociology, the term is attributed a human-made quality whereas 'danger' can also be of natural origin (Beck, 1992, 2009). According to Bonfadelli (2004), risk has a technical and a social dimension. The former refers to a probabilistic risk calculus based on scientific methods. The latter refers to the social negotiation processes that, among other aspects, influence the perceived gravity and acceptability of different types of risk.

News reporting of technological risk

In the context of debates surrounding the public's acceptance of technologies such as nuclear energy, scholars critically analyzed a plethora of communicative problems from early on. Among them are the role of cognitive biases in decision-making on risk (Kahneman & Tversky, 1979), differences between experts and lay peoples' judgments (Slovic, Fischhoff, Lichtenstein, & Roe, 1981), or the social and psychological factors behind the public perception of risk (Renn, 1984), to mention only a few. A popular model that combined different lines of research within this paradigm was the Social Amplification of Risk Framework (Kasperson et al., 1988).

However, it was not until the Chernobyl Disaster in 1986 that the role of the mass media in shaping risk perceptions became the center of attention. Some scholars argued that journalists distorted the gravity of risks, often based on leftist political convictions (Kepplinger, 1988, 1991; Lichter, Rothman, & Lichter, 1986; Rothman & Lichter, 1987). These studies were based on a technology-centered risk concept and postulated that media reporting should reserve to a news format based more or less exclusively on information provided by scientific experts.

Other researchers have argued that news coverage, while being based on scientific facts, should also include the social dimension of technological risk and open the debate to the broad public (Bonfadelli, 1999, 2004; Ruhrmann, 1992, 1996). This tradition is particularly strong in the German-speaking academic community and has been backed by risk sociologists like Luhmann (1986, 1991) and Beck (1992, 2009).

More recently, the focus of research has shifted to less normative approaches analyzing how journalists[3] select and portray reports on technological risk (Guenther, Froehlich, & Ruhrmann, 2015; Wilkinson, Allan, Anderson, & Petersen, 2007). Important factors are for example news values, organizational factors but also the journalistic self-concept. Given that public risk perception is largely culture-dependent (Beck, 2009), however, there is surprisingly little research that takes into account the broader cultural and historical context of risk communication (an exception is Kuhnhenn, 2017, who demonstrated that depending on the subject of investigation, risk communication research needs to acknowledge historical, political, cultural, and socio-political backgrounds). The paper will therefore focus on this aspect in the context of media reporting about the Fukushima Disaster.

The evolvement of discourses on nuclear power in Germany and Japan

In 1953, then U.S. President Dwight D. Eisenhower initiated his "Atoms for Peace" campaign during a much noted speech at the *General Assembly of the United Nations*. He propagated the peaceful use of atomic energy and announced the technology would be helpful to build a safe and prosperous future for societies worldwide. Germany and Japan were among the countries that initially embraced the idea of civil nuclear technology (Radkau 2011, 210–211, 219–22). Both countries built first reactors throughout the 1960s.

However, from the first half of the 1970s onwards, local demonstrations against planned nuclear facilities began to spread across Germany. Protests in places such as Wyhl, Brokdorf, Gorleben and Krümmel marked the beginning of the most powerful anti-nuclear movement worldwide (Radkau & Hahn 2013, 302–311). Maybe the most important turning point was the Chernobyl Disaster in 1986: It caused the diffusion of radioactive fallout across large parts of Europe including Germany. This led to widespread anxiety in the German population and to a growing reservation against the technology (ibid., 340). According to Seiffert and Fähnrich (2014), it was the key moment for the anti-nuclear discourse in Germany and paved the way for the later nuclear phase-out.

Already back in 1986, the role of the media was heavily debated. According to Kepplinger (1988), German news media had already started to assess nuclear energy more critical from the mid-1960s, but especially from the 1970s onwards. He found that the main effect of the Three Mile Island accident (1979) and the Chernobyl Disaster (1986) on the mediated debate was just an intensification of the already prevalent skepticism towards nuclear energy. It is striking, however, that other studies yielded quite different results. Van Buiren (1975, cited in Radkau & Hahn, 2013, 284) analyzed a large sample of newspaper articles and found that between 1970 and 1974, only a small proportion included concerns with regard to nuclear power.

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[3] Of course, social media has a growing influence on public risk communication (Weingart et al. 2017). However, studies such as the one by Wolling and Arlt (2015) show that traditional journalistic media continues to play an important role in shaping public perceptions of technological risk.

Even after the Chernobyl Disaster, pro-nuclear voices were clearly more frequent in the coverage of five national newspapers than anti-nuclear voices according to a study by Rager, Klaus and Thyen (1987).

A review of the literature concerning the discourse on nuclear energy in Japan reveals clear differences. The fact that there was no significant controversy about nuclear energy before 2011 is quite surprising according to Radkau (2011, 219–221) – given that the country suffered the traumatic experience of two atomic bombs. Weiss (2019, 84–100) explains that Japanese politics and industry effectively managed to separate the national trauma from the civil use of the technology with the help of nationwide networking and campaigning activities. Among the main actors working towards the goal of the development of the nuclear power sector were the *Japan Atomic Industrial Forum* (*JAIF*) founded in 1956, which held regional meetings for the advancement of nuclear energy with politicians, scientists and media representatives across the country (ibid., 94–97). Further promotional activities were conducted by the *Japan Atomic Energy Relations Organization* (*JAERO*) founded in 1969, which was more specifically aimed at journalists (ibid., 113–115). Of course, lobby organizations promoting nuclear energy also existed (and continue to exist) in Germany. The most important one is *Kernenergie Deutschland* (Nuclear Energy Germany)[4], which worked towards increasing the technology's acceptance in Germany. However, nuclear lobbyism was clearly more far-reaching in Japan, where promotional content even spread to school books and popular culture (Weiss, 2019, 98—99, 128). Also, the amount spent in 2010 by the German nuclear industry on advertising in journalistic media was 121 million Euros (Axel Springer AG, 2011); in the same year, Japanese energy firms invested an equivalent of 810 million Euros on advertisements in news outlets (McNeill, 2012).

Consequently, it was achieved to win an important part of Japan's media landscape over the pro-nuclear agenda. In a framing analysis of serialized articles in the three biggest Japanese newspapers, Weiss (2019, 356) showed that especially the *Yomiuri Shimbun*, the newspaper with the highest circulation in the world, and the prestigious *Asahi Shimbun* propagated nuclear energy before 2011. The Japanese anti-nuclear movement, while successfully organizing resistance against several planned nuclear facilities since the early 1970s, struggled with achieving significant and sustainable media presence (ibid., 106–108).

In contrast to the German case, the Chernobyl Disaster did not inspire leading Japanese newspapers to question the safety of domestic nuclear energy (Abe, 2013). Despite growing concern in the population, national media typically either suggested to further improve nuclear safety or just stressed there was no reason to believe anything similar could happen in Japan. Nuclear skeptics were sometimes denounced as irrational or even hysterical; several papers also stressed the need to export Japanese nuclear technology to contribute to global nuclear safety (ibid.,

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[4] Until 2019, the organization was known as *Deutsches Atomforum* (German Atomic Forum).

1978–1980). This kind of coverage exemplifies what critics – especially after the Fukushima disaster – called the nuclear 'safety myth' (*anzen shinwa*). It is a phenomenon that has been associated with the so-called 'nuclear village' (*genshiryoku mura*), a term that is meant to describe the collusion between the nuclear industry, politics, bureaucracy, media, and academia in Japan (Honma, 2016).

In this context, it is noteworthy that neither a series of accidents in several Japanese nuclear sites in the 1990s – such as the one in the nuclear recycling facility in Tokaimura (1999) – nor the failure to solve the persistent safety issues in the high-performance reactor in Monju (completed 1995, scrapped in 2016) led to a disruption of the "safety myth" (Nanasawa 2005, Yoshida 2016). This is problematic also from a disaster preparedness perspective: Various investigation commissions including the *International Atomic Energy Agency* (*IAEA*) consider the firm belief in the absolute safety of nuclear power in Japan prior to 2011 a "major factor that contributed to the accident" (IAEA, 2015, v), precisely because on various levels, the lacking awareness of risks led to enormous deficits in disaster preparedness and mitigation (see also The National Diet of Japan, 2012).

However, this is by no means to idealize the discourse on nuclear energy in Germany, where Fukushima triggered an energy shift that in retrospect appears to be hasty and, in many aspects, poorly planned. In this context, previous studies have criticized that reporting of the disaster and the debate about the nuclear phase-out was not well-informed and moreover dominated by emotional argument rather than political deliberation (Nienierza, 2014; Weiss, Markutzyk, & Schwotzer, 2014).

Methodology and sample profile

As part of a larger research project, five expert interviews with German and Japanese communication/social science scholars were conducted, as well as 19 in-depth, narrative interviews with German and Japanese journalists who covered the disaster. For the sake of brevity, the following analysis will focus on a selection of 15 narrative interviews which are most closely connected to the scope of this paper. The remaining four narrative interviews were not included because they were mainly related to other specific aspects of disaster reporting. The entire analysis is available in German language (Meissner, 2019).
As this is a qualitative study, it is not the aim to achieve a representative sampling, an idea that follows quantitative research logic. Instead, the strategy used is theoretical sampling, which is rooted in the Grounded Theory by Glaser and Strauss (1967). While avoiding notably unbalanced samples, the aim is to achieve a diverse selection of cases that allows for building a variety of types that can be clearly distinguished. More and more cases are investigated until the developed typology reaches the state of theoretical saturation. Nohl and Ofner (2010) recommend this sampling strategy for interview analysis with the Documentary Method (outlined in the next section).

Table 1: interview samples

	media organization, political leaning (if evident)[5]	name, position	location of coverage
German media	*ARD* (national public broadcaster, TV)	Philipp Abresch, Tokyo bureau chief	Tokyo (temporarily evacuated to Osaka)
	Süddeutsche Zeitung (national newspaper), center-left	Christoph Neidhart, Tokyo correspondent	Tokyo (temporarily evacuated to Osaka)
	Frankfurter Allgemeine Zeitung (national newspaper), right-leaning	Carsten Germis, Tokyo correspondent	Tokyo (temporarily evacuated to South Korea)
	Freelancer (various TV and newspaper), diverse	Sonja Blaschke, Tokyo correspondent	Tokyo (temporarily evacuated to Germany)
	ARD (national public broadcaster, radio)	Peter Kujath, Tokyo bureau chief	Tokyo (temporarily evacuated to Osaka)
	ZDF (national public TV broadcaster)	Elmar Thevessen, head of news department, deputy editor-in-chief	Mainz (Germany)
	tageszeitung (national newspaper), left-leaning	Sven Hansen, foreign desk editor	Berlin (Germany)
Japanese media	Anonymous (national economic newspaper), right-leaning	anonymous, reporter	Tokyo
	NHK (national public broadcaster, TV)	Junro Ōmori, documentary filmmaker	Tokyo
	J-WAVE (radio station for Tokyo metropolitan area)	Hirofumi Nakano, freelance presenter, contributing editor	Tokyo
	Japan Times (English-language national newspaper), left-leaning	Sayuri Daimon, editor-in-chief	Tokyo
	OurPlanet-TV (web-based activist video platform), left-leaning	Hajime Shiraishi, editor-in-chief	Tokyo
	Kahoku Shinpo (regional newspaper for Tōhoku)	Hideya Terashima, senior reporter	Miyagi/Fukushima prefectures
	JNN (national private TV network)	Hajime Misawa, Berlin bureau chief	Osaka/Berlin
	Asahi Shimbun (national newspaper), left-leaning	Ken Matsui, Berlin correspondent	Berlin

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[5] For more detailed information on the political leanings of German and Japanese news outlets, see Meißner (2019, 73–75, 97–98, 253–255).

The sample of this study centers on, but is not limited to, journalists of TV stations and newspapers. This is because these were arguably the most influential media for the Japanese audience, and because almost all German correspondents in Tokyo work for TV and newspapers. The seven German journalists all mainly work for national media; their eight Japanese counterparts represent national as well as regional/local and, in one case, alternative media.

The selected media organizations of either country range from left-wing (e.g. *tageszeitung*, *OurPlanet-TV*) to conservative (e.g. *Frankfurter Allgemeine Zeitung*, *NHK*). Twelve of the interviewees are male, three are female, which is due to both Japanese journalism as well as the group of German foreign correspondents in Japan being a male domain. Ten informants had their offices in Tokyo when the disaster happened and therefore faced the same situation with regard to their personal safety.

With one exception, none of the journalists requested anonymity. Therefore, the interviewees are generally quoted with full name, but without age as the analysis showed no differences related to this characteristic (the informants were between 37 and 60 years of age at the time of interview). I conducted the interviews in person between March and November 2014, the languages used were German, English, and Japanese.[6]

Narrative interviews and Documentary Method

According to Schütze (1977), who developed this interview type, a narrative approach encourages the informant to provide an impromptu narration that "entangles" him in his experiences and therefore yields a detailed and authentic account of his memory. The method is designed to reduce the influence of the informant's present viewpoint on the interview content. It is furthermore a way to avoid intervention by the interviewer as far as possible. This is of special importance in intercultural research, where the interviewer's primary understandings and normative assumptions bear the danger of leading to artefacts (Kruse, Bethmann, Niermann, & Schmieder, 2012), especially if the cultural backgrounds involved are as different as Japan and Germany (Hayashi & Kopper, 2014).

I analyzed the interviews with the Documentary Method (Nohl, 2010) which is based on the idea that the explicit content of an interview is not the only meaningful level of analysis. Instead, the Documentary Method is designed to reconstruct "the meaning that underlies and is implied with these utterances," as Nohl (ibid., 200–201) states. The implicit content is called "documentary meaning." According to its originator Mannheim (1964, 1980), the concept resembles more than just an individual

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[6] The author of this paper is proficient in Japanese but had additional help by a native speaker and a professional translator during some of the interviews and throughout the translation in order to make sure to avoid errors and misunderstandings throughout the research process..

mental state. Instead, the documentary meaning often points to a specific social context, including shared routine practices and experiences. These patterns, which the Documentary Method calls "orientation frameworks," can best be reconstructed from narrative and description rather than from argument or evaluation (Nohl 2010, 196). The orientation frameworks can be validated by finding similar as well as diverging cases. This process is reiterated until the various orientation frameworks (now labelled "sensegenetic types") reach the state of theoretical saturation (ibid., 211–212).

A further methodological step, the so-called "sociogenetic type formation," looks at the social contexts which the reconstructed types belong to (ibid., 212–214). In other words, the researcher strives to identify the fundamental characteristics behind the diverging type formations. According to Nohl, this procedure is a way to provide a validated explanation of how the differences observed came into being.

Results

As the Documentary Method is an inductive form of analysis, there are no predefined categories which are applied to the empirical material. Instead, the analysis is iterative and yields different type formations based on the comparative analysis of a variety of cases. In this study, the main points of comparison were 1) journalists' perceptions of the disaster (type formations: low vs. high sensitivity to nuclear risk) and 2) journalists' role concept concerning the political debate about nuclear risk (type formations: narrow focus on 'official' sources vs. broad focus on a variety of sources).

Bearing in mind that the essence of the Documentary Method is the comparative interpretation of narratives, it is indispensable that this section gives substantial space to how the interviewees described their experiences. The analysis, however, will necessarily highlight examples that stand for the general tendencies found in the empirical material.

Journalists' perceptions of the disaster

While interviewing German and Japanese journalists who lived and worked in Tokyo, it soon became clear that both national groups experienced the disaster in different ways.

First, I will look at how the interviewees describe the instant of the earthquake. The German journalist Abresch (*ARD*) remembered his excitement during the shake, revealing that he did not take the situation seriously at first. Contrastingly, the Japanese journalist Nakano (*J-WAVE*) described a sense of panic as he felt reminded of a disastrous earthquake that he experienced in 1995 in West Japan. While Abresch mentions the catastrophic tsunami only in brief terms and soon turns to the nuclear disaster, Nakano's account is clearly dominated by the earthquake and tsunami.

Without being asked about it, he explained this thematic focus with the scale of the disaster and the fact that "we were so busy […] collecting the information about [the] tsunami" that the staff at *J-WAVE* had no time to pay attention to the nuclear plant. Meanwhile, Abresch paid attention almost exclusively to the events at the *Fukushima No. 1* power plant in the interview. He said that since he learned about the incident, he felt a personal threat with regard to the nuclear disaster because he anticipated "this may affect us [in Tokyo], too." After three reactors had exploded, Abresch and his team decided to evacuate from Tokyo to Osaka in West Japan and continue their work from there. It is striking that he devoted only little attention to his professional work but much more to personal security issues in the initial part of the interview.

That is in stark contrast with Nakano, who did not mention any sense of personal threat posed by the nuclear disaster. Instead, he said that after the first explosion at *Fukushima No. 1* reactor, "some […] groups or people started talking about the […] nuclear things, nuclear disaster, I mean, its possibility. But we didn't take it seriously back then." This statement shows little risk awareness with regard to the incident at the nuclear power plant. It is furthermore striking that the sources of such warnings appear to be nameless and therefore not very trustworthy ("some […] groups or people"). Consequently, he remembers the nuclear disaster to be just a vague "possibility" at the time. This resembles the official language used by energy supplier *TEPCO* and the Japanese Government at the time, which Nakano later called "the only [credible] source of information we got back then."

From that perspective, it can be understood that Nakano appeared to be irritated by people buying and hoarding every-day goods such as water or toilet paper. According to him, the editorial staff at *J-WAVE* found that behavior "silly" and felt obliged to calm people down. With regard to the panic buyers he again only spoke of an earthquake and tsunami disaster; the idea that people were frightened because of the nuclear disaster did not occur to him. Abresch meanwhile remembered that he and some of his colleagues never felt a stronger personal threat than during the nuclear disaster. "[I've experienced] being robbed in Baghdad, being shot at in Bangkok, […] but radioactivity […] caught all of us on the wrong foot," he said.
In the further course of the interview, it became apparent that the nuclear disaster and its consequences were also the main focus of Abresch's coverage from Japan. It was evident that the nuclear disaster deserved a lot of critical attention: For example, he mentioned the risks of radioactive contamination, the failure of *TEPCO* and the Japanese government to support the people affected as well as the collusive power structures of the "nuclear village." According to the correspondent's words, the focus on nuclear issues was additionally encouraged by the editors he worked with: "I did notice that [*ARD's*] editorial offices are more interested in stories about Fukushima." Meanwhile, according to Nakano's memory, it took about a month until *J-WAVE* prioritized the nuclear over the natural disaster in the station's reporting. Although memory may be inaccurate after such a long time, it is hard to deny that the thematic priorities were different.

If we look at another example, *Süddeutsche Zeitung*'s Neidhart[7] was on a trip to Germany when the earthquake struck. He and his editor, though, did not see the necessity that Neidhart would return to Japan as long as there was news only of a natural disaster. Instead, the newspaper obviously considered it sufficient to report by using wire services. But when an incident at the nuclear plant was reported, "it was clear that I had to fly back immediately," Neidhart said. This shows that the professional assessment of both editor and correspondent changed fundamentally as soon as a nuclear incident came into play.

After returning to Japan, the correspondent still found himself entangled in the German national discourse (although he consumed Japanese-language media, too). In an effort to assess the gravity of the situation, he for example referred to the embassy's recommendation to evacuate and the *German International School* that had closed down. Still, although his family was evacuated from Japan, he "did not assume [...] that Tokyo was in danger" and relocated himself to Osaka because of power blackouts. Compared to the other correspondents of German media, Neidhart appeared to be personally less sensitive to nuclear risk. He was nevertheless very critical of nuclear power and of the Japanese government's "disinformation" concerning the meltdowns of the *Fukushima No. 1* plant.[8] He also slammed the government for not evacuating the heavily contaminated town of Iitatemura until one month after the disaster, leaving the locals exposed to substantial degrees of radioactivity.

The account of Terashima, a reporter of *Kahoku Shinpō*, the biggest regional newspaper in the disaster area, offers some similarities as well as differences compared to Neidhart's case. Although living only about 100 km from the nuclear accident, Terashima didn't mention any sense of danger for himself, his wife or children. He was concerned about his parents, though, who lived in a place about 25 kilometers away from the crippled power plant. On a professional level, he paid substantial attention to both the situation in the areas hit by the tsunami and the nuclear disaster. In the course of his narration, the interviewee shifted his professional attention to those affected by the economic fallout of the nuclear disaster, like farmers and fishermen suffering from "harmful rumors". In his reporting, Terashima strived to mitigate concerns about contaminated food by highlighting rigorousness of safety checks. This perspective on nuclear risk fundamentally differs from the German interviewees who overwhelmingly viewed attempts to alleviate concerns about radioactivity as a form of disinformation. Still, it has to be noted that Terashima, too, criticized the hesitant response to the situation in Iitatemura, which he covered for the *Kahoku Shinpō*.

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[7] Christoph Neidhart is Swiss but has been *Süddeutsche Zeitung*'s Tokyo correspondent since 2002.
[8] *TEPCO* conceded meltdowns only two months after the disaster. It later admitted it had known much earlier.

Among the Japanese journalists, there are also cases where journalists showed substantial awareness of nuclear risk, but faced difficulties to report due to their organizational context. For example, according to the anonymous interviewee working for a business newspaper, the energy companies advertising in the paper played an important role with regard to journalistic content. "The electricity companies gave the conservative newspapers money to get articles published like 'how safe is nuclear power?'", he said, later adding that he witnessed that "the truth couldn't be reported because the advertising companies exerted pressure" even with regard to regular newspaper content. In a similar way, *NHK's* filmmaker Ōmori described political considerations making it difficult to air a documentary about radioactive contamination in the exclusion zone[9].

The narrow bounds of editorial freedom at *NHK* prompted another interviewee, Shiraishi, to resign from the broadcaster in 2001 and found a participatory activist video platform, *OurPlanet-TV*. After the nuclear disaster, it focused on the situation of local residents in Fukushima as well as on the anti-nuclear movement. According to Shiraishi, *OurPlanet-TV* offered a platform for those who were continuously marginalized by traditional Japanese media.

While the disaster led to the downfall of the nuclear "safety myth" in Japan, it also contributed to a political shift in Germany. Even the conservative newspaper *Frankfurter Allgemeine Zeitung* at least temporarily departed from its formerly pro-nuclear stance (Kepplinger & Lemke 2014, 2015, Nienierza 2014), showing that the anti-nuclear discourse reached the status of a broad consensus in German society. It has to be viewed in this context that the newspaper's Japan correspondent Germis said he struggled with the expectations of his editor who urged him to report certain sensational stories on the disaster the correspondent considered one-sided. For Germis, it amounted to a dilemma: "If you don't play along […], you risk losing [your editor's] attention," he said. Other German correspondents did not mention any pressure regarding the tendency of the article, but several made clear that their editors had a strong preference for reports about the nuclear disaster. An exception is freelancer Blaschke, who mentioned a case where an article she proposed to a newspaper was rejected because it was deemed "too critical of nuclear power."

As the examples outlined so far document different national perceptions of the nuclear disaster, it is insightful to look at the case of Misawa, who was exposed to the public perception of events in both Japan and Germany. He was in Osaka (West Japan) when the disaster happened, but was scheduled to leave for Berlin to work as a correspondent for the Japanese private TV broadcasting network *JNN* on March 20, 2011. Shortly before he left, he was assigned to welcome the crew of German Second Television (*ZDF*) at his station's headquarters in Osaka. The *ZDF* team had evacuated from Tokyo, because it was "afraid of the radiation," as Misawa repeated several times with obvious astonishment.

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[9] After the nuclear disaster, the Japanese Government asked the Japanese media to stay out of the exclusion zone. Ōmoriʻs team defied the government's request and an internal order by *NHK*.

After Misawa had begun to work as a correspondent in Berlin, his attitude towards nuclear power soon started to change. He described how being exposed to the discourse in Germany after the Fukushima Disaster made him more aware of nuclear risk. He started to appreciate that people were also looking at the disadvantages of the technology and criticized the Japanese, who, according to Misawa, "began to know" about nuclear risk only "after the accident." The example of Misawa shows that national discourses are not necessarily static but can in fact permeate each other. This phenomenon could also be observed in a few other cases, although not as clearly. The other formerly Berlin-based Japanese correspondent interviewed for this study, Matsui (*Asahi Shimbun*), said he tried to contribute to the discussion in Japan by reporting about the shift to renewable energy in Germany. The German correspondents Kujath and Germis similarly mentioned how they tried to middle between the discourses in the two countries as they tried to calm down concerns about the situation in Japan and tried to explain why the Japanese did not fully abandon nuclear power after the disaster[10].

Despite of their openness towards the discourse in Japan, both Kujath and Germis, like all the other German correspondents interviewed for this study, temporarily evacuated from Tokyo for security concerns. That is in stark contrast with the Japanese interviewees who hardly ever mentioned any concern with regard to being in Tokyo, let alone the idea to evacuate to another place. The only one who expressed that he felt directly threatened by radioactivity is *NHK's* Ōmori, who reported from inside the nuclear exclusion zone. Another case was that of Daimon, who gave to understand she was concerned about her daughter but could not leave Tokyo because of her professional obligations as head of *Japan Times*' national news.

Although the Documentary Method focuses on narration rather than argument or evaluation, it is insightful to look at how the journalists reflected upon the different national tendencies in reporting the disaster. Blaschke, for instance, mentions the effect of the Chernobyl Disaster in Germany. Abresch also remembers his fear that Germany, divided between East and West, would become a "nuclear battleground" if the Cold War had heated up: "I grew up in this knowledge, and I still remember I was very frightened." Remarkably, none of the Japanese journalists made any historical reference with regard to nuclear coverage. Instead, they mentioned situational or structural circumstances like the difficulty to get reliable information in the aftermath of the disaster or the dependence on official information. Against this backdrop, it seems hard to deny that different national discourses on nuclear risk in the two countries indeed shaped journalists' perception of the disaster.

Journalists' role concept concerning the political discourse on risk

With regard to the political discourse on nuclear risk, I would like to focus on two significant aspects: 1) their attitude towards official and alternative sources, and 2)

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[10] It was not possible to determine why some correspondents appeared to be more open to the discourses of their host country than others. Language proficiency did not seem to make a difference.

their attitude towards anti-nuclear activism. Both issues played a role in the context of reporting the nuclear disaster.

Concerning 1), I have pointed out already that in the aftermath of the disaster, Nakano mainly considered official sources[11] as being trustworthy. This is in line with the general tendency found among the Japanese interviewees in the sample. For instance, according to the business newspaper's anonymous interviewee,

> "70% of the media's news sources were government and authorities. […] the Japanese media do not have the ability to assess the announcements of independent institutions […] what we could do back then was to report the official statements of the government as quickly as possible."

The quote has to be understood as a reference to the Japanese system of 'reporter clubs' (*kisha kurabu*), i.e. spaces provided by ministries and authorities, but also big companies for the media's day-to-day coverage, including press conferences, briefings et cetera (Freeman, 2000).[12] As these clubs are the main source of information for Japan's big media (especially newspapers, TV and wire services), it seemed unthinkable for the interviewee to deviate from the official announcements provided there, let alone to use information provided by "independent institutions." Or, as *Japan Times*' Daimon puts it, "Japanese media is very conservative. Unless we confirm things, we don't really report and especially knowing that that's going to trigger panic." Following this logic, she declared that like other Japanese media her newspaper tended to avoid the term "meltdown" until three core meltdowns were officially confirmed by *TEPCO* in late May, 2011 – although experts had come to his conclusion already shortly after the disaster.

On the other hand, there are cases like investigative documentary filmmaker Ōmori (*NHK)* and Shiraishi (*OurPlanet-TV)*, who questioned the official statements concerning the nuclear disaster from the start. Ōmori defied *NHK's* order to its staff and went to the nuclear exclusion zone with a team of experts to gather radiation data independently. Meanwhile, *OurPlanet-TV* reported briefings of independent institutions like the *Citizens' Nuclear Information Center (CNIC)* that were widely ignored by the traditional media. It is important to note, however, that these cases are extremely rare and are not to insinuate being representative for Japanese mainstream media (Itō, 2012).

For the correspondents of German media, skepticism of official information in Japan was apparently common sense after the disaster. Although it is hard to compare the source relations of domestic and foreign journalists, it is conspicuous that anti-

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[11] From the context of the interview, it can be understood that by "official sources," Nakano refers to the central government as well as authorities. He apparently views the public broadcaster *NHK* to be equally trustworthy.

[12] The press clubs have been criticized for their close and often cozy relationships between journalists and the individuals they cover, see Freeman (2000).

nuclear or environmentalist NGOs like *Greenpeace* are legitimate sources for journalists like Neidhart and Thevessen, who represent mainstream media such as *Süddeutsche Zeitung* and *ZDF*.

This observation corresponds with the journalists' attitudes towards the anti-nuclear movement. For the representatives of German media, it was natural to report about the anti-nuclear rallies in Germany after the Fukushima Disaster. That is not only true for Hansen, editor of the leftist, anti-nuclear *tageszeitung*, but also for Thevessen (*ZDF*), who represents a public TV broadcaster: "when there are big demonstrations in Berlin, we can't ignore that," Thevessen argued, despite declaring to be personally a supporter of nuclear energy.

On the contrary, some Japanese media have been accused of largely ignoring the anti-nuclear demonstrations in Tokyo and elsewhere. This is also the case for the anonymous interviewee's business newspaper. He explained his paper's reluctant coverage of the anti-nuclear demonstrations with its outspoken pro-nuclear stance. He argued that there would have been some marginal reports, but only "[b]ecause you get criticized […] when you say you don't write anything at all about it […]." His aloofness towards the anti-nuclear movement, however, is not only due to organizational culture. To the contrary, he seemed to be suspicious about the protestors as he called them "*yatsu*" (derogatory pronoun, roughly "that kind of people").

In the same context, it is worthwhile to look at the case of Berlin correspondent Misawa again. Like with regard to his growing awareness of nuclear risk, he changed his attitude towards political protest after starting to report from Germany. By witnessing the big-scale demonstrations against nuclear power in Berlin after the Fukushima Disaster and other events related to the anti-nuclear movement, he became convinced that such a form of public self-expression is "very mature" and should be done also in Japan. There, according to Misawa's words, people are skeptical of political activism: "Japanese people tend to think that people who are doing some demonstration is something for activists, […] not [for] the normal people. […] But in Germany, so many […] people go to the demonstrations and do something." The quote outlines Misawa's perception that while taking part in demonstrations is widely accepted in Germany, protestors in Japan risk social isolation. According to Shiraishi, a series of student riots in the 1960s and 1970s led to an "image that citizens who merely express their opinion are considered to be dangerous is still commonplace."

Hansen, foreign desk editor of the German leftist *tageszeitung*, described a different situation for Germany. Beginning with the first local protests against nuclear power plants in the early 1970s, he said that the anti-nuclear discourse gradually became common sense in Germany, until the Fukushima Disaster served as final trigger for the nuclear phase-out: "this debate […] has made its way into the heart of society […] it is mainstream since Fukushima. It hadn't been like that before."

Type formation: nuclear risk sensitivity and trustworthiness of political actors

Based on the comparative interview analysis illustrated above, I suggest to distinguish between two pairs of 'orientation frameworks' respectively 'sensegenetic types'[13]: 1) low sensitivity to nuclear risk – high sensitivity to nuclear risk (again to be distinguished between personal and professional level[14]), and 2) fixation on official sources – openness for alternative sources and political actors.

With regard to nuclear risk sensitivity, the interview analysis showed that indeed there are parallels between the initial (personal) perception of the nuclear disaster and their later (professional) experience (table 2). Cases that include elements of both low and high sensitivity types are shown in the middle. The 'sociogenetic type formation' furthermore shows that the types clearly correspond with the nationality of the interviewees.

This is not to imply monocausality, however, as other factors like organizational culture have been identified as well. Also, there is some diversity, for example in the sense that there are two Japanese journalists who were exposed to foreign discourses on the disaster as well and had a higher sensitivity to nuclear risk (Daimon, Misawa). According to several statements made by other correspondents, one German correspondent allegedly entered the nuclear exclusion zone after the disaster.[15] Two other German correspondents felt they had to counter hyperbole with regard to the nuclear disaster and tried to calm the German audience down (Kujath, Germis). Moreover, two (clearly outstanding) cases showed no or little personal risk sensitivity, but a high awareness on the professional level (Ōmori, Shiraishi).

Concerning the journalists' attitude towards the political debate about nuclear risk, two contrasting types can be reconstructed from the interviews that also corresponded with the national groups. For Japanese journalists, legitimate sources are mostly official institutions and (to varying degrees) citizens affected by the disaster. With few exceptions, they seem to be ignorant or even disapproving with regard to sources related to political activism like NGOs or the anti-nuclear movement. In the case of the journalists working for German media, alternative sources and political activists are generally considered legitimate, if not important sources for their coverage, even among pro-nuclear journalists like *ZDF*'s Thevessen. This points to the fact that political activism, and specifically the anti-nuclear movement, is more

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[13] In the framework of the Documentary Method, sensegenetic types are the type formations that are reconstructed by means of the comparative analysis of different cases. Sociogenetic types refer to the social circumstances that correspond with the different sensegenetic types. Possible examples are nationality, gender, age, education, et cetera (see methods section).

[14] By risk sensitivity on the personal level, I refer to the journalists' concern with regard to their own health risk. Risk sensitivity on the professional level refers to the attention the interview partners paid to the nuclear disaster and its potential health-related consequences from a work-related (journalistic) perspective.

[15] The journalist agreed to an interview but later cancelled it. Efforts to reschedule the interview failed.

widely accepted in the German society. Also, it has to be taken into account that the reporter clubs in Japan tie the media system closely to official sources such as the government and big companies like *TEPCO*.

Table 2: personal and professional nuclear risk sensitivity

	low sensitivity to nuclear risk	high sensitivity to nuclear risk
personal level (journalists based in Tokyo or Tohoku)	Nakano (*J-WAVE*) Terashima (*Kahoku Shinpō*) anonymous (business paper) Ōmori (*NHK*) Shiraishi (*OurPlanet-TV*) Daimon (*Japan Times*) Neidhart (*Südd.*	Abresch (*ARD* TV) Blaschke (freelancer) Kujath (*ARD* radio) Germis (*Frankfurter Allgemeine Zeitung*)
professional level (all journalists*)	Nakano (*J-WAVE*) Terashima (*Kahoku Shinpō*) anonymous (business paper) Matsui (*Asahi Shimbun*) Daimon (*Japan Times*) Misawa (*JNN*) Kujath (*ARD*)	Abresch (*ARD* TV) Blaschke (freelancer) Neidhart (*Südd. Zeitung*) Thevessen (*ZDF*) Hansen (*tageszeitung*) Ōmori (*NHK*) Shiraishi (*OurPlanet-TV*)

* Germis was left out as he mainly worked as business correspondent at the time.

Conclusions

The objectives of this paper were: 1) to reconstruct how national discourses on nuclear risk shaped German and Japanese journalists' perception of the Fukushima Disaster, and 2) to reconstruct how journalists conceived their role in the political debate about nuclear risk.

The study has shown that the journalists' cultural background clearly shaped both their personal risk perception as well as their role concept in the discourse on nuclear risk. However, there is diversity within each national group, and the different discourses can also permeate each other in some cases. This leads me to the conclusion that it is not an essentialist notion of 'nation' or 'culture', but the involvement into historically evolved normative discourse(s) that serves as an important macro factor for journalists' risk perception as well as their attitude towards anti-nuclear activism. This key finding sheds light on Beck's notion that the assessment of risk

varies between cultures (Beck, 2009). The fierce debate about nuclear power in Germany and the experience of the Chernobyl Disaster are among the key components that shaped social norms in wide parts of society and, indirectly, also German journalists' perception of the Fukushima Disaster. In the case of their Japanese counterparts, the key factor was the nuclear safety myth in Japan prior to March 11, 2011.

Against this backdrop, it is questionable whether both German and Japanese journalists intentionally distorted the events in East Japan, for example based on political convictions. It has to be acknowledged that personal perception of risk takes effect before a journalist starts to look at an issue with professional eyes. This distinction is important because academic analysis usually focuses on journalistic professionalism but seldom takes into account the implicit, 'pre-professional' foundations of reporting, i.e. historically shaped norms shared across (significant proportions of) society. Additionally, the interview analysis illustrated that German and Japanese journalists have a different understanding of their role in the political debate: For German journalists, it was self-evident that they had to include the voices of anti-nuclear activists in their coverage, while Japanese journalists were much more hesitant to do so. This is due to the fact that media reporting in Japan typically relies on official announcements conveyed through a system of reporter clubs.

A limitation of this study is that foreign correspondents and domestic journalists reported for different audiences and thus had different relations with sources; professional behavior may therefore follow different patterns. However, at least at the personal level (with regard to one's own health), risk perception is not related to audiences. Another limitation is inherent in the method: Although the narrative interview is designed to retrieve a spontaneous, detailed (and therefore largely authentic) account of the informants' memory, one has to keep in mind it is only a reconstruction of their experiences and not a flawless record of reality.

For an outlook, one might ask in how far social norms concerning nuclear energy have been renegotiated in Japanese media after the nuclear disaster. While more liberal news outlets clearly more awareness of nuclear risk, conservative Japanese media still hardly report on the issue (Abe, 2015). Moreover, the government has launched several attempts to silence the more liberal voices in the Japanese media including the nuclear-skeptic *Asahi Shimbun* (Fackler, 2016). The *Olympic Games* of Tokyo in 2020 have also been used for the narrative of nuclear safety: In a much noted speech before the *Olympic Committee* in 2013, Prime Minister Abe assured the audience that the situation in Fukushima was "under control", despite all looming problems with radioactive contamination and the decommissioning of the crippled reactors. As a symbol for the reconstruction and recovery process, Fukushima prefecture was also included in the locations where Olympic competitions take place.

I therefore conclude that the government has tried to reinstall the nuclear safety myth. Regardless of whether one supports or opposes nuclear power, this is highly

problematic: According to the *IAEA* (2015, v), whose aim is to promote and supervise the peaceful and safe use of atomic power, the unshakable belief in the safety of nuclear power was a "major factor that contributed to the accident." Neither the operator nor the government nor the regulator were "sufficiently prepared for a severe nuclear accident in March 2011." (ibid.)

The conclusions of the *IAEA* highlight that a broad debate about technological risk is necessary to prevent further cases where interests and collusion between responsible actors prevail over safety concerns. In this regard, it may be helpful that risk perceptions vary greatly between cultures because dominant normative assumptions within a given society can be challenged more easily when compared to those in other countries. More comparative research should therefore be conducted that includes the social and historical context of journalistic risk communication.

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