Tampere University

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Circulating Emotions, Sticky Feelings

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For those who teach me to see beyond the obvious.

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Helsinki, 16th of October 2020

Anna Rantasila

ABSTRACT

Set off by a magnitude 9.0 earthquake and a subsequent tsunami, the March 2011 Fukushima Daiichi nuclear power plant disaster was, in some ways, a series of simultaneously cascading events that appear to reflect several aspects descriptive of the early 21st century. The disaster resulted from multiple failings in a complex socio-technical system set in motion by an unexpectedly powerful natural phenomenon. As often during major disasters, the mediated coverage of the Fukushima Daiichi disaster was not just about what had happened and what was about to happen, but also about how the people involved in the events, either directly or vicariously, felt about what they experienced.

In this dissertation, I delve into the intersection of the hybrid media environment and mediated feeling by examining the role of affect in the coverage of the Fukushima Daiichi disaster. I focus on how affects circulate and stick in the mediated narratives about Fukushima Daiichi in Finnish and international contexts, in both journalistic reporting and social media discussions.

The introductory part of the thesis addresses the contemporary conditions of the hybrid media environment from a theoretical and methodological perspective. The aim of this section is to combine the understanding of affect with the notion of the public in a hybrid media environment, in the particular case of media coverage on the Fukushima Daiichi disaster.

Presenting the results of case studies conducted between 2014 and 2016, the five publications included in this dissertation open diverse angles to affective dynamics of social media discussions and journalism. Through their versatile empirical settings, the articles contribute to the ongoing debate in media studies on how contemporary social media shape the public discourse. The articles illustrate how social media simultaneously act as platforms enabling various types of public expression and allow for private multi-billion-dollar corporations to create revenue through collecting and selling the data generated by their users. The articles also discuss how users shift between different actor roles in these settings, moving between being the audience, informed citizens and peers exercising their right to public speech.

Each of the case studies provides a distinct angle to the actors and platforms that constitute the hybrid media environment. In two articles (Publication I; Publication

V), the focus centres on the popular social media applications Twitter and Facebook, the analysis illuminating how affect circulates and sticks to certain figures in the conversations, and how affect is structured around cultural conventions, such as ritualised commemoration. One article (Publication III) examines what role traditional mainstream news journalism and scientific expertise play in circulating affect. Two articles (Publication II; Publication IV) examine how people use a mainstream media's online commenting platform to express opinions and emotions about the news coverage of Fukushima Daiichi yet discuss scientific expertise in the same context.

The articles about Facebook and online news commenting (Publication II; Publication IV; Publication V) shed light on the affective dynamics in online discussion and develop the notion of affective discipline as a conceptual tool to analyse how moods and tones develop in these discussions. The articles focusing on mainstream media (Publication III; Publication IV) also use this concept to examine how public affect and emotion are managed during crises.

The results of the presented case studies provide new insights into the role of traditional mainstream journalism and social media during a global, disruptive event. By focusing on the concepts of affect and affective discipline, the study not only provides an analysis of media discussions about the Fukushima Daiichi nuclear disaster that confirms previous results on the cultural circulation of affect, but also expands the knowledge on how journalistic practices and public discussion influence these processes. In addition, the work points to the affective labour done by journalists and members of the public alike when they engage in acts of affective discipline to manage the moods of public discussion. Through these mechanisms, the dissertation contributes to the theoretical and methodological discussion on how to study affect in mostly text-based media.

TIIVISTELMÄ

Yhdeksän magnitudin maanjäristyksen ja sen nostattaman tsunamin alkuun saattamaa Fukushima Daiichin ydinvoimalaonnettomuutta maaliskuussa 2011 voidaan pitää lähes yhtäaikaisesti kasautuneiden tapahtumien sarjana, joka heijastaa useita 2010- ja 2020 lukuja ilmentäviä piirteitä. Vaikka onnettomuuden sysäsivät liikkeelle odottamattoman vahvat luonnonvoimat, sen juurisyyt ovat monimutkaisen sosioteknisen järjestelmän useiden eri kantavien osien pettämisessä. Kuten usein poikkeuksellisten ja yllättävien tapahtumien sattuessa, myöskään Fukushima Daiichin tapauksessa onnettomuuden mediaseurannassa ei ollut kyse vain sen raportoimisesta, mitä oli tapahtunut tai tapahtuisi jatkossa, vaan yhtä lailla siitä, miten tapahtumiin joko suoraan tai välillisesti liittyvät ihmiset tunsivat ja kokivat. Mediaseuranta nosti myös esiin sen, millaisia ilmenemismuotoja katastrofiin liittyvät kokemukset saivat toisiinsa monin tavoin kytkeytyvillä media-alustoilla, joista nykyinen hybridi mediaympäristömme rakentuu.

Väitöskirjassani sukellan tähän hybridin medianympäristön ja medioituneiden tunteiden risteykseen tarkastelemalla sekä kotimaisissa että kansainvälisissä yhteyksissä affektin roolia Fukushima Daiichin uutisoinnissa ja muussa mediakommentoinnissa. Keskityn siihen, miten affekti kiersi ja tarrautui Fukushima Daiichin onnettomuutta koskeneessa journalistisen uutismedian raportoinnissa ja sosiaalisen median alustoilla käydyissä keskusteluissa.

Väitöskirjani johdanto-osassa käsittelen hybridin mediaympäristön tuottamia olosuhteita teoreettisesta ja metodologisesta näkökulmasta. Johtoajatuksena on yhdistää affektin käsite keskusteluun julkison roolista hybridissä mediaympäristössä käyttämällä esimerkkinä Fukushima Daiichin ydinvoimalaonnettomuuden mediaseurantaa.

Väitöskirjan viisi artikkelia esittelevät vuosien 2014 ja 2016 välillä tehdyn neljän tapaustutkimuksen tuloksia. Artikkelit täydentävät toisiaan avaten affektin dynamiikkaa sosiaalisen median keskusteluissa ja uutisteksteissä monesta suunnasta. Vaihtuvien empiiristen asetelmiensa kautta artikkelit tuovat uutta tietoa mediatutkimuksen kentällä käytävään keskusteluun sosiaalisen median sovellusten roolista julkisen keskustelun muokkautumisessa. Kyseiset sovellukset toimivat yhtäältä julkisen mielipiteen ilmaisun mahdollistavina alustoina. Toisaalta niiden

taustalla on miljardien dollareiden liikevaihdolla toimivia ylikansallisia suuryrityksiä, jotka keräävät voittonsa sovellusten käyttäjien tuottaman datan keräämisestä ja jälleenmyynnistä. Lisäksi artikkelit tarkastelevat sitä, kuinka käyttäjät vaihtelevat rooleja näissä monikerroksisissa asetelmissa, liukuen yleisön, kansalaisten ja sananvapauttaan harjoittavien vertaisten positioiden välillä.

Jokainen artikkeleista tarjoaa omanlaisensa näkökulman toimijoihin ja alustoihin, joista nykyinen, luonteeltaan hybridi mediajärjestelmä koostuu. Kaksi artikkelia (Julkaisu I; Julkaisu V) keskittyy suosittuihin sosiaalisen median sovelluksiin Twitteriin ja Facebookiin, valottaen analyysillaan affektin kiertoa ja tarrautumista keskusteluissa tiettyihin hahmoihin. Yksi artikkeli (Julkaisu III) tarkastelee perinteisen uutisjournalismin ja tieteellisten asiantuntijoiden roolia affektin kierrossa. Kaksi artikkelia (Julkaisu II; Julkaisu IV) puolestaan keskittyy siihen, kuinka ihmiset käyttävät uutismedian tarjoamaa keskustelupalstaa purkaakseen Fukushima Daiichin onnettomuuteen ja sen uutisointiin liittyviä ajatuksia ja tunteita. Lisäksi artikkelit käsittelevät asiantuntijuuden määrittymistä samassa asiayhteydessä.

Julkaisuissa, joissa tarkastelen Facebookia ja uutiskommenttipalstaa (Julkaisu II; Julkaisu IV; Julkaisu V) erittelen verkkokeskustelun affektiivista dynamiikkaa ja kehitän affektiivisen kurinpidon (affective discipline) käsitettä työkaluksi, jolla käsitteellistää ja analysoida verkkokeskusteluiden sävyjen ja tunnelmien kehittymistä. Journalistisesti tuotettua sisältöä tarkastelevissa julkaisuissa (Julkaisu III; Julkaisu IV) hyödynnän affektiivisen kurinpidon käsitettä eritellessäni, kuinka julkisia tunteita ja affektia ohjaillaan kriisitilanteissa.

Väitöskirjani osatutkimukset tuottavat uutta tietoa uutisjournalismin ja sosiaalisen median välisistä suhteista yllättävän, globaalisti huomiota herättävän ja maailmanlaajuisia seurauksia saavan tapahtuman aikana. Fukushima Daiichin onnettomuuteen liittyvien mediakeskustelujen tarkastelu affektin ja affektiivisen kurinpidon käsitteiden avulla sekä vahvistaa aikaisempia havaintoja affektin kulttuurisesta kierrosta että tarjoaa uutta tietoa journalistisen median ja julkisen keskustelun osuudesta tässä prosessissa. Tutkimukseni tulokset antavat lisäksi viitteitä siitä, että journalistit, asiantuntijat, viranomaiset ja kansalaiset tekevät affektiivista työtä osallistuessaan affektiiviseen kurinpitoon ja muovatessaan tällä tavoin julkisen keskustelun ilmapiiriä. Empiiristen analyysien ohella väitöskirjani osallistuu teoreettis-metodologiseen keskusteluun siitä, kuinka affektia tulisi ja kuinka sitä on mahdollista tutkia ennen muuta tekstipohjaisessa materiaalissa.

CONTENTS

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ABBREVIATIONS

AFP	Agence France Presse
ANT	Actor–network theory
AOIR	Association of Internet Researchers
AP	Associated Press
API	Application programming interface
CDA	Critical discourse analysis
HCI	Human-computer interaction
HS	Helsingin Sanomat
IAEA	International Atomic Energy Agency
IL	Iltalehti
IRC	Internet Relay Chat
IS	Ilta-Sanomat
JST	Japan Standard Time
LDP	Liberal Democratic Party (Japan)
MECER	Media Events, Circulation and Emerging Social Media Practices. Tracing the Meaning of Fukushima project
NPA	National Police Agency (Japan)
NRC	Nuclear Regulatory Commission, US
SNA	Social network analysis
SNS	Social networking site or service
STUK	Finnish Radiation and Nuclear Safety Authority, Säteilyturvakeskus
STS	Science and technology studies
TENK	Finnish National Board on Research Integrity, Tutkimuseettinen neuvottelukunta
TEPCO	Tokyo Electric Power Company, 東京電力ホールディングス株式会社, *Tōkyō Denryoku Hôrudingusu Kabushiki-gaisha*
TVO	Teollisuuden Voima
UGC	User-generated content
YLE	Finnish public broadcasting company, Yleisradio

ORIGINAL PUBLICATIONS

The thesis is based on the following publications, referred to in the texts as Publications I to V.

I Rantasila A., Sirola A., Kekkonen A., Valaskivi K. & Kunelius R. (2018). #fukushima Five Years On: A Multi-Method Analysis of Twitter on the Anniversary of the Nuclear Disaster. *International Journal of Communication*, 12, 928–949. DOI:1932–8036/20180005

II Rantasila A. (2018). Tahmaiset affektit. Fukushima Daiichin ydinonnettomuus YLE:n uutisoinnin verkkokommenteissa. (Sticky affects: The Fukushima Daiichi nuclear disaster in the online comments of YLE news reportage) *Lähikuva*, 31(3), 30–45. https://doi.org/10.23994/lk.76570

III Valaskivi, K., Rantasila A., Tanaka, M. & Kunelius, R. (2019a). Chapter 6: The Global Circulation of Affect – The Case of Iodide Tablets. In K. Valaskivi, M. Tanaka, A. Rantasila & R. Kunelius, *Traces of Fukushima. Global Events, Networked Media and Circulating Emotions*. Basingstoke: Palgrave, 101–117. https://doi.org/10.1007/978-981-13-6864-6_6

IV Valaskivi, K., Rantasila, A., Tanaka, M. & Kunelius, R. (2019b). Chapter 7: Affective Entanglements of Expertise – The Finnish Case. In K. Valaskivi, M. Tanaka, A. Rantasila & R. Kunelius, *Traces of Fukushima. Global Events, Networked Media and Circulating Emotions.* Basingstoke: Palgrave, 119–135. https://doi.org/10.1007/978-981-13-6864-6_7

V Rantasila, A. (2020). Managing Unpleasant Moods: Affective Discipline in Facebook Discussions. Accepted for publication in *European Journal of Cultural Studies* in September 2020.

1 INTRODUCTION

This PhD dissertation is a work with many components. On one hand, it narrates a journey through locations, events and ideas. On the other, it attempts to bring together, under the umbrella of media studies, works about journalism, social media, and affect and emotions. It also attempts to analyse and understand aspects of public discussion that are typical for the 21st century, through a very specific empirical context. Finally, it seeks to develop methods for analysing the three intertwining elements of affect, journalism and social media while operating from two institutional frameworks: a research project of many authors and a solo work.

The title of this dissertation, *Circulating Emotions, Sticky Feelings: Affective Dynamics of the Fukushima Daiichi Nuclear Disaster in a Hybrid Media Environment*, reflects this manifoldness. At the centre are three words: emotions, feelings and affect. They are bound together by an event, a location and words that provide a more tangible quality. The title also aims to unite the key elements of this dissertation, combining the focus of this introductory section with the five peer-reviewed publications. This formulation seeks to capture the elements that define this work and provide a way to approach it through elements that are familiar to most people: shared emotions and clinging feelings. The formulation also provides a direction, a movement: from the embodied and the concrete towards the abstract and the discursive.

The movement that eventually sparked this dissertation into existence began a decade ago. In late August 2010, I arrived at Narita Airport, jetlagged and nervous, to begin a year in Japan as an exchange student. On March 11, 2011, however, a magnitude 9.0 earthquake and a subsequent tsunami devastated much of Japan's north-eastern region of Tohoku and set off the meltdowns at the Fukushima Daiichi nuclear power plant, altering the course of hundreds of thousands of lives, including mine. I experienced the triple disaster from the safety of my student dormitory in Western Tokyo while acting as an eyewitness and a reporter for Finnish news media. In June 2011, I took part in disaster relief actions in two areas in one of the worst-hit regions, Ishinomaki-shi. Five years later, I visited the town of Namie in the Fukushima Daiichi exclusion zone with professors Shineha, Tanaka, Kunelius and

Valaskivi, and Ms. Hong. These experiences have brought the broader context of my research much closer to me, from the abstract to the embodied.

Coinciding with the triple disaster of 2011, I began to make casual observations about discussions on social media taking abrupt turns, shifting from friendly banter to angry messages in a few keystrokes. For instance, the rapid politization and polarization of my friends, family and colleagues with respect to the Fukushima Daiichi disaster took me by surprise. While online arguments were nothing new in 2010 and 2011, the growing volume of vitriol made me increasingly uneasy. As a journalist in the aftermath of the March 2011 disaster, I was also increasingly concerned about journalistic representations of disasters. My work made me aware of the disconnect between some of the mediated representations of the situation in Tokyo, the social media discussions surrounding the coverage and my own experience living in the metropolis. My experience, as I later learned, reflects those of more seasoned crisis and foreign reporters described in Johana Kotisová's (2019) compelling study.

My unease about the coverage of the March 2011 triple disaster found a partial release through my master's thesis, which considered televised news coverage of the disaster by Finnish Public Broadcaster Yleisradio (hereafter YLE) (Rantasila, 2013). My interest in theories of affect also began while writing the thesis; I became increasingly interested in the construction of emotion in the context of mainstream journalism and disaster coverage.

After completing my master's degree, I was certain I was going to pursue a career in journalism. That plan changed in April 2014 when associate professor Valaskivi asked if I wanted to work on a research project about Fukushima Daiichi. There was just one condition—I had to be registered as a doctoral student before she could hire me. I also remembered something professor Ridell had told me in 2012: I would "be a moron" if I did not pursue a PhD. Thus, I got to work with a research plan and applications, curious to see what would come from my efforts. The work at hand is therefore written in two institutional contexts: my work from September 2014 to August 2016 as part of the Academy of Finland and Japan Society for Promotion of Science funded project titled *Media Events, Circulation and Emerging Social Media Practices. Tracing the Meaning of Fukushima* (MECER), and from September 2016 to May 2020 as a salaried doctoral researcher at Tampere University Faculty of Information Technology and Communication Sciences.

The five articles of this dissertation may thus appear loosely connected, particularly if comparing the first publication with the others. However, in addition to sharing the empirical context of the mediated representations of the Fukushima

Daiichi disaster, the five articles share three key concepts: *affect, public*, and *social media*. I map (cf. Bal, 2002; Latour, 2005) the theoretical framework of my thesis through these concepts, and they form the core of this dissertation. In this core, affect acts as the sticky glue that binds together not only the two other notions but also the rest of the work itself (cf. Ridell & Väliaho, 2006). This bundle of concepts is also reflected in the title of the dissertation, in a slightly different iteration.

With affect, I refer to *discursive and non-discursive intensities, sensations, feelings and emotions that are simultaneously subjective and culturally and socially produced and circulated* (Ahmed, 2004b; Nikunen, 2015; Oikkonen, 2017; Paasonen, 2015; Papacharissi, 2015; Wahl-Jorgensen, 2019; Wetherell, 2012). Public as a noun refers to *a group of people that is brought together by an interest in a specific topic or issue and engaged in discussing it often in a contested and affective manner* (Marres, 2005; Mouffe, 1999; Papacharissi, 2015a; Wahl-Jorgensen, 2019; cf. Blumer, 1946; Park, 1972; Dewey, 1991). With social media, I refer to *the multiple online services and platforms that individuals and organizations use to form diverse networks and to communicate with each other via text, images, audio and video*. I further elaborate and reflect on these concepts in Chapters 3 and 4.

The articles also share a methodological approach stemming from the use of these three concepts in a distinct manner. When I began my work in the MECER project in 2014, the analysis of the mediated coverage of the Fukushima Daiichi disaster from the point of view of affect was chosen as one of the paths to pursue, as I felt there was new ground to cover. I wanted to further test the methodological limits of the concept of affect because of the divisions within the theories of affect concerning the concept's relationship with the narrative and the discursive. Intrigued by the challenge posed by this divide, I wanted to find out whether I could fruitfully analyse affect in text-based expression work.

In fact, most of this work revolves around probing (cf. Blumer, 1954; McLuhan, 1964) the concept of affect in the context of empirical research and bringing the concept into discussion with notions of public and social media. I have sought to develop an understanding of affect that would be, if not fully compatible, then at least discussable together with networked communication and journalistically produced publicity, both on the theoretical and empirical level (see also Vainikka, 2020). This work on the intersections of concepts, disciplines and discussions penetrates all the publications of this dissertation and comprises the major intellectual effort of my thesis.

The contributions of this work are thus twofold. First, the publications contribute to the body of scholarship about the Fukushima Daiichi disaster by providing new knowledge on the media coverage and commentary on the disaster. Second, the

dissertation contributes to the theoretical-methodological discussion on the concept of affect and its role in media studies. By using the concept of affect as a sensitising concept (Blumer, 1954), the dissertation offers novel perspectives on how affect and emotion are present in various media texts. The methodological approach of the study contributes to better understanding of analysing affect in text-based media.

The empirical research methods applied in the publications are mixed-method combinations that contain elements from metaphor and frame analysis, critical discourse analysis and close reading, but also elements that are fully none of those. This combination is a result of my attempts to find an empirical approach to the concept of affect that would accurately capture the complexity of the phenomenon. Each of these methods focus on different aspects of text, and metaphor and discourse analysis examine text and language as sites where social and cultural structures become visible (Katriel, 2015; Wetherell, 2012). Frame analysis complements the approach as it focuses the attention of the researcher on patterns and repetition, and affect circulates through repetition and patterning (Ahmed, 2004b; Papacharissi, 2015a; see also Nikunen, 2019; Oikkonen, 2017; Paasonen, 2015). As my understanding of affect is culturally and socially informed, these methods appeared the most suitable approaches for this study. However, I recognize that, during the six years I have worked on this dissertation, several excellent books on affect in media studies have been published (e.g. Flam & Kleres, 2015; Knudsen & Stage, 2015) and I could have included them more in my work. I further discuss these choices and their broader implications in Chapters 3, 4, 5 and 7, where I elaborate on the roles of concepts and methodology in my work and reflect on the whole process.

Next, I address the wider framework of this dissertation by discussing the role of affect and emotion in media studies, and reflect on how the role is represented in this dissertation. In Chapter 1.2, I discuss the research setting of the work, briefly outline each of the articles and elaborate on the research questions that have driven this work, outlining the core research problematic of this thesis. In Chapter 1.3, I provide an overview on the remaining work.

1.1 Media studies, affect and emotion

Media studies has been called an interdiscipline (Valdivia, 2003; Valdivia, 2013), which is a fitting description for a relatively young field that indeed falls between other disciplines and traditions (Long & Wall, 2012). Because of its interdisciplinary

nature, media studies overlaps with fields such as media history, television and film studies, photography, journalism, game studies and internet research, just to name some examples (Mitchell & Hansen, 2010). Media studies utilises theories of communication, culture and society, and methods from various traditions, such as political science, sociology, social psychology, literature and linguistics, among others (Long & Wall, 2012). The boundaries between these fields and disciplines are, at least concerning media studies, porous and permeable (Long & Wall, 2012, p. 3; Mitchell & Hansen, 2010).

In the Anglo-American context, the history of media studies as a broadly understood field can be traced the 1920s and 1950s (Long & Wall, 2012; Valdivia, 2003; Valdivia, 2013). However, the history of media studies as a field that focuses on media culture is usually defined to the Centre for Contemporary Cultural Studies at Birmingham University and Stuart Hall's encoding/decoding model of media reception in the 1970s. Cultural approach to media, which is followed in this dissertation, was also given further traction from the broader linguistic turn of social sciences and humanities in the 1970s and 1980s (Valdivia, 2003). Following these developments, culturally and linguistically informed media studies arrived at Finland in the 1980s to enrich the existing fields of film, television, photography, radio, newspapers and magazines studies (Pietilä et al., 1990). That media have been studied in various forms of institutional settings also illustrates the position of media studies as an interdiscipline (Long & Wall, 2012; Valdivia, 2003). My personal approach to media studies reflects this position as well, as is visible in this dissertation through the choices of literature and methods: my major for undergraduate and graduate studies was journalism and mass communication studies. My interest today focuses more on forms of expression that are reactions to journalistically produced text in the context of the Fukushima Daiichi disaster. The journalistically produced texts about the disaster provide the framework to which other forms of expression are attached.

Despite the porousness of its boundaries and varying institutional locations, media studies also has distinct discussions and approaches. These discussions include media both as technologies and as content; the production, use, reception and interpretation of media; and historical developments of media technologies and culture (Valdivia, 2003, p. 4-7; Mitchell & Hansen, 2010). Moreover, the traditional topics of culturally informed media studies encompass a wide variety, such as social issues related to media and political economies of media, to name a few examples in a field defined by its plurality (Long & Wall, 2012, p. 4–5; Mitchell & Hansen, 2010). As Valdivia (2003) notes, media studies has been influenced by the same paradigm

shifts as most social sciences and humanities: the linguistic turn in the 1970s and 1980s and, from the 1980s and 1990s onwards, an increasing sensitivity to questions related to gender, sexuality, race, and social and cultural structures of power. The latter attaches media studies to a paradigm of thought that has been called an "affective turn" (Clough & Halley, 2007; Gregg & Seigworth, 2010; Kotisová, 2019; Nikunen, 2019; Wahl-Jorgensen, 2019; Wahl-Jorgensen, 2020; Wetherell, 2012; Wetherell, 2015).

As Anu Koivunen (2008), Karin Wahl-Jorgensen (2019) and several others (e.g. Kotisová, 2019; Pantti, 2010; Pantti et al., 2012; Peters, 2011) have noted, emotion was long neglected as an object of study in journalism and media studies. The ideal of public and political participation of the political theories that have influenced Western thought since Enlightenment emphasised rationality and reasoning, and placed emotion as their opposite (Wahl-Jorgensen, 2019, p. 21–24). In journalism studies, the ideals of objectivity and impartiality have meant that emotion has not been taken seriously as an object of study (Wahl-Jorgensen, 2020, p. 30–34). Because of this legacy, the study of emotion in media studies has focused on popular culture and entertainment, while leaving more "serious" forms of media, such as journalism and news, outside its scope (Koivunen, 2008; Pantti, 2010; Kotisová, 2019; Wahl-Jorgensen, 2019; but see also Ridell & Pietilä, 2008). Yet within both the study and practice of journalism, emotions have been regarded as complicated. On one hand, they are considered markers of tabloidization or sensationalism, or a "bad object" in general, but on the other hand, they are considered part and parcel of journalistic storytelling (Pantti, 2010; Peters, 2011; Wahl-Jorgensen, 2019, p. 40–41).

However, since the late 1990s and early 2000s, an increasing number of studies has focused on affect and emotion in media other than forms of art and entertainment. Particularly relevant for my doctoral dissertation project have been studies that focus on affect and emotion in news (e.g. Kotisová, 2019; Kyrölä, 2014; Pantti, 2010; Pantti et al., 2012; Pantti & Wahl-Jorgensen, 2011; Oikkonen, 2017; Wahl-Jorgensen, 2019) and studies that discuss affect and emotion in the context of social media (Nikunen, 2010; Nikunen, 2017; Paasonen, 2015; Papacharissi, 2015).

Following the call made by these scholars and several others, this study intensely focuses on emotion and affect as an object of its study. The basic premise of this work is that emotion and affect are crucial parts of how events, ideas and objects not only become meaningful to people, but also sometimes become politicised (Publication I; Publication III; Publication IV; Papacharissi, 2015a; Wahl-Jorgensen, 2019). I specifically argue that networked forms of communication play a key role in how affect and emotions are circulated in the contemporary media environment, and

journalistically produced texts are one of the key factors in the process (Publication I; Publication IV; Publication V; Kotisová, 2019; Wahl-Jorgensen, 2019). Through the empirical context of mediated coverage of the 2011 Fukushima Daiichi disaster, I suggest that affect is not only sticking to disaster victims, but also involve scientific experts and public officials (Publication II to Publication V). Therefore, I suggest that, in order to fully understand contemporary forms of public participation, the premise that public discussion is exclusively rational must make way for an approach that considers emotion and affect as key elements of the public and the political life (Fraser, 1990; Mouffe, 1999; Papacharissi, 2015a; Wahl-Jorgensen, 2019). I elaborate on these claims and how they influence the theoretical and methodological aspects of this study in Chapters 3, 4, 5 and 7.

I acknowledge that there is a much larger body of work about media and emotion, particularly related to elections and other forms of political participation, and discussions about authenticity and intimacy; while such work clearly relates to the discussions above, it is not reflected in the scope of this work. In addition, the social media aspect of this work would warrant a lengthier discussion on research about media audiences and emotion. There is also a rich body of work in disaster and crisis communication research that reflects similar themes; such research is not included in this work. I reflect on these omissions in Chapter 7.

Next, I discuss the research questions and key problematics addressed in the dissertation. I also reflect on how the above discussion on affect and emotion in media studies is visible in my research questions, which evolve over time.

1.2 Research questions on three levels

Research questions are a curious format. On one hand, they are essential in shaping and guiding the research process, condensing lines of inquiry that often begin as a tangled mess into neat, processable questions. On the other hand, research questions are surprisingly flexible and porous, as they tend to shift and change over the course of the research process. Next, I reflect on the research questions, hypotheses, and related material I have worked on over the course of my doctoral studies. Based on the various iterations of research questions and settings, I provide a synthesis that forms a cluster of questions that have been guiding my inquiry throughout this work. Based on these questions, I formulate the core research problematic that connects the five publications and forms a bridge to possible further inquiries discussed in

Chapter 7. I also reflect on how my understanding of affect and emotion in media studies has shaped these questions.

I present the research questions and settings of my study on three levels: the research plans of this project from 2014 to 2017, the research questions of the five publications and the combination of the aforementioned plans and questions , which allows me to critically evaluate the elements that have been added and discarded over the course of this work. I then proceed to discuss the key concepts that have surfaced from the research questions. I conclude this section by formulating a core argument for this work spanning the past six years.

1.2.1 Research plans

The research plans are the scaffolds upon which the study is gradually built. While final reports, articles and dissertations generally make it appear as if the plans had been unchanged from the beginning, for the sake of intellectual honesty, I am open about how the plans of my dissertation have been reworked over the course of six years. There are four versions, the first written in April 2014 as a part of my PhD student application and the last updated in late 2017. The research questions (translated from Finnish) of the first plan are as follows:

1. What meanings were stuck on and were layered into news about the Fukushima Daiichi nuclear disaster as the news circulated on social media?
2. How does affect figure into news as a genre?
3. What effects do the sharing of news in social media and the subsequent layering of meanings have on journalism and journalistically constructed publicity?

The questions of the first plan focus on meaning and changes in the meaning of news as it circulates on social media. The plan also draws extensively from my master's thesis, where I dabbled with questions about news as a genre (Rantasila, 2013). A second iteration of the plan from November 2014 slightly reformulates these questions, adding a remark about the "shareability" of news stories to the first question.

In the two more recent formulations of the plan, the third question has remained mostly the same, but the two others have diverged into sets of questions that each address a distinct angle. One version is formulated as follows:

- *Construction of affect in news items*. How is affect constructed in news items in various media, such as television, newspapers and web news stories? Are there any medium- or genre-specific ways for constructing affect? How can affect in news be studied analytically and critically?

- *Circulation of news items*. What kind of news items about the Fukushima Daiichi accident, its aftermath or anniversaries has been most shared or commented on? Do these stories have something in common in terms of affectivity? Do meanings attached to these shared news items change or accumulate when they travel across geographical and cultural distances? What kind of relationships emerge in the interfaces between SNSs (social networking services) and so-called traditional media?

The second version of the question sets is slightly different in focus, with the first set being essentially a synthesis of the two sets attached above. The second set of questions focuses more specifically on issues related to the methodology and empirical research of a hybrid media event (Sumiala et al, 2016; Sumiala et al., 2018). This set discusses the relationship between newer and older forms of media in a hybrid environment (Sumiala et al. 2018; Chadwick, 2013) during a disruptive event and its commemoration, the amount of empirical data a hybrid media environment generates, and the effects the hybrid media environment may have on publicity and its production.

The questions posed in the research plans are quite broad, and particularly the ones posed in the first version appear rather distant from the current form of this work. However, the version changes reflect how my interests move from a more journalism-oriented study towards media studies. As the plans develop, they also reveal how my understanding of affect and emotion evolves.

1.2.2 Peer-reviewed publications

The peer-reviewed publications are separate but interconnected parts of the overall work. In terms of research questions, they contain similar elements as the plans described above but also often have more concrete framing. The research questions of the peer-reviewed publications emphasise the changes noted above. The publications align themselves more firmly towards questions and theorisations of media studies, and the focus on journalism moves to the background. My understanding of affect and emotion also orients towards approaches that are more typical to media studies.

The first publication, co-authored with my Finnish colleagues from the MECER project and titled "#fukushima Five Years On: A Multimethod Analysis of Twitter on the Anniversary of the Nuclear Disaster," was published in February 2018 in the *International Journal of Communication*. This article has two aims. First, it seeks to develop and test a research design that combines quantitative and qualitative approaches for analysing Twitter posts (Publication I, p. 2). Second, it aims to reflect upon the role of Twitter networks in the context of a traumatic event, such as the Fukushima disaster, and to explore questions related to the interplay between a moment of commemoration and the political potential created by collective, emotionally loaded attention (Publication I, p. 2–3). The second aim is elaborated further by stating that the article hopes to

> uncover what remains in discourses relating to a complex disruptive event such as the Fukushima Daiichi disaster five years after the event, and how these discourses are produced, reproduced, and circulated in the contemporary, global, and transnational hybrid media environment. (Publication I, p. 3)

Based on a qualitative analysis, the article identifies three analytically distinct "logics" that intersect in commemorating the Fukushima disaster. First, *the logic of hybridity* refers to the interplay of new and emerging institutions and modes of communication in traditional mass media and on social media platforms. Second, *the logic of ritualizing trauma* refers to how collective traumatic experiences are negotiated towards a shared, cultural interpretation of the disaster. Third, *the logic of politicizing memory* refers to the space of opportunity and the attempts of various social actors to take advantage of it. (Publication I, p. 3, 11). In other words, the first publication simultaneously documents a process (aim one) through which it seeks to answer the questions addressed in aim two. The questions of the second aim, while briefly addressing the notion of emotions, focus more on the circulated, shared discursive meanings about the Fukushima Daiichi disaster.

The second publication, "Tahmaiset affektit: Fukushima Daiichin ydinonnettomuus YLE:n uutisoinnin verkkokommenteissa" (Sticky affects: the Fukushima Daiichi nuclear accident in the online comments of YLE's news reportage), is a single-authored article that was published in the journal *Lähikuva* in November 2018. The article is based on a paper presented at the Affective Politics of Social Media conference in Turku in October 2017. The twofold research question of this article, as translated from Finnish, is as follows:

> How affective intensity forms and is directed in comments about news on Fukushima Daiichi on the YLE's web pages, and are there any "sticky nodes of discussion" (Paasonen 2015) in the comments? (Publication II, p. 31)

In publication II, I elaborate on how the empirical material of the article (comments on YLE's news coverage of the Fukushima Daiichi disaster) allows for the study of not only the ephemeral and reactive aspects of affect, but also the culturally, socially and historically shared aspects (Publication II, p. 31). When discussing the theoretical framework and its application in the article, I detail the examination of how participants produce and direct affect in the online discussions about news coverage on the Fukushima Daiichi disaster (Publication II, p. 34).

The next two publications, "Chapter 6: The Global Circulation of Affect – The Case of Iodide Tablets" (Publication III) and "Chapter 7: Affective Entanglements of Expertise – The Finnish Case" (Publication IV) were published as book chapters in April 2019. They constitute the third part of *Traces of Fukushima. Global Events, Networked Media and Circulating Emotions*, a volume co-authored by associate professor Valaskivi, associate professor Tanaka, professor Kunelius and me that summarises the work from the MECER project. As the third and fourth publication are published as a part of a book that is formatted as a single text instead of an edited volume, they do not have clearly defined research questions. However, both publications have a set purpose and aim.

The purpose of Publication III is to develop an analysis of how affect circulates in mainstream news media and how affect becomes articulated as public emotions (Publication III, p. 102). I was also interested in how mediated affect can be used to direct attention in disruptive situations (Publication III, p. 102). In addition, I introduce the notion of *affective discipline* as a way to render visible and researchable cultural dynamics that underlie discussions about nuclear energy and crisis preparedness, and to address questions about the relationships between the public and journalists, officials and experts in the context of crisis coverage (Publication III, p. 103).

I continue my exploration of the notion of affective discipline in publication IV, where I analyse the comments posted to YLE's online news stories about the Fukushima Daiichi disaster. Publication IV shares empirical data with publication II and addresses questions about how affect can create and unravel senses of community within the same discussions, as online debates tend to become polarised (Publication IV, p. 120). According to my findings, the polarization of online discussions is created in the interplay of feelings of community and animosity. The discussions often appear to be tied to the roles the commenters implicitly or

explicitly assume other commenters or people featured in the stories are playing (Publication IV, p. 130). Like Publication II, Publication IV discusses how the culturally and historically circulated aspects of affect surface and stick to figures that become central in public discussion during a disruptive situation (Publication IV, p. 132).

The fifth publication is also a single-authored article. Titled "Managing Unpleasant Moods: Affective Discipline in Facebook Discussions," it was accepted for publication in the *European Journal of Cultural Studies* in September 2020. The article continues my exploration of affective dynamics and affective discipline, this time in the empirical context of comments about news of Fukushima Daiichi on seven Finnish newspapers' Facebook pages in March 2011. The research questions driving the inquiry of this publication are formulated as follows:

> How is affect present in the Facebook comment discussions about the news of the March 2011 triple disaster, and in what ways does affect structure the discussions?
>
> What kind of relationship do the comments have with the posted news items? (Publication V, p. 2)

In the same publication, I further develop the notion of affective discipline by examining it as part of the internal dynamics of online discussions, following Paasonen's (2015) argument about affect sustaining and driving these discussions.

Examined on the level of research questions, the two single-authored articles and the two book chapters align themselves as explorations of affect and affective dynamics and public emotions in the intersection of two types of mediated communication: journalistic news text and comments to journalistic texts written by their readers on online platforms. How I address this intersection varies between the publications, but with this shifting focus, I aim to highlight the different ways in which affect and emotion work in texts circulated in the hybrid media environment.

1.2.3 Crafting a broader picture

Collectively, the research plans and publications resulted in nine different versions for the research questions of my doctoral dissertation. While there are many recurring formulations and similarities, each version provides a unique angle to the central issues and objects of interest in this work. The four research plans and their evolution over time reflect how my research interests and understanding of the objects of my study have developed over the years. Moreover, the evolving plans

also serve as a reminder of how one's writing is influenced by what one has read and worked on around the same time.

For example, the work in the MECER project was influenced by the notion of hybrid media events (Sumiala et al., 2016), which brings together Katz and Liebes's (2007) concept of disruptive media events and Chadwick's (2013; 2017) concept of a hybrid media system. These influences are most visible in Publications I, III and IV. Questions of networked media technology are also tightly connected to the research setting of this dissertation, but the role of technology is articulated mostly in Publications I and V. All the research plans still contain the question about the implications of the notion of affect for news and journalistically produced publicity. In what follows, I draw together the common denominators of the research questions and formulate the core research problematics of my doctoral dissertation.

The first core problematic revolves around the **relationship between journalistically produced texts and their implied and actual readers in the contemporary hybrid media environment**. On the empirical level, the problematic materialises as questions about the relationship between journalistic accounts of the Fukushima Daiichi disaster and the comments about those accounts on social media. For instance, in Publications II, IV and V, I am interested in how the respective worlds of journalism and the commenters meet on social media platforms. Do the news stories act as prompts for discussion about the news item itself, the topic in more general terms or something else entirely? Or how do representatives of journalistic institutions interact with their readers? In other words, this problematic provides a connection to broader concerns about the implications of the hybrid media environment for democracy in contemporary societies (Chadwick, 2013; Papacharissi, 2015a; Wahl-Jorgensen, 2019). Questions about the contemporary networked media environment also invite inquiries that are more technologically oriented. While this discussion is not at the core of my dissertation, I find approaches from medium theory (McLuhan, 1964; Meyrowitz, 1999) and recent discussions on the concept of affordance (e.g. Papacharissi, 2015a; Vainikka, 2020; Wahl-Jorgensen, 2019; Zeilinger & Scarlett, 2019; cf. Gibson, 1986) to be highly resonant with how the contemporary media environment structures the communication among an increasing number of people. I revisit these theorisations in more detail in Chapter 7.

Second, there is the question of affect, which acts as the sticky glue of the entire dissertation. Questions of affect equally concern the news about Fukushima Daiichi and the online comments, and the hybrid media environment as a broader framework. Thus, the question is posed as follows: "**How does affect work in**

networked, text-based communication?" The question relates to both news texts and comments; covers affect as expressed in texts and as utterances; and is attached to meaning-making. The question also concerns affect as a dynamic that influences moods of communication in all media, even though my examples are mostly of the aforementioned text-based and networked kind (Paasonen, 2015; Papacharissi, 2015a; Oikkonen, 2017; Wahl-Jorgensen, 2019).

Third, there are the methodological questions, which stem from my choices for the theoretical framework and analysis methods. These questions are summarised as the following question: "**How to study affect in text-based media, and what does that mean in terms of research methods and results?**" While I address these questions in Publications I, II, III and V, the accounts are not very detailed. Therefore, in Chapters 3 and 5, I dive more deeply into these figurations, elaborate on the complex implications of studying affect, and argue for how these questions could be answered.

The three questions above summarise the core research problematics of this dissertation. Collectively, the questions provide the following chapters and the publications with a common framework and can be used as a rough itinerary for the rest of this work. They also attach the work at hand to a larger body of scholarship on affect and emotion in media and journalism, a connection which I will return to reflect on in Chapter 7.

1.3 The work ahead

After this introductory chapter, I elaborate on the broader social and cultural context of this work in Chapter 2, discussing the effects and implications the Fukushima Daiichi nuclear powerplant accident has had in Japan and Finland. I also briefly reflect on the role of empirical context for research in studies interested in mediated phenomena. In Chapters 3 and 4, I expand and explore the role of concepts, first more broadly in media studies and then more specifically in this thesis. I elaborate and define the two key concepts of affect and public, and discuss why "social media" perhaps cannot be called a proper concept, but should be addressed as a term instead. I also argue that, instead of seeking firm and self-explanatory definitions, social and cultural research should embrace the interdisciplinary plasticity and fluidity of concepts such as affect and use this porousness as a driving force for the meticulous methodological work needed to produce robust empirical analysis. I return to these arguments in the concluding chapter, further discussing the emerging

concept of affective discipline and its relationship with networked media and technologies.

From these concepts, I move to discussing methodology in Chapter 5, continuing to develop arguments first introduced in Chapter 3. Following Bal (2002), Deleuze and Guattari (1994) and Latour (2005), I suggest that careful methodological work is necessary for social and cultural research to maintain its integrity and relevance. I also discuss how and why the empirical data of this study materialised and elaborate on the methods of data collection and analysis. In Chapter 6, I reflect on the ethical peculiarities of conducting research on historical social media data and more broadly discuss the ethics of internet and media research. I also critically reflect on the data collection and analysis practices of my work. In the concluding Chapter 7, I summarise the key findings and core arguments of the dissertation, reflect on the merits and limitations of this work, and start a discussion on the further implications of my findings for future research.

2 BETWEEN FUKUSHIMA DAIICHI AND FINLAND

The context of research is an integral part of what makes the research subject interesting, and the context is an irreplaceable part of the subject itself (Suoranta 2008: 57–58). While I do not analyse Japanese media texts in this dissertation, I feel compelled to provide a broader context for the empirical material of my study, primarily for four reasons.

The most immediate reason is personal: I was there. As I recount in the beginning of Chapter 1, I was an exchange student in Tokyo in March 11, 2011, and experienced the earthquake and tsunami from there while grappling with the mediated response and reactions to the unfolding events. In June 2011, I took part in disaster relief activities, and in June 2016, I visited the town of Namie and the surrounding areas affected by the fallout from Fukushima Daiichi.

Second, the Fukushima Daiichi disaster illuminates not only the interdependencies of the hybrid media environment but also the interdependency of a global society. As Lewin (1946/1948, p. 215) noted already in the 1940s, events in one corner of the world are bound to also impact the other side of globe (see also McLuhan, 1964). Since Lewin's time, the global interconnectedness has only deepened, as contemporary technologies and, above all, communication networks enable ever faster and farther-reaching connections between organizations and individuals (see, e.g. Allenby & Sarewitz, 2011). Thus, the case studies of this dissertation illustrate that the disaster had an impact beyond Japan, including in Finland and the US. I revisit this claim in Chapter 7.

Third, as time passes, the events disappear from the agendas of global news cycles and fade from individual and collective memory (Valaskivi et al., 2019; Pantti et al., 2012; cf. Galtung & Ruge, 1965). I thus feel compelled to freshen the memories of my readers, to reawaken them to the sense of urgency that passed through so many during the anxious days of March 2011. Apart from a small group that has closely followed the developments at Fukushima Daiichi, some nuances of the disaster have been mostly overlooked in mainstream news media outside Japan. For instance, I want to highlight the complex political and economic circumstances of nuclear power plant towns, such as Futaba and Okuma, that lie behind the headlines.

Fourth, the empirical material of my study revealed the need for a more nuanced understanding of the situation, as the news coverage has historically relied on shorthand stereotypes and clichéd representations of Japan and the Japanese (Publication II; Publication III; Publication IV; see also, e.g. Lochbaum et al., 2014; Meissner, 2018; Uchida et al., 2014). The news reports in the empirical material of my study also often provided a very limited description of the events beyond the Fukushima Daiichi power plant, so a somewhat more detailed approach is necessary.

As news media do not operate in a vacuum, I argue that understanding and describing the social, economic and political context for the media content under scrutiny is necessary for a methodologically sound analysis. Such a thorough contextualization allows the researcher to be aware of what fuelled the circumstances that led to the object under scrutiny. While it is impossible to account for *all* the relevant actors and their relations in one study, I have tried my best to trace at least some interdependent relationships related to Fukushima Daiichi in this chapter, somewhat in the spirit of the actor network theory (Latour, 2005; Bennett, 2005). Hence, in addition to discussing the events at and around Fukushima Daiichi, I have included a description of nuclear energy policy in Finland in March 2011, which serves as a backdrop to the most of my empirical material.

2.1 Events in Japan in March 2011

At 14:46 JST on March 11, 2011, a crisp Friday afternoon, what felt like soft and then more violent swaying in Tokyo were the shockwaves of a magnitude 9.0 to 9.1 earthquake, the most powerful ever recorded in Japan and the fourth most powerful in the world. The quake occurred in the Pacific Ocean, some 70 kilometres east of the Oshika peninsula and around 440 kilometres north-east of Tokyo, at a depth of circa 30 kilometres, in a place where the Pacific tectonic plate is pushed under another plate that holds the northern part of Japan's main island, Honshu. The quake was so powerful it moved the whole island of Honshu more than 2 meters eastward and shifted the Earth's axis (Lochbaum et al., 2014, p. 3).

The quake set off a tsunami wave that travelled 700 kilometres per hour and in some places reached almost 10 kilometres inland. In Ishinomaki, a municipality closest to the epicentre, the wave was estimated to have been up to 40 metres high in narrow valleys. According to Japan's National Police Agency (2019), 15 898 people lost their lives in the tragedy and 2531 people are still missing. Most of the casualties were from the Miyagi, Iwate and Fukushima prefectures (National Police

Agency, 2019; Valaskivi et al., 2019, p. 2.). Entire coastal communities were almost wiped out by the surging waters. Investigations have later revealed that a significant number of those who perished were vulnerable people: 65 percent of them were over 60 years old (Valaskivi et al., 2019, p. 2).

Apart from the irreplaceable human cost, the earthquake and tsunami wrecked the infrastructure of the Tohoku region. According to National Police Agency statistics (2019), 121 919 houses collapsed, roads and railways suffered considerable damage and, at worst, nearly 4,4 million households were without electricity and 1,5 million were without clean water. In June 2011, the Japanese government estimated the financial cost of the disaster to be almost 17 trillion yen (152,2 USD billion) (Valaskivi et al., 2019, p. 2). The combination of record-breaking earthquake and tsunami would have been devastating and dramatic alone, but the north-eastern coast of Japan was also the home of one of the largest nuclear power stations in the world, Fukushima Daiichi.

2.1.1 Fukushima Daiichi: A cascade of misfortunes

The Fukushima prefecture was one of the three prefectures worst hit by the earthquake and the tsunami. There, facing the Pacific Ocean between the towns of Futaba and Okuma, roughly 260 kilometres from Tokyo, lies the Fukushima Daiichi nuclear power plant, operated by Japan's largest electric utility Tokyo Electric Power Company (hereafter TEPCO). The plant has six boiling water reactors, three of which (Units 4, 5 and 6) were out of commission for maintenance on March 11, 2011, at 14:46 when the earthquake started (Kurokawa et al., 2012a, p. 12–13; Lochbaum et al., 2014, p. 5). In operation since 1971, the Fukushima Daiichi, like all nuclear power plants in Japan, was designed to automatically shut down during an earthquake, which it promptly did (Kurokawa et al., 2012a, p. 12; Lochbaum et al., 2014, p. 5). All other emergency measures, such as switching to the emergency power supply after external power was lost, also initially worked as designed (Kurokawa et al., 2012, p. 12; Lochbaum et al., 2014, p. 8). The plant had a seawall as well, and it easily deflected the first tsunami wave to hit the plant at 15:27 JST on March 11, 2011 (Kurokawa et al., 2012a, p. 12; Lochbaum et al., 2014, p. 10).

Unfortunately, the second wave that hit Fukushima Daiichi at 15:35 JST was 14 meters tall, exceeding the height of the protective seawall by 4 meters (Kurokawa et al., 2012, p. 14). The wall of water destroyed the emergency seawater pumps meant to carry excess heat from the reactors and surged the basements of most buildings

on the site, effectively obliterating the emergency diesel generators meant to power the plant's cooling systems (Kurokawa et al., 2012a, p. 12; Lochbaum et al. 2014, p. 10, 13). The water also damaged the electrical distribution systems and backup batteries of Fukushima Daiichi, and by 15:37 JST, the nuclear power plant had no external or internal power supply (Kurokawa et al., 2012a, p. 12; Lochbaum et al., 2014, p. 10, 13). In addition to damaging the power supply at the plant, the surging water spread debris – from gravel to cars and heavy machinery – all over the site, making it harder for workers to move into the area to start repairs after the waters had retreated (Kurokawa et al., 2012a, p. 12, 14). At 19:00 JST on March 11, 2011, Prime Minister Naoto Kan declared a nuclear emergency, and residents of Futaba and Okuma within a 3-kilometre radius of the plant were told to evacuate (Lochbaum et al., 2014, p. 23–24). People living within 3–10 kilometres were told to stay indoors (Lochbaum et al., 2014, p. 23–24).

As the reactors at Fukushima Daiichi were not being cooled, their temperature began to rise and the cooling water started to evaporate, leaving the nuclear fuel rods inside the reactor exposed. Because of the power outage, plant workers had no data on the situation, but they were aware of the risks and tried to make do with what they could in a very precarious situation (Lochbaum et al., 2014). At 9:00 JST, on March 12, the workers began a heated scramble to vent steam from the Unit 1 reactor to relieve the pressure inside. That was too little, too late, however, and at 15:36, hydrogen that had built up inside the Unit 1 reactor building exploded (Kurokawa et al., 2012a; Lochbaum et al., 2014).

On the evening of March 12, 2011, the evacuation zone was extended to a 20-kilometer radius from the plant. At that point, the fuel in Units 1 and 2 was in meltdown, and Unit 3 was also having serious cooling issues. On March 14 at 11:00 JST, an explosion rocked Unit 3. A third explosion occurred a day later, on March 15, when Unit 4 blew up at 6:20 in the morning. As in Unit 1, the explosions in Units 3 and 4 were also caused by a build-up of hydrogen gas. People within 20–30 kilometres were advised to stay indoors (Kurokawa et al. 2012a; Lochbaum et al., 2014).

The efforts to bring the situation at Fukushima Daiichi under control were hampered by everything from continuous aftershocks of the quake and too-short electric cables to the fact that the earthquake had damaged roads and infrastructure around the struggling power plant (Kurokawa et al., 2012a; Kurokawa et al., 2012b; Lochbaum et al., 2014). Further complicating the situation, the plant had an insufficient supply of extra batteries and that the weather in Fukushima at that time was mostly heavy snowfall and strong winds, making it even harder for rescue crews

to reach the plant or complete work outside (Kurokawa et al., 2012a; Kurokawa et al., 2012b).

Altogether, approximately 164 000 people were evacuated from the area between March and April 2011, and 167 workers were exposed to high doses of radiation (Kurokawa et al., 2012b: 15; Reconstruction Agency, 2017). Because of the nuclear emissions, 1800 square kilometres of the Fukushima prefecture were contaminated in a way that, in 2012, the cumulative radiation dose per adult was 5 micro sieverts or higher annually, which is significantly higher than the average annual radiation dose for an adult in Japan, 3,75 micro sieverts (Kurokawa et al., 2012b; Reconstruction Agency, 2016).

As Lochbaum et al. (2014), the official Japanese investigation commissions to the disaster (Government of Japan, 2012; Government of Japan, 2011) and many others (e.g. Hatamura et al., 2012; Kurokawa et al., 2012a; Kurokawa et al., 2012b) have stated, the shortcomings at Fukushima Daiichi were not just a series of unexpected and unavoidable accidents. Rather, many of the problems at Fukushima Daiichi, from neglected safety measures to incompetent company management, had deep roots in the operational culture of the Japanese nuclear industry. While the meltdowns may have not been entirely preventable, the extent of the damage could have been significantly lower, had the plant operator TEPCO and the Japanese officials responsible for implementing and overseeing nuclear energy policy taken several previous warning signals more seriously (Kurokawa et al., 2012b; Lochbaum et al., 2014).

Nuclear power in both the Fukushima prefecture and Japan in general was tied to seeking economic growth and providing heavy industries with reasonably priced electricity in the post-war reconstruction effort (Yoshimi & Loh, 2012). Like many other nuclear power projects, the Fukushima Daiichi was started in early 1960s as an attempt to kick-start the local economy – as previous sources of prosperity were drying up – and as a result of effective lobbying by Liberal Democratic Party (hereafter LDP) politicians impressed by the US "Atoms for Peace" project (Jurakuet al., 2007; Yoshimi & Loh, 2012). The towns of Futaba and Okuma, where the Fukushima Daiichi power plant is located, are parts of the poorest region in the Fukushima prefecture (Yoshimi & Loh, 2012, p. 326), and the majority of the regional jobs had historically been tied to a large coal mine. Since the mid-1950s, coal production had increasingly decreased, and in order to find a new lifeline for the region, Futaba and Okuma turned to nuclear energy (Yoshimi & Loh, 2012). This choice served both the interests of Japanese heavy industry and US companies such as General Electric, which designed the Fukushima Daiichi plant (Yoshimi & Loh,

2012). Since the oil shock of the 1970s, Japan began to rely more on nuclear energy and eventually built 54 reactors – more than any other nation except the US (Yoshimi & Loh, 2012, p. 326, 329).

The interconnectedness of industry and politics in the nuclear energy sector in Japan has been dubbed a "nuclear village", denoting the close-knit relationships among and vested interests of the actors involved in the production, consumption and security of nuclear energy. The nuclear village has in turn upheld what is often called a "myth of safety" with respect to Japanese nuclear energy. According to this myth, nuclear energy is safe because of the superior know-how and standards of Japanese science and engineering, and therefore, major accidents are highly unlikely (Kurokawa et al., 2012; Lochbaum et al., 2014; Nöggerath et al., 2011; Penney, 2012; Suzuki, 2011; see also Walker, 2010). The combination of vested interests and self-importance has led to a mindset in which financial profits come first and safety issues can be ignored given that addressing them would mean both additional costs and the admission of potential failure (Yoshimi & Loh, 2012). For example, according to Penney (2012), in 2007, top managers at TEPCO had given large personal donations to the LDP. The following year, the Japanese government reduced the mandatory inspections at Fukushima Daiichi from once a year to every two years (Penney, 2012). As the investigations into the aftermath of the meltdowns have revealed, TEPCO deliberately ignored several warnings by both Japanese and international inspectors at Fukushima Daiichi for several years before the disaster, in a bid to avoid additional costs (Kurokawa et al., 2012b; Lochbaum et al., 2014; Penney, 2012).

Yet notably, as several devastating environmental disasters caused by industries such as chemistry and mining over the course of Japan's modernity attest, ignorant attitudes towards environmental and safety regulations are not unique to the Japanese nuclear industry but have roots in the rapid industrialization of Japan since the 1880s (Warner, 2010). In a global context, such attitudes are unfortunately not a development unique to Japan.

2.1.2 From March 2011 onwards

As with all crises, the acute phase never lasts forever. By the end of March 2011, all units in Fukushima Daiichi had power and the fuel was being kept under safe temperatures (Lochbaum et al., 2014). However, the end of the acute phase of the crisis did not mean that the situation was over at Fukushima Daiichi or in the 20-kilometre exclusion zone around the plant. Hundreds of thousands of people were

evacuated, and 1800 square kilometres of land was contaminated (Kurokawa et al., 2012b). In addition, the damaged reactors continue to need careful and constant monitoring and management, as they are slowly being decommissioned and the area decontaminated (Kurokawa et al., 2012b). Japan's Reconstruction Agency (2017) overseeing the reconstruction efforts estimates that it will take at least 40 years for the Fukushima Daiichi power plant to be completely decommissioned.

The constant need for water to cool the reactors at Fukushima Daiichi has also led to a new problem with possible global implications. While most of the water is captured, decontaminated and stored in tanks on site, some of the water keeps seeping into the Pacific Ocean, and there have been fears that the leakage might also affect the groundwater (McCurry, 2019a). The escaping water, however, is not the only problem. Because of the massive volume of water used daily at the plant to cool the six reactors, the site is bound to run out of space for storage containers. In Autumn 2019, TEPCO and Japan's minister of environment discussed the possibility of releasing some of this water containing low-level radiation into the Pacific, but the idea was met with both local and international public outcry (McCurry, 2019a).

One of the reasons for the public outcry from residents of the Fukushima prefecture was their concern for the prefecture's image, which has already been tarnished by the disaster. The region was once famous for its agricultural products, but because of the disaster, even produce from non-contaminated areas of the Fukushima prefecture are difficult to sell. The same is true for the fisheries: nine years after the disaster, South Korea still bans imports of fish caught off the coast of the Fukushima prefecture, and the fish do not sell well in domestic markets, either (Sasaki, 2018; McCurry, 2019b).

In addition to the economic havoc the disaster has brought to the livelihoods of the people of the Fukushima prefecture, it has deeply impacted the lives of the people who had to leave their homes. In 2018, nearly 43 000 people from the Fukushima prefecture were still living as evacuees (Fukushima Prefectural Government, 2018). Those who have been evacuated outside the prefecture have encountered discrimination and bullying, much like the *hibakusha* of Hiroshima and Nagasaki 66 years before (Mockensturm, 2014). The living conditions of the evacuees have also been a source of grief and distress. It has been estimated that the stress related to the evacuations and loss of livelihoods has caused tens of additional deaths over the the years since the disaster (Reconstruction Agency, 2017; see also von Hippel, 2011).

2.2 Global responses and effects

While the earthquake and the tsunami prompted a swift and sympathetic global humanitarian response to the plight of the Japanese, the reactions to the nuclear disaster were much more mixed. As the situation at Fukushima Daiichi appeared to spiral out of control between March 12 and 15, 2011, the handling of the situation by Japanese authorities began to draw more criticism and alarmed reactions. For instance, in Finland, the head of the local nuclear regulation and safety authority gave an interview to the national broadcaster on March 18, where he harshly berated the Japanese and wondered if the apparent slowness of the cooling efforts stemmed from "certain features of Japanese culture" (Publication II; Publication IV). Even more dramatically, the Vice-President of the European Commission in charge of Energy, Günter Oettinger, described the situation at Fukushima Daiichi as an "apocalypse" that was "out of control" (Hayden, 2011; Egan, 2011). As the days passed, even the International Atomic Energy Agency officials, whose statements had mostly expressed solidary with the Japanese, began to voice their frustration (Lochbaum et al., 2014). This frustration, which was not limited to actors outside Japan, was arguably later reflected in the scathing conclusions of the investigative reports on the causes of the accident.

In addition to reactions inside the global nuclear village, the fallout from the faulty reactors of Fukushima Daiichi caused concern about the potential environmental and health effects beyond the prefecture. As mentioned above, China and South Korea, as Japan's neighbours, were quick to ban all imports of fish, milk and vegetable products from the Fukushima prefecture, and at the time of this writing, the ban on seafood remains in effect in South Korea (McCurry, 2019b). The news of the fallout also prompted a global buying spree of potassium iodide, a supplement known to protect the thyroid from absorbing radioactive isotopes of iodide (Publication III). This scare was not limited to Japan's closest neighbours; potassium iodide was sold out in pharmacies across the northern hemisphere in March 2011 (Publication III). Where potassium iodide was not available, people resorted to buying, among other things, large quantities of iodized salt and dried kelp (Publication III).

Beyond the restrictions on food imports, the most far-reaching global effects of the Fukushima disaster have been in the energy sector. In the immediate aftermath of the disaster, Germany announced its plan to phase out nuclear energy and replace it with renewables, and many other countries considered similar policies. In the EU, the aftermath of the disaster resulted in union-wide inspections and so-called stress

tests to all existing nuclear power plants, which have had further national implications (e.g. Kunsch & Friesewinkel, 2014; Chien, 2015).

Yet as the events disappear from the news agendas and fade from immediate memory, the Fukushima Daiichi disaster has, much like the 1986 Chernobyl disaster, become a part of the global popular imagination about the risks of nuclear energy (Weart, 2012). In my master's thesis (Rantasila, 2013), I argued that the popular image, or figure of "Fukushima," has become detached from the actual events of March 2011, and it has begun, to paraphrase Sara Ahmed (2004b), to have "a life of its own" as an emotionally charged figure circulating in the public discussions and arenas of popular culture (cf. Kyrölä, 2014). In the Japanese discourse, this detachment is made visible by differentiating between Fukushima written in katakana characters (フクシマ) and Fukushima in kanji characters (福島) (Valaskivi et al., 2019). As I noted above, this detachment has also meant that, while circulating in the hybrid media environment, the figure of Fukushima has taken on new affective stickiness that manifests as stigmatisation of the Fukushima prefecture, its people and its produce.

Because of the mediated response and remembrance of the Fukushima Daiichi disaster, as well how its developed a "life of its own" as part of the global narratives about nuclear energy, the disaster can also be seen as a global iconic event (Sonnevend, 2016, p. 20–21). Global iconic events are not universal, but they do have historic significance in more than one location and travel from region to region across time and space, medium to medium (Sonnevend 2016). The discussion on the impact of the Fukushima Daiichi disaster outside Japan illustrates how the event reverberates through several spatial, temporal and affective layers (Lewin, 1945/1948; Allenby & Sarewitz, 2011; Sonnevend, 2016). Given the politically volatile nature of nuclear energy, the Fukushima Daiichi disaster may even still have global implications not yet visible.

2.3 Meanwhile in Finland

Like Japan, Finland has had nuclear power plants for more than 40 years. At the time of my writing, there are currently two operating nuclear power plants in Finland, located in Olkiluoto in Southwestern Finland and Loviisa in Southeastern Finland. Both plants have two reactor units, built during the 1970s and the 1980s. The reactors in Loviisa, operated by Fortum, were made in the Soviet Union, while a Swedish company supplied the reactors in Olkiluoto, currently operated by

Teollisuuden voima (hereafter TVO) (Michelsen, 2007; Vehkalahti, 2017). In addition, one new reactor has been under construction at Olkiluoto since 2005, and a new power plant is planned in north-western Finland in Hanhikivi, Pyhäjoki by a joint utility venture of Finnish businesses called Fennovoima. Fortum is an energy utility listed on the Helsinki stock exchange, and roughly half of its shares are owned by the state of Finland (Fortum, 2020). TVO is a non-listed company whose majority owner is Pohjolan Voima, an electricity utility owned mostly by forestry companies (TVO, 2020; Pohjolan voima, 2020). The majority of Fennovoima's shares is jointly owned by a conglomeration of major Finnish industries and smaller local utilities (Fennovoima, 2018; Vehkalahti, 2017).

Even though a small majority of Finns has been consistently pro-nuclear (Vehkalahti, 2017; Laihonen, 2016; Energiateollisuus, 2016), the Chernobyl disaster in 1986 and the Fukushima Daiichi disaster in 2011 caused an increase in the number who oppose nuclear energy (Laihonen, 2016; Timonen et al., 1987; cf. Gamson & Modigliani, 1989). According to Timonen, Kallio and Mörä (1987), in 1986 after the Chernobyl disaster, many Finns even felt that the national nuclear and radiation safety regulator STUK had failed to live up to its responsibilities because of the contradictory and sometimes belated information it provided to citizens. This mistrust echoed in some Finns' attitudes towards STUK in 2011, as my analysis of online discussions about STUK experts' media appearances illustrates (Publication II; Publication IV).

After 1986, the national debate about nuclear energy resurfaced in 1995 when the Finnish government and the nuclear power plant operators Fortum and TVO began discussions about processing and depositing nuclear waste, as well as building a repository for the waste. The site of the repository was decided, the companies were granted required permissions in 2001 and the construction of the repository began in 2004 (Raittila, 2000; Raittila, 2001). Since then, the topic has effectively disappeared from the public agenda. The facility is expected to become fully operational during the 2020s.

In 2011, the Fukushima Daiichi disaster coincided with a parliamentary election campaign in Finland, and the safety of nuclear energy became a campaign issue. Particularly, this concern was fuelled by the two new nuclear power facilities in the planning and construction phases in Finland, as mentioned above. The Olkiluoto 3 reactor, supplied by the French Areva, has been significantly delayed because of quality issues and additional safety tests required after the Fukushima Daiichi disaster (Laihonen, 2016; Vehkalahti, 2017; TVO, 2020), and it is expected to produce power for the national grid in 2022. In March 2011, the project was under scrutiny as some

of the subcontractors were suspected of labour regulation violations. Began in 2010, Fennovoima's nuclear project meant the return of the Russians to the Finnish nuclear energy market, as the reactor will be supplied by Russia's Rosatom. In 2011, Rosatom's involvement in the project kindled a debate about the project's defence and national security implications, in addition to environmental concerns (Laihonen, 2016; Vehkalahti, 2017).

Throughout its history, much like in Japan, the Finnish nuclear energy policy has been entwined with questions of economic prosperity and the success of the nation's main exports and heavy industries. This attitude is also reflected in the current reactor projects, especially in Hanhikivi, as the majority of the operators' shares is jointly owned by a conglomeration of major Finnish industries and smaller local utilities (Fennovoima, 2018; Vehkalahti, 2017). Another major theme has been securing energy independence, though this has been called into question with Rosatom's involvement in the Hanhikivi project (Laihonen, 2016; Vehkalahti, 2017). Despite sporadic opposition, the image of the nuclear industry is less mired in scandal in Finland than in the US, South Korea or Japan, for example, and thus perhaps also more positive than in other European countries (Laihonen, 2016; Ruostetsaari, 2018; Vehkalahti, 2017; see also Abe, 2012; Jasanoff & Kim, 2009; Penney, 2012; Weart, 2012).

Because of that positive image, the risks of nuclear power or nuclear waste are rarely discussed in the Finnish mainstream news media. The 1986 Chernobyl disaster, discussions of the nuclear waste repository in the 1990s and the 2011 Fukushima Daiichi disaster are the most recent exceptions to relative silence. In the case of Fukushima Daiichi at least, the mediated public debate was often framed in a way that removed the notion of risk from nuclear energy in Finland and placed it on nuclear energy elsewhere. This framing occurred in the case of Fukushima Daiichi coverage, as there were several instances of STUK officials and other experts stating that an accident like Fukushima Daiichi would never be possible in Finland (Publication II; Publication IV). While this claim is technically true given the different geophysical conditions, reactor types and safety features, such statements betray an attitude that resonates with the Japanese myth of safety regarding nuclear energy mentioned above (cf. Kurokawa et al., 2012; Lochbaum et al., 2014; Nöggerath et al., 2011; Penney, 2012; Suzuki, 2011; see also Walker, 2010). While the Finnish society generally tends to be more transparent than the Japanese, there are structures and distributions of power in Finland that resemble those comprising the so-called iron triangle of business, politics and economy in Japan and the position of nuclear as the energy form of choice inside this triangle (Ruostetsaari, 2017).

2.4 Next steps

While the acute phase of the Fukushima Daiichi disaster has passed, the situation is far from over for the thousands of people who continue to be affected by the events. Life in the Fukushima prefecture is still bound to the emotionally sticky "phantom of radiation" (cf. Kyrölä, 2014), and this phantom continues to live on in the narratives circulated in popular culture.

This dissertation focuses on the dynamic of mediated representations about events at Fukushima Daiichi and discussions about these representations in the hybrid media environment. However, I wanted to remind the readers about the events and their toll on the lives of people. As noted above, geographically and culturally distant events tend to become detached from their original contexts and start a "life of their own" as they circulate in the currents of culture (Ahmed, 2004b; Sonnevend, 2016). While far from comprehensive, this chapter has illuminated the events and circumstances to which the representations were attached. The chapter has also highlighted the connections and similarities between Fukushima and Finland in order to anchor the sometimes-ephemeral social media discussions to geographical, political and social realities. Having discussed the empirical context of the dissertation, I now move to elaborate on the more abstract elements of the work at hand: concepts and methods.

3 CONCEPTS, PART 1

In scientific writing, concepts are most often understood as tools for the act of science itself: they are instruments of analysis and inquiry that allow researchers to name, describe, order and classify objects and phenomena (Ronkainen et al., 2011, p. 51). Concepts are attached to theories, and such connections allow scholars to connect their findings to previous research (Ronkainen et al., 2011, p. 52). Each of the key concepts of this work – *affect*, *public* and *social media* – attaches my research to three distinct theoretical discussions, previous studies, and fields, traditions, and scholarship.

However, concepts and their use are often more complicated than what neat descriptions, such as the one above, suggest. As Ridell and Väliaho (2006, p. 13) highlight, even the concept of a concept appears to escape a clear, single definition. Given the interdisciplinary nature of media studies (Valdivia, 2003; Chapter 1), concepts used in the discipline tend to bear several and overlapping meanings. I would therefore like to further probe the idea of concepts in media studies and even slightly problematise the idea in this chapter.

In the first part, I discuss the idea of concept, and the movement of concepts across disciplines in a broader sense, by drawing inspiration from the work of literary and cultural theorist Mieke Bal (2002), philosophers Gilles Deleuze (1925–1995) and Felix Guattari (1930–1992) (1994; 2013; see also Massumi, 2013), and Herbert Blumer (1900–1987) (1969), a key figure in symbolic interactionism.

The second part of this chapter examines affect, the core concept of this thesis. I first revisit the definition of affect presented in Chapter 1. I then further unpack the concept by elaborating on its potential meanings through a framework presented in the first part of the chapter. Chapter 4 continues the elaboration on the key concepts of this work, as I discuss the public and social media and ponder whether the latter can be considered a concept in a proper sense.

3.1 Conceptualising concepts

The word "concept" has its roots in the Latin word "conceptus", which translates as "something *conceived*" or as "something taken in" – in other words, something someone has thought of and figured out (Oxford Dictionary of English 2020a; 2020b). Blumer (1969, p. 155–156) takes this connection between concept and conception further by pairing it with the noun "perception" and the verb "perceive". He (1969) argues that there can be perception without conception, but no conception without perception: conception shapes perception, allowing for new orientation (cf. Gibson, 1986; Deleuze & Guattari, 1994). Therefore, Blumer (1969) suggests that concepts should be understood as enablers of abstract thinking, as ways of conceiving. While the English word concept is attached to rather cerebral activities, the Finnish equivalent "käsite" has a more tangible etymology, as its root is a concrete grasping of something with your hands (Ridell & Väliaho, 2006, p. 11–12; cf. Bal, 2002, p. 11).

According to Blumer (1969, p. 157–158), a working concept can bring a solution to a problem that was not conceivable before the introduction of the concept in question. In other words, concepts as enablers of abstract thinking allow something to be separated from the world and to become the object of study, and the concepts act as connectors between the planes of theory and empiric reality (Blumer 1954, p. 4, Blumer 1969, p. 158). He (1969, p. 166) also argues that, like concrete tools, concepts may initially be crude and used in experimentation, but the more they are used, the more precise they may become, eventually even becoming a standard in their own field, until someone again rethinks their use and begins to develop them further. Blumer (1969, p. 160) also understands concepts as symbols of conception and that sharing and circulating those symbols allow others to conceive the same. This process enables collective action, such as conducting research and implementing the findings of research.

However, not all concepts are alike: there are common sense concepts, which refers to concepts used in everyday discussions, and concepts used in scientific study, which can be divided into *definitive* and *sensitising concepts* (Blumer, 1954, p. 7). According to Blumer (1954, p. 7–8), definitive concepts are clearly defined and "refer precisely to what is common to a class of objects", while sensitising concepts lack the specification of definitive concepts but provide a general sense of reference. Sensitising concepts can also be understood as concepts that lend particular power to theorising the issue to which they refer. Instead of searching for definitive concepts, one should embrace sensitising concepts that provide suggestions along

which to look and test these concepts in various empirical settings (Blumer, 1954; cf. Bal, 2002).

Blumer's notion of concepts as shareable symbols of conception and his emphasis on the empirical probing of concepts resonate strongly with Bal's (2002) work. To Bal (2002), who does not refer to Blumer, concepts are "intersubjective abstract representations of an object". As representations, concepts are also flexible, historical and debated, and thus never "innocent" (Bal, 2002, p. 9, 13, 22–23). To examine an object through a certain concept is to frame it, to interpret it in a certain way and to omit some aspects of it (Bal, 2002, p. 9, 13, 22–23; see also Surman et al., 2014).

Bal also argues that a well-defined concept can act as a miniature or shorthand theory. What Bal (2002, p. 23) means by this is that, when explicitly and self-reflexively defined, concepts can be the basis for methodology and act as tools of analysis that facilitate discussion and open up possibilities for reflection and debate in concert with other concepts and theories. This approach requires awareness of the flexibility and historicity of concepts themselves: that concepts are never isolated of the broader cultural and temporal framework from which they stem and aim to explain and that they are, after all, abstract representations and therefore always flexible and partial (Bal, 2002, p. 9, 11, 13, 22, 28; cf. Deleuze & Guattari, 1994).

In addition to never being "innocent", concepts are never "alone". They are always connected to other concepts through the theoretical frameworks in which they are coined and sometimes through their components (Bal, 2002; Deleuze & Guattari, 1994; Ridell & Väliaho, 2016, p. 14–15). For instance, affect (as it is used in cultural studies and media studies) is closely connected to concepts such as body, intensity, potential and (new) materialism, but in other fields such as psychology and neurology, it is connected to concepts such as cognition, stimulus and response (Wahl-Jorgensen, 2019; Wetherell, 2012). The concept of the public is, in turn, connected to concepts such as democracy, political representation, participation, secrecy and privacy (Papacharissi, 2010; Wahl-Jorgensen, 2019). An illustrative example of a concept constructed by bringing together separate concepts is social media, which comprises two concepts that are notoriously complex by themselves.

Bal's work has been influenced by Deleuze's and Guattari's explorations on the same topic. In their book *What Is Philosophy*? (1994), the philosophers argue that redefining existing concepts and creating new concepts are absolutely necessary given that each concept introduces a specific plane of discussion and can only address the problem at hand on that distinct plane (Deleuze & Guattari, 1994, p. 7, 15, 21, 31). Therefore, what may be at a first glance called fuzziness of concepts can

(at least sometimes) represent nuanced and careful redefinitions of a problem a particular scholar wishes to address.

To paraphrase Bal, readjustment and reiteration of concepts, however, are not "innocent" acts, either. As concepts are not given but created, dynamic tools of thought and instruments of thinking, they also focus each scholar's inquiry and interests (Bal, 2002, p. 28–29). Because of their flexibility and historicity, concepts are sites of debate, awareness of difference and tentative exchange (Bal, 2002, p. 13). Hence, choosing a concept and redefining it is always not simply an act of science but also a political act given that concepts are related to traditions, which have their own specific strategic rigidness and histories (Bal, 2002.; for politics of affect, see Ahmed, 2004b; Koivunen, 2008; Papacharissi, 2015a; Wahl-Jorgensen, 2019).

Resonating with Blumer's call for rigorous probing with sensitising concepts, Bal argues that, in order to do the work of a "miniature theory", concepts must be kept "under scrutiny through a confrontation with the cultural objects being examined" (2002, p. 24), because concepts are not meaningful unless they help to understand the object of the analysis better on the object's own terms (2002, p. 8). Perhaps one should add that lived reality and the objects that inhabit it tend to resist the pens that concepts try to build around them, constantly finding ways to shift and change (Bal, 2002).

Bal and Blumer appear to be concerned with the same issue: concepts used in humanities and social sciences tend to have shifting and multiple potential meanings. These varying meanings and uses of a concept create friction and misunderstanding between researchers who subscribe to different meanings. However, because of their intersubjectivity, concepts are bound to gather different meanings as they circulate in the currents of scholarship and everyday use (Bal, 2002).

One way to discuss this circulation of concepts is through analogies of travel (Bal, 2002; Blumer, 1954), nomadism (Deleuze & Guattari, 1994; Massumi, 2013) and propagation (Bal, 2002; Stenger, 1987). According to Surman, Stráner and Haslinger (2014), to describe a concept as nomadic implies a roaming, constantly changing, anti-establishment and slightly unpredictable movement (cf. Deleuze & Guattari, 2013; Massumi, 2013: x–xi), while travelling implies a more organised movement, suggesting a clear distinction between "home" and "away", and a return to "home". In order to avoid implications of any rigid boundaries between fields or disciplines, Surman et al. (2014, p. 8) suggest the use of a nomadic metaphor when discussing concepts that circulate between various locations and traditions, such as the concepts discussed in this work. Likewise, they argue that the nomadic metaphor allows for

showing how concepts can work simultaneously as fertilisers of the new and the unexpected, and as stabilisers (Surman et al., 2014).

Yet neither the metaphor of travelling nor the metaphor of nomadism provides a possibility of simultaneous existence of a concept in several locations at the same time – a simultaneity present in Stengers's idea of propagation of concepts (Surman et al., 2014; see also Bal, 2002). According to Bal's (2002, p. 32) reading of Stengers (1987), propagation has two meanings. The first is diffusion, as in propagation of heat, where a concept becomes so widespread that its power to explain a phenomenon dilutes. The second meaning is epidemic propagation, where each new particle becomes a host that does not weaken the concept in the process. Bal (2002, p. 33) argues that propagation as diffusion occurs when concepts are used as labels. In the context of this work, the notion of social media could be understood as an example of how two "diluted" concepts are used together as a label (see Chapter 4.2).

In epidemic propagation, the concept moves from one discipline to another without losing its explanatory strength and can simultaneously have multiple "hosts" or locations (Surman et al., 2014). Affect could be argued to be such a concept, as it is successfully used in various disciplines with different but related meanings. Public, however, is a trickier creature, as it is simultaneously a common word and a concept used in various fields with varying degrees of scrutiny toward its movements.

Nomadic concepts can also encounter obstacles that may slow down movement or cause the concepts to change in some way. Quite often one such obstacle is translation (Surman et al., 2014, p. 11). The concept of affect is a prime example, as it has several possible meanings in English with two different Latin roots (Wetherell, 2012, p. 1–3) and, for instance, no direct corresponding term in my native language, Finnish. Similarly, the concept of the public lacked a Finnish equivalent that referred precisely to the aspects of public discussion and participation embedded in the concept, until Pietilä and Ridell (1998) suggested "julkiso" as a corresponding term.

Next, I take on the challenge posed by Bal, Blumer, and Deleuze and Guattari, and elaborate on the three key concepts of this dissertation. Below I seek to make visible the nomadic, propagated side of the concepts and illustrate how they have accumulated meanings and interpretations from circulating among disciplines. I conclude this exploration in Chapter 4.3 by revisiting Bal's notion on concepts' relationship with methodology.

3.2 Affect: Sticky business of emotions

In Chapter 1, I referred to affect as *discursive and non-discursive intensities, sensations, feelings and emotions that are simultaneously subjective and culturally and socially produced and circulated* (Ahmed, 2004b; Nikunen, 2015; Oikkonen, 2017; Paasonen, 2015; Papacharissi, 2015a; Wahl-Jorgensen, 2019; Wetherell, 2012). I have formulated the definition in a relatively pragmatic manner, as I have sought a way to address affect in the contexts of the hybrid media environment and textual media (Chapter 1). However, because affect is a nomadic and propagated concept, and its theorisations provide overlapping and even conflicting interpretations, the above definition requires unpacking. In what follows, I trace the movements of the concept in fields relevant to this work, mostly drawing from scholarship associated with cultural and media studies. I also refer to selected works in psychology and sociology to identify multiple "hosts" of the concept (Bal, 2002; Surman et al,. 2014). After producing a narrative of how affect travels across disciplines, I discuss the recent scholarship on affect and emotion in media studies. I conclude this chapter by revisiting the definition above and elaborating on its elements, as well as on the title of this dissertation.

3.2.1 At the roots: Spinoza and affect

Most modern accounts of affect trace back to the work of Benedictus (Baruch) de Spinoza, a 17th century Dutch philosopher, and his volume *Ethics, Demonstrated in Geometrical Order* (*Ethica, ordine geometrico demonstrate*), first published in 1677. If I am to follow Bal's (2002) ethos of getting to the roots of one's concepts, it is reasonable to start by revisiting Spinoza's work. While Spinoza was considered a dangerous heretic during his lifetime, his philosophy has since gained popularity in various circles of thought over the centuries (Oittinen, 2019, p. 7–9; see also Gregg & Seigworth, 2010; Wetherell, 2012).

My reading of Spinoza is based on two translations of *Ethics*: the most commonly available English translation by R.H.M. Elwes, originally from 1883, and a Finnish translation by Vesa Oittinen from 1994, reprinted in 2019. As I noted above when discussing obstacles for nomadic concepts, some differences appear in the translations, which may influence my interpretation.

Spinoza's definition of affect makes little sense unless one understands how he sees the relationship between the human body and the mind. Spinoza opposed

Descartes's idea that the mind ultimately controls the body and that the two are essentially separate (Oittinen, 2019, p. 312-313). Instead, Spinoza argues that there is only one substance ("God") and that everything else is different modes of this one substance (Part I, definition 3, prop. 5, 9, 25; Part II, definition 1). Human bodies and human consciousness are therefore different modes of the same universal substance and thus can neither be considered separate nor can have knowledge without the other (Spinoza, 2019: Part II, prop. 12 & 13; prop. 21–25). Spinoza also argues that humans have no absolute or free will, as there is always a reason behind every action and wish (Part II, prop. 48 & 49). Thus, the idea that the mind would have control over the body simply does not make sense to Spinoza (Part III, prop. 2).

Spinoza discusses affect in Parts III and IV of *Ethics*. There are three basic affects, from which all others are variants and mixtures: positive affect of pleasure, negative affect of sorrow and desire (Part III, prop. 15–18, definitions of affect 1–48; cf. Tomkins institute, 2019a; Sedgwick & Frank, 1995; Papacharissi, 2015a, p. 16). Affects are further defined as "modifications of the body" that increase or decrease, aid or hinder the body's ability to act (Part III, definition 3). These modifications are brought about by physical changes, ideas and thoughts (ibid.). The mind acknowledges changes in the body, which influence the thoughts occurring in the mind (Part III, general definition of affect; cf. Damasio 1999).

Affects can vary in frequency and intensity, they may blend together, and the mind and the body remember their influence over time (Part III, prop. 11 & 14, 17). They can also be seemingly sparked at random (prop. 15), both by encounters with concrete things or actions or through images or memories (prop. 18). For instance, if one imagines someone else experiencing an affect, the same affect is felt in one's body (prop. 27). Yet affects are subjective in the sense that the same thing can spark different affects in different people (prop. 51 & 57). Even though an individual may be aware of how their mind and body shift from one state to another, they are never able to fully control how the body is affected (Spinoza, 2019, Part IV, Introduction). Therefore, affects can be understood as automatic or autonomous (cf. Massumi, 1995).

In the context of affect in contemporary scholarship, three key aspects of Spinoza's thinking are useful to keep in mind. First, affect is formed through the interaction of the body with other bodies or ideas, and the body can remember and later recall the effects of those interactions. Affect always influences the ability to act, for both the body and mind, by increasing or diminishing this potential (cf. Brown & Stenner, 2001, p. 93; Ahmed 2004b, p. 4). Second, while affect is automatic in one

sense, there is also a learned aspect to it. Third, affects can blend and mesh together, and several types of affects can be present in the same situation, some in the foreground and some in the background.

Next, I address affect from two distinct perspectives before discussing the concept in the context of media studies. First, I touch upon how affect has manifested in the development of contemporary psychology. I then reflect on the role of Deleuze and Guattari's philosophy on the contemporary understandings of affect, particularly through the work of Brian Massumi. I reflect on these texts through two authors, whose understandings on affect and emotion have been influential in the development of my own interpretation of affect: social psychologist Margaret Wetherell (2012; 2013; 2015) and media scholar Karin Wahl-Jorgensen (2012; 2013; 2019; 2020).

3.2.2 Affect and psychology

Over the course of the 20th century, affect established itself as a key concept in contemporary psychology and neuropsychology (Gregg & Seigworth, 2010; Wetherell, 2012). As affect became defined as a part of an innate, hierarchical and automated part of the biochemical stimulus-response processes of an individual's brain and mind in neurology and psychology, respectively, Wetherell (2012, p. 17–18) argues that something crucial about the phenomenon was lost in the process (see also Ahmed, 2004b, p. 8–12; Wahl-Jorgensen, 2019, p. 6). Yet it is very hard to discuss the contemporary understanding of affect without considering its role in psychology and neuroscience. Moreover, the definition process Wetherell (2012) criticises has produced the analytical differentiation between affect and emotion that drives several contemporary inquiries into the concept. As I discuss below, contemporary psychology defines affect as the bodily, nonconscious response that precedes discursively expressed and conscious emotion. Yet, the following discussion also highlights how these definitions have evolved over the years, and are still developed, probed and problematised as the concept continues its nomadic travels.

The founder of psychoanalysis, Sigmund Freud's (1856–1939) early writings on affect and theories about the structures of the mind are given much credit in the development of contemporary understanding of affect (Ahmed, 2004b; Highmore, 2010, p. 122–123; Wetherell, 2012, p. 132, 134). However, pragmatist philosopher and psychologist William James (1841–1910) formulated his theory of emotions

(currently known as the James-Lange theory of emotion) in the 1880s, decades prior to Freud (Wahl-Jorgensen, 2019, p. 5; Wetherell, 2012, p. 10–11). The basic premise of the James-Lange theory of emotion is that physiological arousal sparks the experience of emotion, as the brain reacts to the body's shifting state. While the theory has been criticised and developed further, this basic premise is widely accepted in neuropsychology (Ellsworth, 1994; Damasio, 1999, p. 288–291).

Echoing Spinoza, however, Freud understood affect as embodied measurable energy that circulates in the body and is divided into life and death drives (Wetherell 2012, p. 131). According to Wetherell's reading of Freud (2012, p. 131), affect can stick to ideas, memories and representations, and the experience of emotion forms when bodily states of affect become stuck together with habitual thoughts, subjective states and patterned responses (cf. Ahmed, 2004b). For Freud, affect does not dissipate but circulates in the individual's inner world as kind of excess energy (Wetherell, 2012, p. 132; Ahmed, 2004b; cf. Baraitser & Frosh, 2007; Frosh, 2008).

Stemming from the early work by James, Freud and others (Wetherell, 2012), two theories of affect and emotion were developed in the 1950s and 1960s that are particularly relevant for the discussion about contemporary theories of affect: Silvan Tomkins's theory of basic affects and Magda Arnold's appraisal theory of emotions.

Originally coined in the 1960s, Tomkins's theory was (re)popularised by Eve Kosofsky Sedgvik and Adam Frank in their influential essay "Shame in the Cybernetic Fold" in 1995. Tomkins's theory insists that there are nine universal, biologically based and innate basic affects: interest-excitement, enjoyment-joy, surprise-startle, distress-anguish, anger-rage, fear-terror, shame-humiliation, dissmell and disgust. For all but the last two affects, the first part of the pair names the milder manifestation of the affect and the second part the more intense manifestation (cf. Spinoza's basic affects above).

According to Tomkins, affects serve a function for the survival and self-preservation of an individual (Tomkins Institute, 2019a). Basic affects have specific triggers, which are the increasing, decreasing or level intensity of neural firing (Tomkins Institute, 2019b; Sedgwick & Frank, 1995, p. 505–506). Feeling, according to this theory, is awareness of affect, and when awareness of affect is combined with memories of prior similar feelings, it becomes emotion (Tomkins Institute, 2019b; see James and Freud above). Affects can also amplify each other and can be combined (Tomkins Institute, 2019b; see Spinoza above). Any affect can also have any object (Sedgwick & Frank, 1995, p. 503; see Papacharissi, 2015a; Spinoza above).

Reading Tomkins through system theory and cybernetics, Sedgwick and Frank (1995, p. 505–506) argue that what makes Tomkins's model of affect fascinating is

that it overlays digital (on/off) and analog (many) modes of representation and thus blurs the distinction between the machine and the biological. They see Tomkins's theory as an antithesis to the emphasis on post-structuralism and the linguistic turn placed on culture and cognition at the expense of biology and body (Sedgwick & Frank, 1995). This position reflects one of the key dilemmas that contemporary theories of affect face regarding their relationship with the structured and discursive aspects of experience.

As Wetherell (2012, p. 11) highlights, while more widely cited, Tomkins is not the only psychologist to theorise affect and emotion in the 1960s whose work resonates with the current scholarship. Magda B. Arnold (1903–2002) published her major works on emotion and the brain at roughly the same time as Tomkins published his. Her work led to the development of appraisal theory of emotion, according to which emotions are formed through an individual's "appraisals" or evaluations, interpretations and explanations of events (Moors et al., 2013). She argued that the initial appraisal of a situation launches the physiological effects of emotions in the body (Arnold, 1945; Arnold, 1968). This position is reflected in contemporary understandings of affect that emphasise the culturally and socially shared and circulated aspects of affect, which I discuss in more detail below.

One influential and slightly more current take on basic emotions influenced by James's theory is formulated by neurologist Antonio Damasio. In his book *The Feeling of What Happens* (1999), Damasio differentiates basic emotions into background, primary, and secondary or social emotions, which are innate and universal to all humans. Echoing Tomkins's account of neural firing, affect in Damasio's model is an automatic, non-conscious and involuntary response to a stimulus, which awakens the processes that bring forth emotions, and the conscious feeling of feeling an emotion (Damasio, 1999; cf. Massumi, 2002; Wahl-Jorgensen, 2019).

While Damasio (1999, p. 281, 283) places affect, emotion and feeling in a hierarchical relationship, he also argues this process is not linear. Instead, affect travels in the body from stimulus to affect, from affect to emotion and from emotion to feeling in a continuous loop. The stimulus that sparks affect can be either internal or external: both an abstract thought and a concrete action by another being can spark affect (Damasio, 1999; cf. Arnold, 1945; Arnold, 1968; Spinoza, 2019; Tomkins Institute, 2019b). Damasio suggests that an individual is never aware of their affects, but only becomes conscious of the emotion they recognize feeling (1999, p. 279–289; cf. Massumi, 1995). Emotions with related external indicators are public in the sense that they can be communicated to and understood by others (Damasio 1999, p. 36). Feelings, however, are internal to an individual and therefore

cannot be shared with others, as people can only produce rough verbal and visual representations of their inner states (Damasio, 1999, p. 36, 305). This view on feelings as unshareable presents interesting implications for studying affect and emotion in media, as Damasio's view contradicts the understanding of affect and emotion as culturally circulated and collectively experienced (cf. Ahmed, 2004b; Ahmed, 2010b; Nikunen, 2019; Oikkonen, 2017; Wahl-Jorgensen, 2019; Wetherell, 2012).

In contemporary psychology, affect refers to any internal experience of feeling or emotion, and it is understood along with (but separate from) cognition and conation as components of the mind (American Psychology Association, n.d.). However, affect as a response to stimuli and an internal state can, according to this understanding, be objectively measured, either through various assessment scales or through neuroimaging technologies (American Psychology Association, n.d.). This understanding, which utilises versions of basic emotions theory and cognitive sciences, often treats affect as separate from emotion and places the two in a hierarchical relationship in which the embodied affect is located in "lower" or "older" structures of the brain, while emotions are understood as socially and culturally learned (cf. Damasio, 1999). However, according to more culturally and socially informed accounts on affect, this division may necessarily not be the case (Wahl-Jorgensen, 2019; Wetherell, 2012, p. 43–44).

Theories of affect that draw their inspiration from basic emotion theory have also been criticised for their rather mechanised understanding of human beings and for the implications regarding the universalism of emotions. For instance, as both Riis and Woodhead (2010, p. 24–25) and Wetherell (2012, p. 41) point out, various languages have a wide variety of expressions for naming and describing emotions, let alone what meanings these emotions and other related experiences are given and on what basis (Rantasila, 2013, p. 32–33).

3.2.3 Affect as excess and potential

Accounts about affect – such as those from Damasio, Freud and Tomkins – have also gained traction in fields of theory considered critical towards mainstream psychology. Philosophers Deleuze and Guattari, and Brian Massumi, a translator and expert on the former, have unique approaches to affect that reflect both Spinoza's work and the aforementioned psychobiological approaches to affect.

Affect, as defined by Deleuze and Guattari in *What Is Philosophy*, is understood as becoming or as an excessive range of connections that something is capable of forming (1994, p. 169, 173–174; Smith & Protevi, 2018; cf. Spinoza, 2019). In *A Thousand Plateaus* (2013), affect (French "l'affect", Spinoza's "affectus") denotes an ability to affect and be affected. Affectus is understood by Deleuze and Guattari as a prepersonal intensity that corresponds to a body's passage from one experiential state to another and the accompanied increase or decrease in the body's ability to act (Massumi, 2013: xv). Spinoza's "affection" (French "l'affection") is then defined as each state considered as an encounter between a body that is being affected and a body that is affecting (Massumi, 2013).

Notably, Deleuze and Guattari's understanding of affect, in emphasising the body's ability to affect and to be affected, removes boundaries between humans and other animals, objects and subjects, and nature and culture, and shifts the attention to the mobility and flow of the body's current and possible states (Wetherell 2012, p. 75; cf. Sedgwick & Frank, 1995). In other words, in Deleuze and Guattari's understanding, the body is a continuously flowing process of simultaneous messages and stimuli that has no clear boundaries but porous interfaces. This porous body is capable of forming countless assemblages with any other body, becoming an affective assemblage.

One of the most prominent contemporary interpreters and developers of Deleuze and Guattari's work is Brian Massumi, whose theories have also been influenced by the work of Henri Bergson (1859–1941) and Damasio (see above). Following Deleuze and Guattari, Massumi (1995; 2005) considers affect as a bodily potential, an always about-to-unfold virtuality that resides somewhere between actuality, activity and passivity. Massumi (1995, p. 85, 88; 2005, p. 41) also makes clear distinctions between affect, feeling and emotion, and places them in a hierarchic relationship in which affect is the primary bodily autonomous process, feeling is the conscious form of the affect and emotion is the discursively formulated feeling (cf. Shouse, 2005; Damasio, 1999; Papacharissi, 2015a, p. 14–15; Wahl-Jorgensen, 2019, p. 7). According to Massumi (1995, p. 91), affect is pre-personal and asocial: it includes social elements, but they are combined with elements "belonging to other levels of functioning".

Moreover, Massumi (1995, p. 86; 2005, p. 39) argues that affect can never be conscious and that it is separate from meaning-making processes that follow discursive and linguistic logics (see also Thrift 2008). While Massumi (1995, p. 86–87; 2005, p. 37) agrees that discursive and linguistic expressions can influence affect, he also argues that affect cannot be discussed at a semantic or semiotic level, because

affect is primarily about the body's potential to unfold into new states (cf. Papacharissi, 2015a; Wahl-Jorgensen, 2019). In other words, to Massumi (1995; 2005; 2010), affect is simultaneously virtual and actual, a synesthetic potential and feeling of being alive that is always more than its components, transcending the limits of explicit knowing and thus overflowing conscious cognition. Massumi further argues that affect can be shared and transmitted from one body to another (2005, p. 32; cf. Papacharissi, 2015a; Wahl-Jorgensen, 2019: 7). To paraphrase, in both Deleuze and Guattari's and Massumi's understanding, affect appears as "something more": the ingredient that adds or diminishes the intensity of an experience, the ability (or inability) of a body to connect with other bodies without the conscious mind noticing until the process is already ongoing. Affect is seen as an excess one cannot access, as it will transform into something else if one tries to verbalise it (cf. Ahmed, 2004b).

In addition to being hugely influential, Massumi's account has been controversial, particularly his argument that "pure affect" is always out of reach of discursive and narrative expression. According to this argument, affect as an autonomous biological response becomes "tamed" when it comes to contact with language and conscious cognition (Massumi, 1995; see also Thrift, 2008) One of Massumi's most vocal critics has been Margaret Wetherell. She argues that, by privileging the body and the non-conscious, Massumi's account bypasses the complex role affect plays in human meaning-making processes and that, by emphasising the autonomy and the unconscious, these theories risk mystifying affect instead of clarifying it (Wetherell, 2012, p. 19, 22, 56).

Wetherell (2012, p. 67) also points out that Massumi's separation of the responses of the brain and the body from the cultural and social assemblages that order everyday life risks reproducing the Cartesian division and hierarchy Spinoza set out to dismantle. While Massumi also provides interesting analyses on mediation of threat and fear, his approach to television and other media is dated at best and uninformed at worst (Grossberg, 2010, p. 316; Wetherell, 2012, p. 59). Wahl-Jorgensen (2019, p. 7) shines a different light on Massumi's account of affect by noting that understanding emotion as a narrativization and interpretation of affect places it in the context of social relations and thus helps to understand affect and emotion as aspects that are not simply internal to an individual (see also Papacharissi, 2015a).

3.2.4 Affect and media studies

As I noted in Chapter 1.1, there has been an increasing interest in affect, emotion and media during the past 30 years. Next, I reflect on the scholarship on affect and media that focuses on news and journalism or social media. What further connects the works discussed below is an understanding of affect that emphasises its cultural, social and political sides. Drawing inspiration from these works, I develop my own view on affect as it has been used in this dissertation and propose some openings for further discussion. In the spirit of Bal (2002), I suggest that the various definitions of affect discussed above and below are not mutually exclusive but highlight different aspects and angles to a very complex phenomenon (Gregg & Seigworth, 2010, p. 4–5; cf. Blumer, 1954; Riis & Woodhead, 2010, p. 21–47).

Even though I disagree with some of Massumi's claims, I understand that, at the analytical and theoretical level, the distinction between affect and emotion, ineffable and effable, can be made and makes sense (Publication III, p. 102–103; cf. Deleuze & Guattari, 1994; Deleuze & Guattari, 2013; Spinoza, 2019). On the level of lived experience and empirical research, however, a neat separation between affect and emotion is often very difficult, as they blend and blur into each other in constant motion (Publication III, p. 102–103) Hence, in publications II, III and VI, the distinction I make between explicitly expressed emotion and embodied affective intensity is an analytical one. At the same time, as my co-authors and I note in Publication III, because symbolic representations are not the same as their referents, affect precedes emotion. This notion reflects a distinction made by Wahl-Jorgensen (2019, p. 8), one between affect as circulating in individual bodies and "emotions as discursively constructed through media texts".

Following Nikunen (2015), Papacharissi (2015), Wahl-Jorgensen (2019) and Wetherell (2012; 2013), I emphasise that, while affect does have a subjective aspect, it can be separated only analytically from the cultural and social meaning-making processes that surpass the level of the individual. In the context of mediated and networked communication in particular, Sara Ahmed's (2004a, p. 119–120; 2004b, p. 44–45, 90–92, 194–195) model of circulation and stickiness of affect provides a powerful approach for understanding how and why events, symbols and figures become infused with meaning and intensity (Publication III, p. 103; cf. Publication V; Oikkonen, 2017; Paasonen, 2015; Paasonen, 2016; Papacharissi, 2015a). This circulating intensity attracts and sustains people's attention to, for instance, an online discussion and, in turn, furthers the circulation and sticking of affect. As Ahmed (2004a; 2004b; 2010b) notes, affect also cumulates: some objects are stickier than

others, and as they circulate, they accumulate more affect onto themselves. For example, as a link to a video about the first hydrogen explosion of the Fukushima Daiichi power plant is circulated in the hybrid media environment, it accumulates affect to itself (cf. Publication V). Some of these affects continue to stick onto other objects, as in the case of potassium iodide tablets (Publication III). The process also works in the opposite direction: affective stickiness of an object may dilute due to temporal, spatial or cultural factors (Publication I).

To discuss how these intensities flow in online discussions, I have followed Susanna Paasonen's (2015; 2011) and Venla Oikkonen's (2017) understanding of *affective dynamics*. Affective dynamics denote how the affective potential invested in an issue, object or event plays out in communication, for instance, in the way emotions become articulated and emphasised in news reports about Fukushima Daiichi, and how the articulated emotions are responded to (Publication III, p. 103). In online discussions, affect sustains people's interest to participate in the discussions (Paasonen, 2015, p. 28; 2016), playing a crucial part in why some discussions attract more participation and reactions than others. Affective dynamics shift and direct the intensity and tune of the discussion, and there may be multiple affective dynamics at play simultaneously (Publication II; Publication V; cf. Oikkonen, 2017). While each participant experiences the affective dynamics of the discussion as an individual, there is also a mediated, shared element to the dynamics (cf. Wahl-Jorgensen, 2019). Therefore, affective dynamics at the discussion level should be considered collective (cf. Massumi, 2005; Papacharissi, 2015a; Riis & Woodhead, 2010; Wahl-Jorgensen, 2019).

In the context of news circulating in a hybrid media environment, Zizi Papacharissi's (2015a) account of affective news streams on Twitter has been inspirational regarding the role of affect in mobilizing and politicizing groups of people. Papacharissi (2015a) argues that older and newer forms of media provide an infrastructure that amplifies people's ability to feel connected to distant events and breaking news by evoking affective reactions. To her, affect is the intensity with which emotions are felt, and this intensity can be transmitted to others and sustained, for example, in the short textual outbursts on Twitter (Papacharissi 2015a, p. 15, 22). Papacharissi (2015a, p. 32) also suggests that news and other forms of storytelling allow people to make affective connections with distant others, and collectively, these stories form "structures of feeling" (Williams, 1961) that may sustain and mediate affective intensity particular to the event being covered. Drawing from Papacharissi, I suggest that news comments are crucial in formulating these structures of feeling (Publication II; Publication IV; Publication V).

To conclude the elaboration on the coexisting definitions of affect and emotion above, I present my own definition, which has emerged from a rather practical standpoint. Affect is often, as previously noted, used to refer to non-discursive intensities and sensations, and emotion is understood as a more consciously, culturally and socially produced and circulated form of the same phenomenon (Ahmed, 2004b; Nikunen, 2015; Oikkonen, 2017; Paasonen, 2015; Papacharissi, 2015a; Wahl-Jorgensen, 2019; Wetherell, 2012). However, I use affect to refer to *both discursive and non-discursive*; while they may be separable at the theoretical level, in practice, *affect is entangled with the human meaning-making processes and can be culturally, socially and historically mediated while experienced as deeply personal and subjective* (Ahmed, 2004b; Nikunen, 2015; Oikkonen, 2017; Paasonen, 2015; Papacharissi, 2015a; Wahl-Jorgensen, 2019; Wetherell, 2012). *Affect also accumulates, or sticks, to signs, figures, bodies and objects as they circulate in interactions between other signs, bodies and texts* (Ahmed, 2004b; Nikunen, 2015; Oikkonen, 2017; Paasonen, 2015; Papacharissi, 2015). This both/and approach to affect is also reflected in the title of this dissertation. By lifting emotions, feelings and affect as equal parts of the title, I seek to emphasise my understanding of these as distinct elements of the same phenomenon. Each of these words highlights a slightly different aspect of the complex, simultaneously embodied and abstract experience.

In online discussions, affect sustains people's interest in participating (Paasonen, 2015, p. 28; Paasonen, 2016). Affective dynamics also shift and direct the intensity and tune of the discussion (Oikkonen, 2017), and multiple affective dynamics can simultaneously be at play in one discussion (Publication V). To elaborate on the affective dynamics of online discussions, I wish to further elaborate on an emerging sensitising concept I introduce in Publications III, IV and V: *affective discipline*. I suggest its emergence reflects the interaction between concepts, theory and the empirical world described by Bal (2002) and Blumer (1954).

3.2.5 Policing patterns of feeling: Affective discipline

Affect and emotion circulate in public discourse in patterned ways that have deep social and political implications (Wahl-Jorgensen, 2019, p. 9). Wahl-Jorgensen (2019) and Riis and Woodhead (2010), who draw from Reddy (2001) and Hochshcild (1983; 1998; 2003), describe these patterns as *emotional regimes*. Emotional regimes refer to sets of normative emotions and rituals, practices and expression that are tied to social and cultural relations (Riis & Woodhead, 2010, p. 10, 47–51; Wahl-Jorgensen, 2019,

p. 9, 115). While Reddy's (2001) original definition limits the notion to emotional ordering imposed by the nation state, Riis and Woodhead (2010, p. 49) note that emotional regimes are present at all levels of society, from families to international organisations. And as Wahl-Jorgensen (2019, p. 93, 115-116) argues, news and other mediated texts are crucial in sustaining emotional regimes and inviting them into being (Kotisová, 2019).

The notion of emotional regimes has proven useful for thinking about how affect and emotion are patterned while circulating in the hybrid media environment. In the process of seeking to describe and theorise how affective dynamics of mediated texts are ordered at various levels, I began to develop the emerging concept of *affective discipline* to complement the three other key concepts of this work. The notion of affective discipline is an offshoot of affective dynamics, as conceptualised by Paasonen (2015) and Oikkonen (2017), and is informed and inspired by the notion of emotional regimes discussed above, Langlois et al.'s (2009) remarks on communicative discipline, and Haselstein and Hijiya-Kirschnereit's (2013) notion of affect control (see also Valaskivi, 2016). Affective discipline is an attempt to discern how various actors seek to actively influence or direct the affective attunement and intensity of (online) discussions. Therefore, acts of affective discipline can also be understood as a part of the assemblage of (bio)power technologies that Kotisová (2019, p. 176) describes in her account of how journalists manage emotion.

I suggest affective discipline, as a phenomenon, refers to a cultural process or structure that can be activated by various actors in different ways, depending on the context in which it becomes activated. The empirical examples in Publications III, IV and V illustrate that affective discipline can assume many forms, from official announcements urging people not to panic to what could be described as "tone policing" in social media discussions (Kotisová, 2019; Wahl-Jorgensen, 2019). With this concept, I seek to make visible the attempts at affective discipline and analytically examine them as part of the complex affect in mediated human communication. I connect affect with questions of power through the notion of affective discipline, particularly on the level of social and cultural structures (something the concept of affect has been sometimes accused of neglecting), as examinations of affective discipline make visible contestations over the mood of a discussion or situation. With the notion of affective discipline, then, my dissertation introduces a sensitising conceptualisation (cf. Blumer, 1954) to probe and analyse the contemporary sociotechnical reality based on theoretically ambitious and methodologically alert footholds (cf. Bal, 2002).

However, it is necessary to highlight that acts of affective discipline are only one possible affective dynamic influencing discussions online and offline, and that acts of affective discipline do not exclude the presence of other affective dynamics. I suggest that these dynamics are not limited just to online communications but are present in all communication that takes place between humans, whichever medium one chooses to use. The notions of affective dynamic and affective discipline may be particularly helpful in analysing contemporary networked conversations and their dynamics, as acts of affective discipline may help to accumulate affect to certain conversations, thus increasing their pull and sustaining the interest of other discussants in the conversation (cf. Larsson, 2018 and his remarks on why journalistic media like to outsource their commenting to Facebook). Furthermore, acts of affective discipline can be understood as attempts to sustain an emotional regime or invite one into being.

I return to elaborate the emerging concept of affective discipline in the concluding chapter of this dissertation, where I discuss the paths of new research this work may open. Next, however, I address the two other key concepts of this work: public and social media. I seek, in a similar manner as above, to elaborate on how the concepts of public and social media have moved across disciplines and traditions, and how I choose to implement the concepts in this work.

4 CONCEPTS, PART 2

While affect was mostly regarded as a somewhat niche concept until the late 1990s and early 2000s in media studies, the two other key concepts of my work, public and social media, are connected to discussions that can be considered one of the key debates of the tradition. The concept of public can be regarded as a cornerstone of modern sociology and of media, communication and journalism studies. Social media, while a much more recent construct, is connected to the same discussions around the concept of the public through the two components of the concept. In this chapter, I address both concepts through a similar, but somewhat narrower approach than I used with affect in Chapter 3. In addition to discussing public and social media as nomadic concepts and methodological tools (Bal, 2002; Blumer, 1954; Latour, 2005), I again build working definitions which support the definitions provided for each concept in the articles of this dissertation. The conceptual discussion in this chapter is driven by questions that have arisen from the empirical material of my study, so both concepts are used rather pragmatically in this work.

First, I address the concept of the public, which operates in my work sometimes in the background (Publication I) and sometimes in the foreground (Publication III), without ever quite being centre stage. I examine the notion of the public through two adjacent notions: the public sphere and the hybrid media environment (Chadwick, 2013; Sumiala et al., 2018), in addition to discussing the concept in more general terms. Second, I discuss the notion of social media by first addressing the problems in defining the concept in a scientifically relevant way. I then pull the two components of "social media" apart and discuss what each of the elements mean in the context of "social media".

4.1 Public: Some notes on a long discussion

As a concept, "public" is tricky. It is used as a common word that can be either a noun or an adjective. Simultaneously, it is a concept that traverses several disciplines, including social psychology, sociology, communication, political science, economics and more. Public can refer to the whole population, a group of people, to a mode of

behaviour, to a figurative or empirical realm, or to a theoretical construct, to name just a few potential referents, each capable of being a way to approach the concept. The ontological and epistemological aspects of the concept have been debated for decades (Blumer, 1946; Fraser, 1990; Habermas, 1989; Marres, 2007; Mouffe, 1999; Park, 1972; Pietilä, 1999). This polyphony means the definitions and meanings of "public" very quickly dilute (Bal, 2002; Surman et al., 2014) and can sometimes cause more confusion than clarity. This confusion is not absent from my own work, either, as a diligent reader may observe.

However, the concept of "public" simultaneously unites and stabilises, and divides and electrifies the broad fields of media, communication and journalism studies. For instance, at the heart of discussions about how people behave online lies the question of how a public should be understood in terms of behaviour. Often, this conversation has revolved around the binaries of a public behaving either as rational and deliberative, or as irrational and confrontational – a conversation that has been ongoing for some time (see, e.g. Blumer, 1946; Fraser, 1990; Habermas, 1989; Mouffe, 1999; Park, 1972; Papacharissi, 2010). In my work, this discussion is present in the article on the iodide tablet coverage (Publication III), and in the articles that discuss group online behaviour through the notion of affective discipline (Publication II; Publication V). This approach to the concept of public also ties it to the concept of affect and how, for example, public displays of affect become indicators of improper behaviour (Publication II; Publication IV; Publication V).

Deliberations about what constitutes a public are closely related to discussions about the relationship between the concept of the public and the concept of audience. With the proliferation of terms such as "user" and "produser", the concept of audience appears to have been somewhat side-lined from the contemporary discussions concerning the hybrid media environment (cf. Loosen & Schmidt 2012). Even though I do not use the concept of audience in this dissertation, it is necessary to highlight some brief observations. The relationship between the audience and public has been, as Livingstone (2005a, p. 9; 2005b, p. 17) notes, quite entangled and has become more complex with the emergence of digital media. She argues that audience has traditionally been defined through engagement with media and implied emotions, passivity and orientation towards the private realm, while public has been associated with broader political participation, collective action and rationality (Livingstone, 2005b). As most aspects of public life are mediated, Livingstone (2005b) suggests that opposing the concepts of public and audience with each other is not a fruitful approach in the contemporary media environment, as various forms of media allow for people to simultaneously assume both the user and produser

position – or something between the two. However, as Pietilä (2007) notes, making this suggestion a reality requires further elaboration. While the distinction between audience and public is clear in English, most languages do not make a corresponding separation, even though they capture the same semantic field (Pietilä, 2007).

In addition to questions about what kind of behaviour, mode of (inter)action or form of engagement defines a public (Blumer, 1946; Fraser, 1990; Habermas, 2006; Mouffe, 1999; Park, 1972; Ridell, 2012; Warner, 2002), the methodological part of my work also touches on key questions, such as when does a text or utterance become public, and where do the boundaries of private and public lie in a hybrid media environment? I foreground the discussion about boundaries of public and private by briefly visiting the notion of the public sphere in this chapter. While the concept of the public sphere is not explicitly present in the publications for this dissertation, it looms in the background of how I understand the relationships between mainstream media, social media, individuals and democracy in the contemporary media environment.

As the travels of the concept of the public have been debated elsewhere by esteemed scholars (e.g. Arendt, 1958; Fraser, 1990; Habermas, 1989; Habermas, 2006; Mouffe, 1999; Warner, 2002), I find it unnecessary to replicate their work here, despite recognizing the sometimes deep differences between theorists. Instead, I jump to questions about the public in 21st century contexts of networked hybrid media environments, reflecting them against three works I have found relevant related to the empirical context of my work: Zizi Papacharissi's *A Private Sphere* (2010) and *Affective Publics* (2015a), and the second edition of Andrew Chadwick's *The Hybrid Media System* (2017). While these three volumes are not necessarily the most encompassing accounts on the concept of the public in contemporary settings, I argue that, even with their evident blind spots, they grasp something essential in understanding the dynamics between mediated representations of various events and phenomena, politics and the groups of people who engage in producing, consuming and discussing and acting upon these representations.

There are also two sets of double figurations about the concept of the public that go to work in the discussion below. The first set concerns the concept of the public itself: it is examined as both a theorising concept and a social phenomenon being studied through the empirical material of this dissertation (cf. Dayan, 2005). Second, I discuss public in the empirical sense through two different settings: traditional news media and social media. The way public is discussed through each setting varies according to the perspectives they provide.

4.1.1 Public sphere: A space for the public

As noted above, public can be discussed through several points of reference, each of which assigns the focus of the concept slightly differently. For my work, two points are of particular importance: *public as a realm or a space for interaction*, as in the discussion about the public sphere, and as *a mode of behaviour or interaction*, as in discussions about how a public behaves in relation to other groups of people. In the context of this dissertation, both aspects are discussed in relation to networked media, thus limiting the discussion to mediated publics and a mediated public sphere. As I noted above, the notion of public sphere is present only implicitly in the publications of this dissertation, even though my understandings of public and publicity lean on the public sphere concept. Therefore, I begin by making this connection more explicit.

The classic (Habermas-inspired) notion of the public sphere discusses it as a space where individuals can gather to debate current political affairs, often in the context of a nation state. In this understanding, publicity is produced when people gather to discuss in public space. The public sphere thus refers to the space where publicity is produced. The people gathered together share an understanding about the common good as the general motivation of discussion in public, and the motivations behind their actions are political. In her volume about public civic participation in contemporary networked environments, *A Private Sphere*, Papacharissi (2010) suggests that these classic notions no longer apply. Drawing from philosopher Hannah Arendt's views in *The Human Condition* (1958), Papacharissi (2010) argues that, with the advent of ever more personalised ways of engaging with current affairs brought by social media, the public sphere is collapsing into the realm of the private. This development grows the realm of the social as private interests attain public importance through economic means and not by collective interest. According to Papacharissi (2010, p. 50), this effect leads to the formation of multiple private publics that formulate the realm of the social. In other words, people continue to form groups that can be defined as publics, but their motivations can be privately or socially motivated; the realm in which they gather is governed by various interests, including those of economics, instead of the politics of the common good (Papacharissi 2010).

Citizenship and being an active member of the public are included in most contemporary discussions about the role of a deliberative public engagement as a prerequisite for a healthy democracy: a good citizen expresses their opinions and

engages in debate in the nationally shared public sphere (Habermas, 2006; cf. Fraser, 1990; Mouffe, 1999). However, Papacharissi (2010; 2015a) suggests that, because the public sphere as a nationally shared arena of political argumentation and action is becoming fragmented due to increased use of personalised social media, the notion of citizenship and the traditional notion of the public must both be adjusted. Her suggestion is that, instead of discussing the public sphere and the public that engages with it, a more fruitful approach would be to discuss "a private sphere", where various simultaneously existing smaller publics mesh in a global network of individuals' personalised media "cocoons" (Papacharissi, 2010).

In the light of the current debate about the public sphere and fragmentation of contemporary media use and its effects on national and transnational politics, Papacharissi's account seems almost endearingly positive. She appears to regard the formation of fragmented and personalised publics mostly as a positive development, a way to break away from the implicitly nation-state-focused agenda dominated by hegemonic commercially driven mainstream mass media. While a contemporary perspective might call this view naïve, Papacharissi's account raises interesting questions regarding the definition of the public and how the notion connects to citizenship. This view resonates with certain aspects of Fraser's (1990), Mouffe's (1999) and Warner's (2002) ideas of multiple simultaneous publics and counter publics existing in an interreferential relationship (see also Wahl-Jorgensen 2019). While some contemporary popular and academic accounts have lamented the apparent fragmentation of a single public sphere, as described by Papacharissi (2010), Fraser (1990) points out that a single public sphere probably never existed in the first place, as various groups excluded from one type of publicity have created their own publicities.

As Dayan (2005, p. 44) notes, publics and (by my extension) the public sphere are simultaneously intellectual constructions and social realities. In a similar vein, Bal's (2002) note on the historicity of concepts is worth keeping in mind, as theorisations of concepts are bound to the cultural and social context of the scholars using them. Thus, the concepts of the public and public sphere defined in the early 1900s, 1960s, late 1990s and early 2000s are all bound to have slightly different points of reference and are sensitised (á la Blumer) for making different observations.

Andrew Chadwick's *Hybrid Media System* (2013; 2017) provides a more recent discussion on similar topics. Chadwick focuses his account on how traditional political communication and mainstream news media intertwine with newer forms of communication; he also provides insights on how citizens engage in public life in an environment characterised by developments also described by Papacharissi (2010;

2015a). However, it is worth noting that Chadwick (2013; 2017) problematises neither the phenomenon nor the concept of the public or discusses the notion of the public sphere in his work. Instead, public figures there as a double image. On one hand, there are the active citizens who engage in public life by participating in citizen movements (2017, p. 149–151, 217–224) or by challenging the established political communication machinery in blogs and social media activity (2017, p. 84–87, 192–199). On the other hand, particularly in parts discussing mainstream media and their role in the hybrid media system, the public disappears into the background as a passive audience that seems to have little agency, other than tuning in to the streams of mediated content.

Next, based on Papacharissi's and Chadwick's accounts, I discuss in more detail how the concept of the public operates in a hybrid media environment. This discussion leads me to visit two closely related concepts: *networked public* (boyd, 2010; Ito, 2008; Langlois et al., 2009) and *affective public* (Papacharissi, 2015a). These concepts help provide more detailed and defined accounts of how networked media technologies shape public discussion and participation.

4.1.2 Public in the hybrid media environment

Papacharissi's (2010; 2015a) and Chadwick's (2017) works provide two different angles to simultaneously fragmenting media consumption and intertwining of various forms of media technologies and their operational logics. The current hybrid media environment in Finland and other post-industrial nations can be best described as a cornucopia of local and global television and radio channels and video-streaming services, online news, blogs, vlogs, podcasts and the ever-ongoing chatter on the various social media platforms. These forms contain traces of their previous iterations and borrow constantly from each other (for an ontology of hybridity in this context, see Chadwick 2017, p. 10–27). Of course, this multitude is only available for those with sufficient means to access it. In addition to the technologies of mediation constantly borrowing from one another, Chadwick (2013; 2017) and Papacharissi (2010; 2015a) argue that the hybrid media environment also enables and accelerates the process of mediatization (Couldry & Hepp, 2013): media operational logic adapted by, for instance, political actors such as party organizations and activist movements.

According to Chadwick (2013; 2017), all media are hybrid, as they contain elements and affordances of previous forms of mediated communication; this view

resonates with McLuhans's (1964) view that all media emulate historically previous versions of other media (cf. Bolter & Grusin, 1999; Meyrowitz, 1999). However, Chadwick (2013; 2017) and Papacharissi (2010; 2015a) both argue that this hybridization has notably accelerated since the advent of ubiquitous internet access and mobile devices in the last two decades. Papacharissi (2010) and Chadwick (2013; 2017) also suggest that the combination of hybridization and mediatization has led to the divide between public and private, both as realms and as modes of behaviour, becoming increasingly porous.

According to Chadwick (2013; 2017), the hybridity of a media system means that the range of actors in the system has broadened from professional journalists and political professionals to all kinds of interest groups, private individuals, commercial actors and so on. Sumiala, Valaskivi, Tikka and Huhtamäki (2018) further broaden this scope by noting that interest groups acting in a hybrid media environment may also be malicious, such as terrorist organizations or other malignant entities. Social media platforms have certainly increased the ability of individual citizens or civic groups to raise issues to public discussion and awareness (see Papacharissi 2015a on the popular uprising in Egypt in 2010–2011 and the Occupy movement; a more recent example is the Black Lives Matter protests of spring and summer 2020). However, the actors who dominate public agendas on Twitter, for example, are often tied to existing, established news media organizations, political parties or the entertainment industry (Publication I; Bucher, 2012; Langlois, 2012; Papacharissi, 2015a; Suh et al., 2010; Willis et al., 2015).

The global hybrid media environment ultimately relies on networked communication technologies. Ranging from digital broadcasting technologies to mobile applications, such technologies enable the multifaceted communication that comprises the digital saturation of the everyday in post-industrial nations. While enriching the variety of media content produced and consumed, and enabling connections across temporal, geographical and cultural limits, the affordances of these technologies appear to encourage certain types of communication over others. This development has serious implications to public participation and democracy, as poignantly illustrated by Chadwick's (2017) account of both the Obama 2008 and 2012 and Trump 2016 presidential campaigns, Sumiala et al.'s (2018) study on the 2015 shootings at *Charlie Hebdo* magazine and Wahl-Jorgensen's (2019) study on Trump, just to name a few examples. In addition to the fragmentation of publics into narrower niches based on preferences, as discussed by Papacharissi (2010), another major concern is the way the dominant technology companies behind these platforms – such as Facebook, Google, Twitter and ByteDance – process, use, and

sell data they gather from their users based on consent that can hardly be called informed (e.g.. boyd, 2008; Couldry & Mejias, 2019; Langlois et al., 2015; Wahl-Jorgensen, 2019).

The operational logic of the media industry and these technologies is based on attention and engagement. For instance, the algorithm that organises Facebook users' news feed curates the content based on various factors, such as reactions (anger, love, sadness and laughter) (Facebook, 2016; Wahl-Jorgensen, 2019) given by other users who viewed the same content (Bucher, 2017; Bucher, 2012; Knuuttila & Laaksonen, 2020). The same logic, intended to recommend and offer the user content their network has been most interested in, makes the service simultaneously vulnerable to and very efficient in spreading mis- and disinformation (e.g. Chadwick, 2017, p. 271–279; Gray et al., 2020).

4.1.3 Affective and networked publics

The operational logics of the hybrid media environment raises an important question: how should people's activities as publics be understood in the constantly shifting and sometimes confusing currents of the contemporary media environment described above? One way to address this question is through the concepts of *networked public* (Baym & boyd, 2012; boyd, 2010; Ito, 2008; Langlois et al., 2009) and *affective public* (Papacharissi, 2015a). While networked public historically precedes the hybrid media environment, I find the two concepts highly resonant, grappling with the same phenomenon from different angles. The concepts of networked public and affective public are closely related, so I find it most fruitful to discuss them together, as affective public can be conceived as further elaboration on networked publics.

According to boyd (2010, p. 39), networked publics are "publics that are restructured by networked technologies". Such publics are simultaneously "the space constructed through networked technologies and the imagined collective that emerges as a result of the intersection of people, technology, and practice" (boyd, 2010). boyd (2010, p. 42) argues that networked publics are not just "publics networked together, but they are publics that have been *transformed* by networked media" (emphasis mine). Papacharissi (2015a, p. 19) further elaborates on the concept by adding that networked publics "include civic formations that develop beyond the model of the public sphere". While all publics are networked because of the information-sharing occurring in and between them, their mediality may differ (Papacharissi, 2015a, p. 126).

The concept of networked public has been described as an attempt to understand how networked media – as assemblages of software and hardware, and of political and economic actors – shape and restructure practices of public communication and participation (boyd, 2010; Ito, 2008; Langlois et al., 2009; Papacharissi, 2015a). According to boyd (2010) and Langlois et al. (2009), both the public and the technology have agency, and networked publics come into existence when these multiple agencies intersect on various platforms. For instance, while Facebook is notorious for data-gathering and secrecy surrounding the workings of its algorithms, it simultaneously offers a platform for groups to organise, communicate and mobilise at various levels that would be harder without the networked technology.

The concept of networked public as defined by boyd (2010) and Papacharissi (2015a) emphasises how the technological affordances of networked, digital media influence how the publics take shape and how discussions are structured by the circulation of various types of content enabled by these technologies (cf. Chadwick, 2017; Ridell, 2014; Sumiala et al., 2018; Wahl-Jorgensen, 2019). boyd (2010, p. 7) defines these affordances as *persistence, replicability, scalability* and *searchability*. In other words, in networked digital media, everything leaves a trace that is very hard to completely erase, almost anything can be copied and pasted effortlessly and endlessly, the same type of content can be shared with one or with one-million people, and most of this content is stored and indexed in a way that it can be reached by various search tools and engines (boyd, 2010: 7–9).

Papacharissi (2015a, p. 126) complements boyd's list by adding a fifth element: *shareability*. According to Papacharissi (2015a, p. 126) shareability evolves from the four other affordances of digital networked media through an architecture that "thrives on, invites, and rewards sharing". Furthermore, shareability as an affordance encourages and discourages certain types of social activities, and it is precisely the act of sharing information that, according to Papacharissi (2015a), defines networked publics.

Drawing from Meyrowitz (1995), boyd (2010, p. 9–12) further argues that participation on networked public discussion exposes regular people to dynamics of publicity that were previously known only to mainstream media professionals, such as not knowing your audience, the collapsing of social contexts in which the content is circulated, and the blurring of public and private (Baym & boyd, 2012). Networked publics are most often understood as several spheres of public activity interlinked by networked technologies, with thousands of individual users engaging in public exchanges with each other, such as a trending Twitter hashtag related to a political event (boyd, 2010; Langlois et al., 2009; Papacharissi, 2015a). In other words, the

elements that set networked media and networked publics apart from other types of media and publics can also be understood as core producers of hybridity in the contemporary media environment.

Langlois et al. (2009) complement the above definitions by approaching networked publics through the notion of issue publics (Marres, 2005; Price, 1992). They describe how various issues related to local political events drew people to participate in Facebook discussions (Langlois et al., 2009). But they also revealed how these discussions can easily be hijacked or derailed (Langlois et al. 2009, p. 423–424; cf. Baym & boyd, 2012). This approach to issue publics opens a path to the concept of affective publics, as defined by Papacharissi (2015a).

According to Papacharissi (2015a, p. 125–126), affective publics are "networked public formations that are mobilised and connected or disconnected through expressions of sentiment" and that "have been transformed by networked technologies to suggest interaction of people, technology, and practices, and the imagined collective that evolves out of this interaction". Examining affective publics through three Twitter case studies, Papacharissi (2015a, p. 127–133) further defines five points that describe how affective publics are formed, what drives and sustains them, and what impact they have:

1) Affective publics materialize uniquely and leave distinct digital footprints.

2) Affective publics support connective yet not necessarily collective action.

3) Affective publics are powered by affective statements of opinion, fact, or a blend of both, which in turn produce ambient, always-on feeds that further connect and pluralize expression in regimes democratic and otherwise.

4) Affective publics typically produce disruptions/interruptions of dominant political narratives by presencing underrepresented viewpoints.

5) Ambient streams sustain publics convened around affective commonalities: impact is symbolic, agency claimed is semantic, power is liminal.

In other words, networked technologies enable people to come together, share their opinions, and *feel more intensely* and become more aware of the issue at hand through *affective news streams* (Papacharissi 2015a, p. 127–128). The intensity of the feeling and the increased awareness produced through these streams may lead to forms of collective action, but not necessarily (Papacharissi 2015a, p. 129; cf. Bennet & Segerberg, 2013; Wahl-Jorgensen, 2019). Because of this potentiality, affectively driven forms of connective action are important for democracy (Papacharissi, 2015a, p. 129). The polyphony of the affective publics allows different people to tune into

them, producing plural opinions and interpretations – even though this may produce affective intensities in discord with one another (Papacharissi, 2015a, p. 130–131). This tendency, which is described in points 3 and 4 above, can also be interpreted as increasing the hybridity of the media environment. The fifth point reflects Wahl-Jorgensen's (2019) argument about the centrality of affect and emotion in political involvement and Marres's and Price's definition of issue publics: people engage with issues, things and events they *feel* something about. Combined with the four other elements, this engagement may, but does not necessarily lead to political impact.

Taken together, notions of networked and affective publics can help to understand public expression and participation in the contemporary hybrid media environment in ways that consider forms of expression that fall outside the rationalist–objectivist ideals of the classical understanding of the public sphere (Fraser, 1990; Mouffe, 1999; Papacharissi, 2010; Papacharissi, 2015a; Wahl-Jorgensen, 2019). Next, I draw together my arguments on the topic and produce a formulation of the public that acts as a working definition in the publications of this dissertation.

4.1.4 A pragmatic approach to a broad conversation

As the above deliberations illustrate, the concept of the public remains slippery, assuming new articulations as the sociotechnical conditions of public communication transform. I have not, as I noted in Chapter 3, attempted to pin down a single definition of the concepts used in this dissertation. Instead, I wish to demonstrate how concepts with multiple overlapping meanings, such as affect and the public, can be used to take discussions in several directions regarding the conditions of contemporary life in post-industrial representational democracies.

The key, threefold question concerning the public in the contemporary hybrid media environment thus remains essential. First, how should a public be defined? Second, what issues and conversations can be considered public when they take place in the constantly shifting, sometimes public, sometimes not-so-public spaces, such as those provided by social media platforms? Third, can any of these spaces and congregations of people amount to what could be called a public sphere? Moreover, if discussion is a defining feature of a public, can the groups of people convening on social media platforms be called publics, if most discussions on those platforms are not people talking *to* each other but talking *past* and *over* each other (Papacharissi, 2010; Wahl-Jorgensen, 2019; Publication II; Publication V)?

The answers to the questions above depend, of course, on the definitions of the public one wishes to employ. Drawing from Papacharissi's (2010; 2015a) cocoons of private sphere and affective publics and Wahl-Jorgensen's (2019) further elaboration of the concepts, and from Mouffe's (1999) and Frazer's (1990) agonistic publics and micro-publics, I suggest a rather pragmatic (Lippmann, 1997; Lippmann, 2002; Dewey, 1991) understanding of the public, one that considers the sociotechnical dynamics of the contemporary hybrid media environment.

In this understanding, there is no single public sphere, but rather several overlapping spheres of publicity that vary in size and in their relationship with political and social power. The publics formed in these spheres are often mediated by networked communication technologies, which enables the publics to exist in multiple spaces and times (Papacharissi, 2015a). In addition to being multiple, the overlapping and simultaneous formations are not stable, but form and disperse as the interest and attention of their members shift and change (cf. Dean, 2003, p. 105; Dayan, 2005, p. 44). In a hybrid media environment, this cycle can be rapid, as the pace of news cycles is agitated, and interpersonal communication is always on and always present in mobile networked devices.

Moreover, drawing from Marres's (2005; 2007) pragmatism and STS informed accounts on issue publics, I suggest that what makes contemporary publics emerge are issues that evoke the need to discuss, debate and argue (see also Langlois et al., 2009; cf. Latour's "matters of concern", 2004). Drawing from Lippmann and Dewey, she argues that a crucial factor in the formation of publics is personal *implication*: if actors are implicated in an issue, they are more likely to organise to find a solution (Marres, 2007, p. 768–769, 771; see also Langlois et al., 2009; Papacharissi, 2015a). In other words, if people consider an issue to *affect* them in some way, they are more likely to become interested and engaged in it (Wahl-Jorgensen, 2019). Therefore, publics form and disperse according to people's and the media's shifting attention, sometimes regardless of how the given issue was solved, if at all. In the case of Fukushima Daiichi, once the reactors stabilised by the end of March 2011, the attention of those not directly affected by the disaster began to move elsewhere (cf. Papacharissi, 2015a; Dayan, 2005; Wahl-Jorgensen, 2019).

Marres (2005; 2007, p. 769) also suggests that the formation of publics is a response to problems that the current means of political participation and knowledge production cannot adequately address. In the context of a contemporary hybrid media environment, this suggestion touches upon what has been called the crisis of (established scientific) expertise and prevalence of mis- and disinformation. This dynamic is also visible in the online discussions about the news coverage of

Fukushima Daiichi, in particular in Finnish commenters' responses to the public performances of local radiation and nuclear safety officials (Publication II; Publication IV). In other words, contestation and unsolvable disagreements are crucial parts of public engagement with issues that invite various types of publics into being (Marres, 2007, p. 772–773; cf. Mouffe, 1999; Papacharissi, 2015a; see also Blumer, 1946; Dewey, 1991; Park, 1972).

It is fair to say that the concept of the public and questions about the boundaries between the public, private and social remain crucial for discussions about the contemporary hybrid media environment. However, empirical reality appears far too complex to submit itself to clear-cut definitions and crisp boundaries, but continues to shift into new forms. Therefore, I have chosen to employ a rather pragmatic understanding of publics and publicity, in which public as a noun refers to *a group of people that show and express a publicly perceivable interest in a topic or an issue* (Marres, 2007; Dayan, 2005; Price, 1992). These issues and topics of interest are often *mediated by the hybrid media environment*, and the spaces the public gathers can also be either *actual or networked spaces*. *Publics as formations are multiple*, and because they are *sustained by attention*, they can disperse (Marres, 2007; Dayan, 2005; Papacharissi, 2015a; Wahl-Jorgensen, 2019). Therefore, I suggest that, instead of one public sphere, there be *multiple overlapping spheres of publicity* of various sizes. The platforms examined in the empirical material of this dissertation are connected to what could be understood as a national public sphere in the traditional sense, as they are either directly provided by or closely connected with mainstream journalistic mass media in a national context. Furthermore, *publics can engage in deliberative discussion, but are often equally contested and affective* (Marres, 2005; Mouffe, 1999; Papacharissi, 2015a; Wahl-Jorgensen, 2019; cf. Blumer, 1946; Dewey, 1991; Park, 1972). As I have argued above and in Publication V, contestation is a crucial part of public engagement. As an adjective, I use the term public to refer to the relative openness of the platform where the discussions are taking place.

4.2 Social media: A curious combination

The third concept that forms a key element in my research is that of social media. In the publications of this dissertation, I define social media rather pragmatically through the platforms analysed in each article (mainly Twitter, Facebook and YLE's commenting forum). The working definition for social media, which I have been using rather implicitly in the five publications included in this dissertation, can be

summed up as follows. By "social media" or "social media service", I refer to *the multiple online services and platforms that individuals and organizations use to form diverse networks, and to communicate with each other via text, images, audio and video*. The types of social media I examine in the empirical material of this thesis can be divided roughly into two groups. In one group, there are platforms such as Facebook and Twitter that are built on the premise of friend or follower networks, support various types of media (text, images, video, hyperlinks) and are run by one of the most powerful corporations in the world. In the second group, there are platforms such as YLE's commenting platform, which is text based, does not allow users to connect with one another like on Facebook or Twitter, and is governed by a publicly funded broadcasting corporation.

As I elaborated on in Chapters 4.2.1 to 4.2.3, some definitions of social media do not support placing Facebook, Twitter and YLE's commenting platform together under the same term. However, while the technological affordances and operational logics of the three platforms do differ, I argue that they all enable people to gather in online spaces to discuss and debate current events and news, allowing people to add their own voices to the affective news streams that circulate in the hybrid media environment (Papacharissi, 2015a; Wahl-Jorgensen, 2019).

In the publications, I have emphasised certain aspects of social media platforms over others. For instance, in Publication I, my co-authors and I emphasise the networking side of Twitter. But in my analysis of Finnish Facebook discussions on news about the Fukushima Daiichi disaster (Publication V), I am more interested in Facebook as a venue for (semi-)public communication. In Publications II and IV, YLE's commenting platform is examined in a similar manner.

Unlike the previous two concepts discussed in this dissertation, the hybrid term "social media" emerged through Silicon Valley start-up company and venture capitalist jargon to both popular and scientific language. While some scholars have resented the term for its somewhat problematic foundations, it has remained in the popular discourse mainly perhaps for the lack of a better term to cover the various digital networked services and platforms that enable people to communicate with one another across time and distance. In fact, following Bal's (2002) and Deleuze and Guattari's (1994) definition of a concept (see Chapter 3.1), it is relevant to ask whether "social media" merits being called a concept, as it is often used in ways that resemble more of a label than a profoundly considered instrument for abstract thought.

Next, I discuss the problematics regarding producing a satisfying scholarly definition for social media and relate it with other closely related concepts, such as

social network(ing) services (hereafter SNSs), before elaborating on the two components that comprise the discursive hybrid of "social media". Again, the topics covered here merit profound studies of their own, but I try my best to focus on aspects that are most relevant for the key problematics of this study. In this chapter, I draw particularly from the work of media scholars José van Dijck (2012; 2013) and Geert Lovink (2012), critical theorist Christian Fuchs (2014), social media scholar Taina Bucher (2012; 2015; 2017) and media scholar Nick Couldry (2015; 2019), who have all written extensively on social media in a way that challenges some of the most banal notions about social media as a phenomenon. I also reflect on Carr and Hayes's (2015) article, in which they seek to build a definition of social media that would go beyond the current, often rather ad-hoc formulations. To conclude this section, I return to the question of whether "social media" should be considered a concept and discuss some ways forward.

4.2.1 Looking for a definition

Currently, the Merriam-Webster (n.d.) English dictionary defines social media as follows:

> forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos).

According to the dictionary, the term was first used in this meaning in 2004 (Merriam-Webster n.d.). However, as Carr and Hayes (2015) note, there is no commonly accepted definition of what social media is among media and communication studies, and most scholars (myself included) make do with somewhat ad-hoc understandings of the techno-social phenomena.

According to Carr and Hayes (2015, p. 47), this situation poses a problem as these ad-hoc definitions work only as long as the medium they describe does not change its technological or social affordances, which can be a cycle of some years or, in some cases, just a few months (Helmond et al., 2019). Carr and Hayes (2015, p. 48) also argue that these rather vague definitions, such as the practical one I presented above, are problematic given that they do not account for the particularities of the technological and social affordances of these media. Furthermore, they criticise models that rely on descriptions of a single medium, as they see these models missing the social impact these media have (Carr & Hayes, 2015, p. 48; cf. van Dijck, 2013a).

Discussion on definitions of social media stems partly from discussion around SNSs (e.g. boyd & Ellison, 2008; Carr & Hayes, 2015; Helmond et al., 2019; Kaplan & Haenlein, 2009). The term, which became widely used in the early 2000s, focuses on how various types of online platforms made it possible for their users to make their social connections visible. The discussion on SNSs provides a historical reminder of what the internet was like in the early 2000s, before it became dominated by a handful of large conglomerates (cf. Lovink, 2012; van Dijck, 2013a). It also offers perspective to the contemporary musings by providing evidence on how the sites have changed over the years. The emphasis on social networks in turn helped to make social network analysis (SNA) with large datasets a rather fashionable method, which has again helped to theorise the contemporary hybrid media environment and to reveal the ties various actors have with each other.

The discussion about SNSs stems from a need to define and theorise online spaces where people met and communicated with each other. Some spaces, where individuals went to discuss common interests were (and still are) commonly called forums, and slightly later, when accumulating and displaying a network of friends and acquaintances inside the space in question became a common feature, the SNS term emerged (boyd & Ellison, 2008; boyd, 2010; Caers et al., 2013; Helmond et al,. 2019).

In their influential 2008 article, boyd and Ellison define SNSs as

> web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site. (boyd & Ellison, 2008, p. 211)

Boyd and Ellison (2008, p. 211) argue for the above definition; they emphasise that sites such as Facebook, MySpace and LinkedIn differ from other computer-mediated communication (such as email, forums or IRC) in allowing users to make their social connections visible to themselves and others. They also emphasise the role of commenting and private instant messaging offered inside the sites. In sum, what boyd and Ellison (2008, p. 219) argue sets SNSs apart from other forms of online communication is that the focus and structure of SNS are centred around people and the networks they form. As Carr and Hayes (2015, p. 49) note, boyd and Ellison's definition of SNSs became highly influential, but it has been erroneously used to define all types of social media, not just SNSs. While not all forms of social media are SNSs, many have included or include a SNS feature (boyd & Ellison 2008, p. 216).

Resonating with Carr and Hayes's concern about the difficulty in producing a stable definition, Helmond, Nieborg and van der Vlist (2019, p. 124) point out that the ability to constantly change the tools and forms of content offered to users has become a constant feature of social media giants, such as Facebook and Twitter. As previous scholarship points out, in the early 2000s, there was an abundance on sites to form networks with existing social circles, meet strangers or use one of many photo-sharing services, for instance (e.g. boyd & Ellison, 2008; Helmond at al., 2019; van Dijck, 2013a). However, the contemporary landscape of the hybrid media environment is drastically different, as few remaining sites have expanded into giants, either by assimilating their competitors or by adopting new features in ways that converge various forms of online activities, and data produced by those activities, into few platforms.

Based on an extensive and critical review of previous scholarship, Carr and Hayes (2015, p. 49-50) propose the following as a definition for social media that is not bound by time, is broad enough to cover all forms of social media (SNS or not) but is also precise enough to account for the specifics of each medium:

> Internet-based, disentrained, and persistent channels of masspersonal communication facilitating perceptions of interactions among users, deriving value primarily from user-generated content. (Carr & Hayes 2015, p. 49)

They further elaborate the above definition by noting that social media allow the users to interact and self-present opportunistically and selectively, either in real-time or asynchronously (Carr & Hayes, 2015, p. 50). The audiences for this interaction and self-presentation can be both broad and narrow, and they derive value from user-generated content and the perception of interaction (Carr & Hayes, 2015).

The above definition is loose enough that it accommodates both large platforms such as Facebook and smaller venues such as YLE's commenting platform to be included. Such inclusiveness, however, results in some shortcomings. While Carr and Hayes (2015) critique previous theorisations and models for being technologically centred, the model they produce focuses mostly on the technological and temporal affordances of social media. Their definition also does not address the economic and political underpinnings of social media, such as the collection and sale of the data generated by users, nor does it address the social and cultural impact of these media (cf. Baym, 2015; Fuchs, 2014; van Dijck, 2013a). While their definition does indeed tick all the boxes for the technological affordances of most social media, Carr and Hayes (2015) take for granted the two separate concepts that make up "social media". They (Carr & Hayes, 2015) also refer to the various SNS as channels instead

of "platforms", echoing the classic Shannon-Weaver model of communication (Shannon & Weaver, 1949), but do not explicate the reasoning behind this choice.

While Carr and Hayes's (2015) definition is usable for the purposes of this study, the shortcomings mentioned above require further unpacking. Next, I examine what the "social" and "media" in "social media" may mean and what further implications their separate connotations may have on the term.

4.2.2 The social in social media

If one follows boyd and Ellison's (2008) definition of SNSs, "social" stands for connections and communication between people (see also van Dijck 2013a). Kaplan and Haenlein (2009, p. 61–62), however, approach the social in social media through the notions of self-representation and self-disclosure, and Carr and Hayes's (2015) definition combines both approaches. In general, the SNS-focused discussions centre more on sociality as ties between individuals and groups, whereas other definitions emphasise sociality as self-expression directed at others. These theorisations rely on an understanding of the social that is (in most cases) not very critical. This reliance appears problematic, as the concept of social in and of itself is rather slippery (Couldry, 2015; Fuchs, 2014; Lovink, 2012; cf. Latour, 2005).

Sociologists who subscribe to the post-structuralist tradition agree that "the social" is a construct produced by various institutions, individuals, and the interactions between and among them (Couldry, 2015; Latour, 2005). For some theorists, such as Arendt (1958), social denotes the terrain between matters that are public (perceivable to all and of common interest) and matters that are private (the individual). Others, such as Couldry (2015) and Latour (2005), focus on the relationships between individuals and institutions, and the power they exercise over one another. An alternative understanding is provided by Fuchs (2014, p. 38–58), who focuses on different types of *sociality* instead of *the social*, and emphasises different kinds of behaviours and practices.

Fuchs's (2014, p. 38–58) approach to the social in social media draws from Durkheim, Weber, Tönnies and Marx, focusing on shared behaviours, membership in a collective (e.g. the society) and cooperation between individuals. Based on this view of sociality and the social, Fuchs (2014, p. 43), partly in resonance with Carr and Hayes, argues that what sets social media apart from other media is that it enables cooperative action. However, as Fuchs's understanding focuses on different aspects of sociality, it appears to take the social and the society itself for granted.

Couldry's (2015, p. 613–614; 2003) account calls this approach into question, as he argues that media institutions are crucial in producing and renewing what he calls "the myth of the mediated centre". This myth is key in creating the sense of the social in society and providing access to an imagined centre of the society. Arguably, then, if mainstream journalism and entertainment industries helped to establish and maintain the sense of social in the 20th century, social media has done the same in the early 21st century.

Couldry (2015, p. 619) argues that, instead of creating new forms of social, contemporary social media engage the same narratives as its predecessors and thus benefit from the same symbolic and financial power (cf. Chadwick, 2017). However, rather than addressing the nation, as public broadcasting and print media have done, social media conglomerates address the individual in order to turn interactions between individuals into financial profit (Couldry, 2015, p. 619–620; Chadwick, 2017; van Dijck, 2013a). This dynamic helps to produce a narrative that social media are the go-to sites for social (Couldry, 2015, p. 620–621; Chadwick, 2017; van Dijck, 2013a).

For van Dijck (2013a, p. 12), the social in "social media" encompasses both human *connectedness* and automated *connectivity*, the latter making the former visible, traceable, manageable and commodifiable for the companies providing the coded platforms of contemporary sociability (cf. Bennett & Segerberg, 2013). She points out how the utopian language of the early internet has been co-opted by corporations for marketing the idea of social media platforms as the site for the social (van Dijck, 2013a, p. 13; cf. Couldry, 2015). She also highlights how social media constitutes an area of public communication in which norms and rules are shaped and contested (van Dijck, 2013a, p. 19; cf. Papacharissi, 2015a; Wahl-Jorgensen, 2019). Drawing from Foucault, van Dijck contends that these public contestations serve to normalise practices such as sharing personal information online, and that feeds into the commodification of human connectivity that generate the surplus for companies like Google and Facebook (van Dijk, 2013a, p. 19). Tracing through the human, machinic, economic and cultural elements that make up the platforms enabling the culture of connectivity, van Dijk (2013a) produces a compelling account on how the platforms produce sociability while weaving the users and the material they produce and circulate as part of their infrastructures. Therefore, the social in social media, according to van Dijk's (2013a) account, is human *connectedness* as woven into the sociotechnical, coded and automated infrastructures of *connectivity* and the commodification logics of the platforms (cf. van Dijck & Poell, 2013).

Another formulation of social in social media is provided by Geert Lovink (2012). According to him (2012), in social media, social is no longer a reference to society and its institutions. Instead, he argues that social manifests itself as networks of people rendered as users and consumers, not as a class, movement or institution (Lovink, 2012). To Lovink (2012), the networked form of social is replacing the institutionalised form, and this step creates tension between the informal social networks and the formal, institutionalised social. The networked form of the social, however, is not simply "(digital) awareness of the Other", but there needs to be an existing, active interaction between individuals (Lovink, 2012). Echoing Baudrillard, Lovink (ibid.) argues that producing active interaction with others in the networked form of social has woken "the masses" from "the state of stupor" mass communication allegedly placed them under. Yet resonating with van Dijck (2012; 2013a), he argues that the operational logics of social media platforms render the talk of the masses into points of data minable for commercial profit (Lovink, 2012). According to Lovink (2012), "the public has become a database full of users".

As illustrated by the accounts above, the social in social media is far from a self-explanatory component of the concept. It can be understood as social practices of self-representation and connectivity between individuals and groups. However, as Couldry (2015; see also Couldry & Melias, 2019), van Dijck (2013a), Fuchs (2014) and Lovink (2012) highlight, these practices are enabled by and embedded in coded environments that are produced in the capitalist pursuit of financial profits.

4.2.3 The media in social media

If the first half of the term social media has proven to be a many-shaped creature, so is the latter half of the term, as "media" can also be understood in several overlapping ways. The etymology of media may be one reason behind this complexity, as the concept has become laden with converged connotations, from concrete technical understandings to the philosophical roots of the concept (Williams, 1983, p. 203-204). Media in social media has been overlooked in terms of theorisation and problematisation, or these activities have been limited to discussing the technological specifics of the given medium (cf. Meyrowitz, 1999 on understandings of media in mass communication and media studies traditions; Michell & Hansen, 2010).

For example, Kaplan and Haenlein (2009, p. 61–62) discuss the media element in social media by drawing from theories of the social presence of media and the theory

of media richness. Their approach conceives media as a means for information transfer and for emphasising the type of contact achieved with a medium and the amount of information transmitted through the medium within a given time (Kaplan & Haenlein 2009, p. 61). I suggest a slightly McLuhanesque way of unpacking what media means as a conceptual component of social media.

Below, I emphasise the singular form of media, *medium*, and focus on Facebook as a medium that affords certain types of technosociality and related uses while discouraging other types of uses. I also look at what implications this specificity may have for the users and the social and cultural impact of the medium in question. The way Facebook, for example, has assumed new features over the years resonates interestingly with how McLuhan (1964) describes the development of media as the newer form acquiring the forms of the older (see also Chadwick, 2017). While similar processes have taken place for various social media platforms, I mostly discuss Facebook in this section as part of my research also concerns the platform.

As Helmond, Nieborg and van der Vlist (2019) point out, Facebook has managed to embed itself deep into the structures of the contemporary industries of journalism, entertainment and advertising. Facebook can, from this point of view, be seen in a triple role. First, it provides a platform and access to large audiences for mainstream and fringe journalistic content alike, and second, it allows private individuals and various types of groups and organizations to gather inside the same platform. At the same time, its third role is to generate revenue from advertising and "sponsored posts" that penetrate all levels of the platform. Facebook essentially attempts to become a place that simultaneously contains personal photo albums, provides gathering space for all kinds of groups, and provides its users their daily news and entertainment (cf. van Dijk, 2013a).

Van Dijck (2013a), on the other hand, understands the media in social media through a kind of double articulation. She uses media to refer both to *the content* circulated within and across social media platforms – such as status updates, images and videos – and *the platforms* that enable this circulation of content (van Dijck, 2013a). This double articulation resonates with a conceptualisation of media in social media that is reflected in everyday understandings of the term. While the content circulated within the platforms is understood as media in the sense of a medium (text, image, video, sound), the platforms themselves are seen as media institutions (such as newspapers, television and radio) where a technological medium is also a site for various narratives. Such platforms are often operated by a publisher, and the content is curated by an editor-in-chief or a corresponding body, following a commercial or public service logic.

The developments and definitions described above have led some to argue that Facebook should recognize its role as a media institution and therefore take larger responsibility on what is shared on the platform (Gillespie, 2017; Marwick, 2017). So far, despite those arguments, the company has denied this position and maintained, in a similar vein to Twitter and YouTube, that they simply "provide a platform" for individuals, communities and organizations, and are thus not responsible for the content (Zuckerberg, 2020; Zuckerberg, 2019; cf. Gillespie, 2017; Marwick, 2017). Yet Facebook is simultaneously implementing semi-automated protocols to moderate and censure content that has been deemed unfit for the company's "community guidelines", thus accepting some responsibility on the content being circulated under the Facebook brand name (Zuckerberg, 2020; Zuckerberg, 2019). These moderation practices have been deemed highly problematic for various reasons by scholars and media practitioners alike (e.g. Carlson, 2018; Johnson & Kelling, 2018; Stafford, 2018).

As the above discussion illustrates, large social media platforms – such as Facebook, Twitter, Instagram or TikTok – and their owners are in a position where they appear as media institutions, but the content circulated on the platforms is produced by users. This understanding of media both as content and platforms in the context of social media illustrates the complexity of the platforms and the coded and financial logics that underlie the companies' operations. Notably, however, while the above applies to most large platforms, older forms of social media, such as discussion forums like YLE's forum studied in Publications II and IV, operate with very different premises.

4.2.4 For the lack of a better term?

Nancy Baym argues in her 2015 essay that all media are inherently social, as they enable people to form connections with each other. She further argues that there is nothing more social about "social media" than there is about postcards or newspapers (Baym, 2015, see also Papacharissi, 2015b). Instead, she suggests that "social media" is what happens when informal social interactions between people get funnelled into software applications controlled by large corporations and are called "content" (Baym, 2015; see also Couldry, 2015; van Dijk, 2013a; van Dijk, 2015; Fuchs, 2014; Lovink, 2012). As the above discussion illustrates, Baym's view is shared by many other scholars. I must therefore add to the rather superficial working definition I proposed at the beginning of Chapter 4.2 to include the

operational logics of social media platforms, as they direct human practices of connectedness towards normalised, automated and algorithmic connectivity and commodification (van Dijck, 2013a; Fuchs, 2014).

At the beginning of this section on social media, I asked whether it can be called a concept in the sense that Bal, and Deleuze and Guattari mean, or even as a sensitising concept as Blumer defines it. On one hand, there are several definitions based on established theories in the fields of communication and media studies, including a robust body of critical literature that discusses the term and its components and implications in considerable depth. On the other hand, however, the term continues to live a life of its own in the vernaculars of everyday talk and business jargon, true to its origins. It is therefore understandable that some scholars are reluctant to adopt the concept for academic use. If one would consider social media as a concept in the theoretically ambitious spirit of Bal, such a conceptualisation would be a highly diffused one (Bal, 2002, p. 32–33). Next, I conclude the chapter by setting up the shift into the discussion on the methodology.

4.3 Concepts as paths to methodology

As I noted in Chapter 1.1, media studies as a contemporary discipline could be described as a busy intersection, or an interdiscipline (Valdivia, 2003; Valdivia, 2013), with loose and porous boundaries. One reason behind this intersectional nature of the field is that it is relatively young and multidisciplinary, employs multiple methods and therefore has yet to form a clearly defined methodological and theoretical canon. Such conditions can also generate new perspectives and insights (cf. Ridell & Väliaho, 2006, p. 8). This reflection suggests that media studies as a field is one that has room for various kinds of inquiries and that it enables asking various types of questions in all sorts of combinations that might be considered unusual or unthinkable in some other fields.

In the two chapters about concepts, I have attempted to achieve two things simultaneously. On one hand, I have sorted the roots of the three concepts crucial to my work by analysing their coexisting definitions, using a selected number of authors as my conversation partners. On the other hand, I have sought to produce definitions of the three concepts that support and elaborate the ones provided in the articles of this dissertation.

As Bal (2002) and Latour (2005) note, concepts are important not only for establishing the topic of the study but also for serving as instruments for

methodological thinking. Concepts are tools to think with, so they also provide the means to make things visible and audible: to choose to work with a certain understanding of a concept is to build a world with it, and different understandings build different worlds (Warner, 2002). Thus, I have covered the three key concepts of my work at a level of detail that paves the way for the next chapter, which will delve into the methodological underpinnings of this study.

5 METHODOLOGY

In the previous two chapters, I discussed the concepts I have chosen as instruments of analysis or that have emerged from the analysis of my empirical material as instruments of inquiry. According to Bal (2002) and Latour (2005), a careful discussion on concepts can provide extensive grounding for methodology. However, methodology encompasses more than concepts and their use. Behind selecting concepts are fundamental questions about what it is that one studies, what one can know about it and what are the most suitable ways to approach the object under study in a way that allows for understanding it *in its own terms* (Bal 2002; Latour 2005). In other words, methodology is essentially about the *ontology* and the *epistemology* of research. The ontology and epistemology concern the empirical material of a study, such as how the choice of the empirical material influences how the questions about what can be known can be answered.

Methodology, then, is not just about choosing and applying suitable research and analysis methods to a set of empirical material. As Suoranta (2008) argues, methodology involves being aware of what one does and about the ability to justify the choices one has made during the research process. Each method and each theory provide a different framework through which the object of study is examined, and each method and theory produces different kinds of results. Thus, methodology is crucially also about the ability to consider the possibility of other outcomes, approaches and solutions (cf. Bal, 2002; Suoranta, 2008; Varto, 2005). Reflecting on methodological choices is a way to understand and scrutinise the research process.

Because of the epistemological and ontological implications, methodology is always *political*. The methods considered relevant and valid within a discipline may also change over time (Bal, 2002; Suoranta, 2008). Moreover, discussions about the legitimacy of methods often reveal a kind of boundary work that occurs within and between fields and disciplines (Bal, 2002; Suoranta, 2008, p. 23). The politics of methodology become visible when one examines the relationship of the research to the society in which it is conducted. As Suoranta (2008, p. 55) points out, research is never just discussion *about* society, but a discussion *with* society, as science is not conducted in a social vacuum; the values of the society influence the research. The politics of methodology stem, in part, from the interests of knowledge that guide a

researcher's work (Bal, 2002, p. 12). In other words, methodological awareness also applies to being aware of the value commitments that guide one's research. In the case of this dissertation, the interests of knowledge concern most acutely the concept of affect and the implications of its use for analysis of media both as content and as technology. Through its empirical context, this study also attaches itself to a growing body of research about the cultural impact of the Fukushima Daiichi disaster.

The politics and boundary work related to methodology come together beautifully in discussions about affect. The concept of affect and its theorisations bring with them a particular set of methodological questions and issues that appear sometimes at odds with the constructivist and post-structuralist approaches that are common in most contemporary research in media studies (Knudsen & Stage, 2015). For instance, as I noted in Chapter 3.2, some theories on affect regard it as ontologically outside or beyond linguistic categorisation. If that were true for this study, studying affect would require an empirical approach that understands semantics and semiotics as distorted traces of affect (Katriel, 2015; Knudsen & Stage, 2015, p. 4). The understanding of affect I follow in this work, however, considers language as a way to express affect, and therefore research methods that focus on studying affect in texts are valid ways of producing knowledge about affect (Eksner, 2015; Katriel, 2015; Knudsen & Stage, 2015).

In this chapter, I first discuss questions about the ontology of affect and its epistemological implications when studying affect in text. I then move on to the methods applied in the case studies and discuss more broadly what it means to conduct mixed methods research. I am transparent about the process of the work itself: how this dissertation started as part of the work for an international and interdisciplinary research group and how it then transitioned into a solo work. In this context, I elaborate on what effects the two-step process has had on this dissertation, from the shaping of the research questions to assembling empirical material and research methods. I conclude by reflecting on the process of the work. I argue for a methodological approach that structures the empirical through highly specific contexts that can be tied into the bigger picture without losing sensitivity to the unpredictability of lived reality.

5.1 Affect and text: Ontological and epistemological questions

Suoranta (2008, p. 20) argues that methodology is most attached to research when it stems from a concrete empirical problem that needs to be solved. He also highlights that realizing this requires a researcher to understand that no research method is a "turnkey solution" to be applied to an empirical setting as such, but always requires adjustments to fit the empirical issue at hand (Suoranta, 2008, p. 20). In the case of my research, finding the right fit has been very much the situation.

As I noted in Chapter 1, when I began this work, there (to my best knowledge) were few canonised methods for studying affect in media studies. While there are bodies of work that bring together various empirical approaches (e.g. Flam & Kleres, 2015; Knudsen & Stage, 2015; Oikkonen, 2017; Papacharissi, 2015a; Wahl-Jorgensen, 2019; Wetherell, 2012), and every individual study has a methodological grounding, each of them offers a specific approach to empirical methods for studying affect. I have therefore mainly drawn inspiration for my analysis methods from literature on media studies and more general method handbooks for content analysis and discourse analysis.

As I noted in Chapter 1 and elaborate on below, when I began my work, I argued that the existing literature did not match the idea of what I wished to do with the empirical material. As Suoranta (2008) notes, this approach to methodology requires increased awareness of and openness about the origins of the methods, concepts and the researcher's own position within the field (Bal, 2002; Latour, 2005; Varto, 2005). In what follows, I therefore first discuss ontological and epistemological issues related to empirical analysis of affect in some detail, before providing a description of collecting, processing and analysing the empirical material for this dissertation.

As I noted in Chapter 3, I agree with the theories of affect that suggest the personal aspect of affect precedes articulated emotion. As with all representations, the discursively organised expressions of affect are, in a way, always "second-hand accounts" of their referents (Katriel, 2015; Publication III; Wahl-Jorgensen, 2019). Acknowledging this premise poses certain limits to what an analysis of textual representations can say about affect.

The empirical material of this study also poses its own methodological challenges. On one hand, I have texts produced by mainstream news journalism, with its own conventions and genres. On the other hand, I study texts produced by non-professional writers on three types of social media: Twitter, YLE's discussion forum, and Finnish mainstream news media's public Facebook pages. The latter two are

bound to the journalistic institutions, which may influence how the people having discussions on these platforms express themselves (see Publication V).

Hence, I agree with Massumi's (1995; 2005) view that there is no possibility to access "pure affect" through text-based material (see Chapter 3 above; Wahl-Jorgensen, 2019). I argue, however, that this impossibility applies to all human meaning-making processes: everything one says, writes or expresses in the form of motion or image is always mediated and filtered through multiple interrelated layers of culture, society, technology and language. When analysing *any* text, the analyser can never know the true intention or feeling of the producer of the text. One can only make well-argued estimations based on the information available at that given point in time.

That said, the theories of affect and their relationship to the structures of reality and meaning-making require some further discussion. Most theories of affect can be loosely labelled as materially oriented, and they imply an empiricist approach to reality. In other words, they assume that some things exist outside human construction and understanding. Affect also challenges some views of social constructionism; if all human experience and knowledge are socially constructed, why does affect, which can also be understood as a form of knowledge, seem at times so ineffable? Social constructionism is a fruitful starting point for analysing conscious, intentional and meaningful actions, but it is ill-suited for probing sensitive things that fall outside these cognitive and cultural categories (Suoranta, 2008, p. 75). This view also deals poorly with structures and powers that are larger than the individual (Suoranta, 2008, p. 75). Yet as I argue in Chapter 3, affect is also inescapably tied to how language and cognition shape human experience.

Because theories of affect challenge aspects of what could be described as the mainstreams of social and humanistic research after the linguistic turn, such theories also emphasise the complex and often layered nature of reality. Reflecting on how theories of affect test constructivist and constructionist ideas of the structure of the world(s) in which people live, I suggest affect can be seen as a phenomenon that lies somewhere between "the world of meanings" and "the world of things" (Suoranta, 2008). Affect inhabits both worlds, sometimes figuring more strongly on the side of the speakable meanings, but sometimes reverberating across the plane of the unspeakable. Considering my argument on affect in Chapter 3, I suggest that it is equally important to understand the deeply subjectively experienced and embodied aspects of affect alongside its culturally, socially and historically structured and sticky, collective dimensions.

This both/and approach, in some ways, comes close to Blumer's (1969, p. 57–60) symbolic interactionism, as it suggests the simultaneous importance of situated interpretations and meanings in the broader context of organizational and societal structures. In terms of studying affect in text-based empirical material, this approach requires acknowledging that what one can discern in the text is the culturally circulated and shareable side of affect (Wahl-Jorgensen, 2019; Wetherell, 2012). It is also possible to reveal how the researcher reading the text has been moved by it. However, what the text does not show are the embodied, subjective affective intensities of the reader, not to mention those of the person who wrote it.

The idea of the subjective and the structural resonating with one another is summed up nicely already in the second-wave feminism motto "personal is political" (Wahl-Jorgensen, 2019, p. 78–79). I argue, echoing Anu Koivunen's 2008 article, that employing theories of affect in the context of media studies and journalism can be understood as a feminist intervention to the structures and conventions that shape public speech and public spaces (Wahl-Jorgensen, 2019). A common reading of the history of the public sphere and political deliberation by critical media scholars, such as Fraser (1990) and Mouffe (1999), has been that it has favoured forms of expression that have been coded as predominantly male qualities, such as rational and neutral, issue-focused approaches (Ahmed, 2004b; Wahl-Jorgensen, 2019). Historically, women, members of the working class and various minorities have been excluded from the public debate because they have been deemed as incapable of behaving according to the terms and tones of the discussion mentioned above. This division reflects the broader Enlightenment conception of white, affluent males as the epitomes of reason, the mind and civilization, while women and minorities are socio-culturally coded as being more of the body, emotion and nature (Wahl-Jorgensen, 2019).

Therefore, employing a theoretical and methodological framework that renders visible some of the cultural binaries and seeks to challenge them provides an opportunity to imagine, through research, ways of knowing and formulating meanings that may allow for different approaches to society and culture to emerge (Ahmed, 2017). For instance, I argue, particularly in publications II and IV, that even the most neutral-appearing statement by an expert or an official is in fact tied by many strings to affect and emotion, and to a cultural need to manage them (see also Wahl-Jorgensen, 2019). Disaster and crisis reporting are realms of journalism where more expressive use of affective language is often accepted and even expected (Pantti, 2010; Pantti et al., 2012; Wahl-Jorgensen, 2019). However, I suggest that affect is present in all human expression, including journalism, as it moves people or

prevents them from being moved whether they want it or not. Furthermore, by recognizing that affect is a phenomenon that shapes, directs and sustains all forms of public expression, from professional journalism to online vernacular discussions, may help improve the current understanding of challenges and promises the networked hybrid media environment poses to democracy and freedom of speech (Nikunen, 2019; Paasonen, 2015; Papacharissi, 2015; Vainikka, 2020; Wahl-Jorgensen, 2019).

To conclude this section, I summarise the key arguments and suggestions. First, I agree with Massumi (1995; 2005) that there is no way to study "pure" affect through text. This is not, however, because discursively organised expression would somehow "ruin" affect, but because all texts are representations, and they are not the same as their referents (Publication III; see also Katriel, 2015; Knudsen & Stage, 2015; Wahl-Jorgensen, 2019). Therefore, I suggest that studying affect in texts is possible, but one must acknowledge that texts as representations are cultural and social constructs, and therefore, the social side of affect can be grasped through those constructs. Second, as affect appears to actualise somewhere between the subjective and the collective, the discursive and the embodied, at the same time interrelating both dimensions, studying affect through texts requires one to be aware of the representational form of the texts and of the intertwined sides of affect. The combination of the embodied subjectivity with the structural and systemic slightly resembles the core idea of symbolic interactionism, as it attempts to recognize the phenomenon at several levels simultaneously (Blumer, 1936; Blumer, 1969: 57–60). Third, I argue that employing theories of affect is a feminist act given that affect highlights cultural and social gendered binaries that often operate on the levels of text and language. My suggestion is that theories of affect offer ways to broaden these binaries. I also argue that acknowledging that no form or format of communication is separate from affect and emotion can in fact help researchers better understand and tackle problems the contemporary hybrid media environment poses to some of the taken-for-granted values of modern societies.

5.2 On mixed methods and case studies

In this section, I elaborate on the processes of collecting and analysing the empirical material of this study and reflect on the successes and misgivings of the process. The individual case studies presented in the publications and their respective empirical materials and analysis methods are summarised in Table 1.

Case study	Empirical material	Analysis methods
Publication I: 5th anniversary of the Fukushima Daiichi disaster on Twitter	17,619 English-language tweets with #fukushima posted on March 11, 2016, collected by Arto Kekkonen using Twitter's Streaming API and the Digital Methods Initiative Twitter Capture and Analysis Toolset program (DMI-TCAT; Borra & Rieder, 2014)	Social Network Analysis for all tweets, Critical Discourse Analysis for 50 most retweeted tweets
Publication II: Affective dynamics of comment discussions to YLE's Fukushima Daiichi coverage	59 news stories published on YLE's web page in March 2011 that had comments enabled. Comments total: 1083.	Qualitative content analysis (discourse analysis, metaphor analysis), focus on affective dynamics of the discussion
Publication III: Potassium Iodide Stockpiling	254 news stories published across the globe in 101 English-language newspapers and 20 news agencies, obtained via LexisNexis + 47 online news stories from Finnish and Anglo-American mainstream media outlets, all published between March 11 and 31, 2011	Qualitative content analysis (frame analysis, discourse analysis), focus on narrative themes and affective dynamics of the news items
Publication IV: Scientific experts in comments discussions to YLE's Fukushima Daiichi coverage	59 news stories published on YLE's web page in March 2011 that had comments enabled. Same as in Publication II	Qualitative content analysis (discourse analysis, metaphor analysis, frame analysis), focus on affective dynamics of the discussion
Publication V: Affective dynamics in comments about Fukushima Daiichi in Finnish mainstream media's Facebook pages	732 comments written to 51 Facebook posts of 7 Finnish news outlets' public FB pages published between March 11 and April 30, 2011	Qualitative content analysis (discourse analysis, metaphor analysis, frame analysis), focus on affective dynamics of the discussion

Table 1. Summary of individual case studies and empirical material from each study.

The most obvious underlying reason for the overall structure of this work has been the framework of the MECER project, which influenced how the empirical material was collected and how the case studies were then analysed. The focus of the project was on how news about and reactions to the Fukushima Daiichi disaster and its

anniversaries were circulated in the hybrid media environment. Consequently, this work is a mixed-method study at two levels: at the level of data collection and at the level of empirical analysis. The latter can also be divided into two levels: the combination of quantitative and qualitative methods, and the combination of different qualitative methods, such as discourse analysis and metaphor analysis.

In the MECER project, the approach to collect the empirical material was two-sided. On one hand, my colleagues and I needed a sample of the journalistic media coverage of the Fukushima Daiichi disaster, which meant using and forming archives of the existing news coverage in Finland and elsewhere. On the other hand, the collection of the social media data I was responsible for was informed by methods and ethical positionings of media and online ethnography. Obtaining Twitter data was a slightly more complicated process, as my co-authors and I wanted a large enough dataset for SNA, but also material that could be examined qualitatively. In Chapter 5.2.1, I elaborate more on collecting both types of empirical material.

From the beginning, one MECER project goal was to identify how to study complex events and larger sets of empirical data from different angles. This idea organically led to a mixed-method approach where qualitative and quantitative methods were used to analyse the same empirical material sample. The quantitative analysis was generally used to find elements and patterns from the material that can be taken under further scrutiny through qualitative methods. The qualitative findings may also lend to further understanding for interpreting the findings of the quantitative analysis. This approach is best observed in Publication I, in which my co-authors and I examine the same set of Twitter data with two methods: SNA and CDA, and in the Chapters 2 to 5 in *Traces of Fukushima* (Valaskivi et al., 2019).

In Publications II to V, I have adopted a different approach. As previously noted, when I began my work, to the best of my knowledge, there were few established methods for studying affect textually. Therefore, I chose to work with an approach that combined elements of several qualitative analysis methods. The combination of methods I chose to use in Publications II to V came about somewhat organically, based on previous literature on affect in journalistic text and social media, and based on analysis methods I used in my master's thesis research.

The work of the MECER project quickly took the form of case studies. My co-authors and I realised that, because of the various issues that rose from data collection (see Chapter 5.2.1 below), it would be very difficult to obtain the samples of Finnish, Japanese and English-language journalistic and social media material needed to conduct a clean-cut comparative study. We also realised that the broader phenomenon we were studying was so complex that it required an approach that

would recognise and address this complexity at a methodological level. Therefore, we decided to present our research as case studies that stand on their own, with each having their own research questions and outcomes. They are produced in a joint framework of the project and together seek to answer questions about the mediation of a disruptive event such as the Fukushima Daiichi disaster as it circulated and continues to be circulated across the hybrid media environment in 2011 and beyond.

Because the empirical material of the publications has been collected in the context of the MECER project, I consider publications II and V as iterations of the project's case studies, even though I have conducted them independently after the project officially concluded in 2016 and they have been published outside of the project's publications. While their focus is slightly different from the three publications more closely connected to the MECER project, publications II and V also resonate with the overall inquiry of the project.

5.2.1 Collecting data: From news to social media

The empirical material analysed in the publications of this dissertation consists of several types of material, as Table 2 illustrates.

Publication	Empirical material
I	17,619 English-language tweets with #fukushima posted on March 11, 2016, collected by Arto Kekkonen using Twitter's Streaming API and the Digital Methods Initiative Twitter Capture and Analysis Toolset program (DMI-TCAT; Borra & Rieder, 2014)
II	59 news stories published on YLE's web page in March 2011 that had comments enabled. Total of comments: 1083
III	254 news stories published across the globe in 101 English-language newspapers and 20 news agencies, obtained via LexisNexis + 47 online news stories from Finnish and Anglo-American mainstream media outlets, all published between March 11 and 31, 2011
IV	59 news stories published on YLE's web page in March 2011 that had comments enabled. Total of comments: 1083
V	732 comments written to 51 Facebook posts of 7 Finnish news outlets' public FB pages published between March 11 and April 30, 2011

Table 2. Summary of the empirical material from the case studies.

The empirical material was collected in several batches between 2014 and 2016. The collection of YLE's news coverage began in autumn 2014 and concluded in December 2016, while the comments on the news on YLE's site were collected during autumn 2014. The Facebook discussions were also collected in fall 2014, as well as the first set of the iodide tablet material. The second set of iodide tablet stories

and the Twitter material were both collected in 2016. The Twitter material was collected by my colleague Arto Kekkonen.

5.2.1.1 Using and creating news archives

The empirical material can be divided into two main categories: journalistically produced material and social media material. From the start, my colleagues and I in the MECER project acknowledged that there would be ethical and other issues related to the social media material, but the collection of the journalistic material had its own issues as well.

The most straightforward approach to empirical data collection was presented by the second set of the iodide tablet material. The English-language newspaper and news agency material were obtained through the global Lexis-Nexis database, which indexes over 1200 newspapers and 100 news agencies, plus transcripts of television and radio news (Nexis, 2020). The data was collected with three searches on the Lexis Nexis newspaper database with the broad All News search function. We searched for stories published between March 11 and April 1, 2011, with the keywords "japan AND iodide" and "fukushima AND iodide". The search yielded 254 news stories published across the globe in 101 English-language newspapers and 20 news agencies. The results from the database were exported as Microsoft Word documents, search by search, and cleaned of possible duplicates and false positives, as Fukushima is both a relatively common place name and a surname in Japan. Two copies were made of each document, one that was kept without markings, and another that was used for the analysis.

The online news set about iodide, collected first in 2014 as a pilot sample to confirm that iodide buying was not an isolated incident, contains 47 web news stories from Finnish and Anglo-American mainstream media outlets and published from March 11 to 31, 2011. The news outlets were selected in advance to include different types of media with large readerships. They are two Finnish television stations, two Finnish tabloids, the British Broadcasting Corporation; the US-based Cable News Network; and the global news wire service Reuters' US and UK editions. Articles were retrieved from each outlet's web pages with the same keywords as above. The stories were saved in the Firefox browser add-on Zotero, and as screen capture images and word documents containing only the text of the stories.

The YLE online news collection turned out to be more cumbersome. News stories were retrieved from YLE's news website by using the site's search function with the keywords "Fukushima*", "Japan*" and "säteily" (Finnish for "radiation"),

and then saved with the Firefox browser add-on Zotero by year to create a browsable archive. YLE's own search functions were not always reliable, and searches had to be complemented by following links in the stories pointing to related news and by using Google as a secondary source. Altogether, these searches yielded 554 online news items published between March 11, 2011, and December 31, 2016. The stories selected for qualitative analysis were also saved as Microsoft Word documents. In addition to the YLE's website's search not being effective, changes in the website's visual interface and layout caused further issues, as the broadcaster redid their whole site in September 2016. This affected all older stories published on the site and meant that some videos and images attached to stories published prior the redesign were rendered useless.

This type of collection of empirical data is typical to media and journalism studies that are interested in existing material produced by professional journalists. As my experience illustrates, while searchability of online news sites and expanded access to large international databases has made data collection significantly easier from the days of non-digital media, data collection in digital environments has its own handicaps. Moreover, the widened access to produce online digital material has meant that one must abandon the idea of a "complete" sample that would contain everything ever published on a certain topic. There will always be a story that is not indexed in the search engine databases, or things will disappear as sites and servers are rearranged, sometimes forgotten and/or taken down. Still, sometimes the sheer amount of accessible material can be too much for a single researcher, or even a server set up to store large amounts of data, to handle in a reasonable time. This problem brings me to the collection of the social media data.

5.2.1.2 Online data collection and the changing web

The publications of this dissertation use social media material from three sources: YLE's commenting platform, Finnish mainstream news media's public Facebook profiles and tweets with the hashtag #fukushima from March 2016. The two former sets of material were collected manually and with the aim of only conducting a qualitative analysis. The Twitter material was collected with Twitter's streaming API by my colleague Arto Kekkonen (see Publication I for details), with the intention of analysing the material both quantitatively and qualitatively. After the quantitative analysis was conducted, my co-authors and I selected tweets retweeted at least 10 times for a qualitative analysis, a total of 208 tweets (Publication I, p. 934). In 2016,

the MECER project also purchased historical Twitter data from 2011 to 2015, and it was used in case studies presented in *Traces of Fukushima* (Valaskivi et al., 2019).

YLE's comments were collected in autumn 2014 after the search for stories about the Fukushima Daiichi disaster described above. In 2011, 59 stories had commenting enabled (see Publication II; YLE, 2010), and there were 1083 comments in total. The comments for each story were saved from the website first as screen capture images and then transferred into Microsoft Excel tables in which I anonymised the discussions by replacing the pseudonyms of the commenters with running numbers, starting from the first comment in the first story. I also organised the comments according to the time of the publication of the stories and the number of comments, in order to figure out if the number of stories with comments enabled varied from day to day.

The comments were collected manually for two very practical reasons: at the time I started the data collection in 2014, I was unaware whether there were any scraping software programs that would work with the Finnish language, and I had neither the time nor the skills to start building one myself. Moreover, my colleagues and I anticipated the number of comments to be relatively small and therefore easy for one person to handle. Notably, YLE decided to close the commenting functions on their news site in 2015 and then reopened them in late 2018. As a result, comments left on stories prior to 2018 were scrapped by YLE in the process and can no longer be accessed online.

The Facebook comments were also collected manually in autumn 2014, very much for the same reasons I did not use scraping software for the YLE comments. The seven mainstream news outlets from whose Facebook pages I collected the comments were chosen to provide a cross section of the Finnish media landscape; two national tabloid papers (IL and IS), two television news outlets (YLE and a commercial channel MTV), the national daily (HS), a business daily (KL) and a regional daily from north-western Finland were included in the sample (Publication V). The business daily and the regional daily were chosen because I anticipated that commenting on their Facebook pages would differ from the other media, which are both more general in focus and oriented towards a nationwide readership. The business daily is openly pro-nuclear, and there was a nuclear power plant planned in the readership area of the regional daily (see Chapter 2.3). Commenting on the Facebook pages of the two papers was not very active, however (Publication V).

The Facebook comments were collected using the platform's search functions and simply scrolling the timelines of each media page back to March 2011. This process was possible back in 2014 when Facebook's algorithm still organised the

posts on the timelines chronologically and not according to the number of reactions and comments received by each post (e.g. Knuuttila & Laaksonen, 2020). Once I reached March 2011 on each news outlet's Facebook timeline, I searched for posts about the Fukushima Daiichi disaster, or the earthquake and the tsunami. Upon finding a relevant post, I clicked on the "Comment" button to make the existing comments visible and took screen-capture images of the entire discussion thread, including the original post. These images were stored on an external hard-drive to which only I had access. I then transcribed the posts and comments to a Word document containing all posts on each news outlet, anonymising the posts by replacing the name of the commenter with a running number. Each post and comments were also assigned numbers according to the time they were posted, and I noted how many comments each post received. I also counted the number of likes each post and comment were given. To trace if a commenter was recurring in the material, I had to refer to the original images of the posts, but after I completed that phase, I used the transcribed versions for further analysis.

How I collected and processed the material from YLE's commenting platform and Facebook was informed and inspired by Cristine Hine's *Ethnography for the Internet* (2015), and Johanna Sumiala and Minttu Tikka's (2013) work on media ethnography online (see also Isomäki et al., 2013). From this point of view, the method of data collection above could be described as online observation (Hine, 2015; Sumiala & Tikka, 2013) or nonreactive data collection (Janetzko, 2017) as I was "listening in" on online discussions. However, as I started my data collection three years after the discussions had originally taken place, this approach is far from clean-cut online ethnography and is, in some ways, closer to researching online histories (Suominen, 2013; cf. Janetzko, 2017). This approach also had profound implications for obtaining the consent of the people who participated in the discussions in 2011, which I elaborate on in Chapter 6.

As for the Twitter data used in Publication I, the collection process was more complicated as it required my colleague Arto Kekkonen's expertise in computer science. As the process of the Twitter data collection and quantitative analysis is described in detail in Publication I, below I discuss the events that led to Mr. Kekkonen joining the MECER team and what the process taught me about obtaining social media data through third-party services. The discussion will be continued in Chapter 6, as it is firmly related to the ethics of social media research.

Prior to Mr. Kekkonen joining the MECER team in winter 2016, my colleagues and I had already tried to obtain tweets about Fukushima Daiichi disaster from two third-party service providers: Meltwater and Pulsar. However, as Meltwater and

Pulsar are predominantly aimed at companies for their brand-work and marketing, my colleagues and I soon realised they were not particularly useful for our purposes. With Meltwater, the licence I was using allowed only for a certain amount of data to be obtained, and because the discussions around Fukushima Daiichi were still relatively active in 2014 and 2015, that data allowance was quickly spent. Because of the small data-allowance, and because I was unable to get a clear picture on how the search results were filtered, we decided to abandon Meltwater.

Pulsar, on the other hand, did provide us with plenty of data in Japanese and English, and we were able to gain some insight on the most common topics of discussion around Fukushima Daiichi disaster in 2014 and 2015. However, even though I had more freedom to choose the parameters with which the service searched for the tweets, my colleagues and I again did not know how the results were being filtered. Due to that lack of transparency and other concerns we had about the data, we ultimately decided to discontinue the use of Pulsar.

After these trials and errors, my colleagues and I had a relatively clear idea on what we wanted, and especially what we did not want, when it came to collecting Twitter data in large quantities. With Mr. Kekkonen's help, we were able to obtain usable data for Publication I and conduct the study we had originally planned.

If the process of collecting the empirical material for the case studies was, on hindsight, anything but a smooth and linear process, the same applies to the methods and processes for analysing the empirical material.

5.2.2 Analysing data: Mixed methods, a mixed bag?

The analysis methods for each case study presented in the publications provide a two-level approach to studying affect in textual contexts. As noted above, the material consists of different types of texts, produced in different empirical contexts. The analysis methods for each publication therefore also have different points of emphasis, even though all publications follow an approach that combines the elements of several research methods.

From the early stages of my research, I also understood affect as a multifaceted phenomenon that occupied several planes of experience and reasoned that it would not do justice to the complexity of affect to examine it through a single analysis method (see Chapters 3 and 5.1 above). This awareness led me to adopt an approach to analyse affect from textual material that does not strictly follow a single existing research method, but combines elements from three different methods: metaphor

analysis (Burrell, 2018; Lakoff & Johnson, 1980; Soriano, 2015), frame analysis (Entman, 2007; Vliegenthart and van Zoonen, 2011), and critical discourse analysis (Fairclough, 1995) complemented with close reading (Bal, 2002; Lukic & Espinosa, 2011). Each of these methods captures unique aspects of text, and by combining elements from each of these methods, I seek to understand how affect is present in the text, as textual affect includes more than explicitly expressed emotion (Oikkonen, 2017; Paasonen, 2015). I recognize that this approach is far from a proper triangulation of methods, but it is an approach where core elements of three different methods are deployed to the same empirical material in order to simultaneously examine several aspects of the material.

Because my understanding of affect is culturally and socially informed, metaphor analysis and critical discourse analysis appeared the most suitable approaches for teasing out how affect appears on the level of text, as both approaches examine text and language as sites where social and cultural structures become visible (Katriel, 2015; Wetherel,l 2012). As Lakoff (2016, p. 272) argues, all metaphors are constitutive of emotion, and affect and emotion are discursively constructed in text (Soriano, 2015; Chapters 3 and 5.1. above). Frame analysis complements the approach provided by metaphor and discourse analysis due to the focus on patterns and repetition, and as Ahmed (2004) and Papacharissi (2015a) note, affect circulates through repetition and patterning (see also Nikunen, 2019; Oikkonen, 2017; Paasonen, 2015). Next, I briefly discuss how the analysis process proceeded in each of the publications.

In Publication I, which combines quantitative and qualitative methods, the approach in the qualitative part was guided mostly by critical discourse analysis (CDA) (Publication I, p. 934–935). CDA focuses on the specific meanings that utterances construct and the power relations these meanings shape and reinforce (Blommaert & Bulcaen, 2000; Fairclough, 1995; Wodak, 2013). Thus, CDA provides an opportunity to examine the ritual and political aspects of the commemorative tweets about Fukushima Daiichi disaster (Publication I, p. 934). Based on the results of the quantitative analysis, my colleagues and I selected 208 tweets to be analysed with CDA (Publication I, p. 934). This approach allowed us to pinpoint the discourses that dominated the affective news stream on Twitter (Publication I, p. 934). It also enabled us to explore the relationship between the most circulated discourses and the most influential users highlighted by the quantitative analysis (Publication I, p. 934). My colleagues and I focused only on the content of each tweet, leaving out possible external links, and looked particularly at the utterances

and expressions used in depicting the initial event, and whether the tweet included references to other events or actors (Publication I, p. 934).

In Publications II, III, IV and V, I have employed the combination of qualitative methods described above. In each study presented in the publications, I examined the overall composition and style of the texts, paying attention to the word choices, usage of emotional expressions, metaphors, and argumentation styles, as these elements often influence how the text is interpreted, both in terms of meanings and in terms of affect (Publication II, p. 34–35; Publication III, p. 107; Publication IV, p. 124–125; Publication V, p. 8; cf. Oikkonen, 2017). The word choices included verbs, nouns and adjectives used and the connotations they carry – for instance, whether the events at Fukushima Daiichi were referred to as "an accident" or "a catastrophe" (cf. Ahmed, 2004b; Lakoff & Johnson, 1980). Emotional expressions refer to statements such as "that's terrible", "this makes me laugh" or even "omg lol wtf", and of course words used to describe an emotion, such as sadness, fear, joy and so forth (Oikkonen, 2017, p. 686). In classifying metaphors, I followed Lakoff and Johnson's (1980, p. 5) definition of metaphors as expressions in which one thing is understood and experienced in terms of another. Understood in this sense, metaphors are not simply figures of speech, but also are pervasive in everyday language (Lakoff and Johnson, 1980). For instance, when "the nation mourns", the nation is understood in terms of a person's emotional expression (Ahmed, 2004b; Nikunen, 2015; Oikkonen, 2017). With argumentation styles, I referred to the overall style of writing in a text, which comprises the elements described above.

A key element of this approach was to read the material several times, each time focusing on a different element of the text. Through this process, I accumulated an understanding of how the elements described above worked on their own and as parts of a larger framework (Publication II, p. 34–35). This recurring reading also made me sensitive to repetition in the texts themselves, enabling me to point out, for example, references to the 1986 Chernobyl disaster as a recurring element, thus teasing out the texts' affective stickiness (Publication I; Publication II; Publication III; Publication V). This approach resembles classic qualitative content analysis (Davies & Modell, 2006), as I sought to describe the contents of the text in a detailed manner, assigning components of texts to different categories. However, while content analysis stops at the categories, my approach also incorporated the elements of discourse analysis, frame analysis and metaphor analysis to deeply study how affect works on various levels of text.

5.3 Reflecting on methods

I acknowledge that there has been substantial critique towards mixed-methods research (e.g. Toomela, 2011; Wythoff, 2018), and I agree with some of the critique. To start, this work lacks the kind of profound understanding that stems from employing only one specific method, but I also argue that mixed-methods approaches open possibilities for widening the boundaries of specific methods. I suggest that, by choosing to use a combination of several established methods to study a complex phenomenon, I have followed Bal's (2002) argument of allowing the empirical material and the object of research to speak on their own terms (see also Suoranta, 2008).

My approach, which privileges the multifaceted nature of the empirical phenomenon under inquiry, has allowed me to experiment and explore on the boundaries between three qualitative methods. By going into the analysis "phenomenon first", I have taken the opportunity to discuss the epistemological and ontological dimensions of affect in depth. In retrospect, some aspects of this approach resemble grounded theory (Flick, 2018; Urquhart, 2013), even though I employed theories of affect as the broader conceptual and methodological framework of this study.

I acknowledge that a more systematic approach towards both data collection and analysis methods would have benefitted this work. Part of this relative haphazardness may be the result of the institutional and occupational framework of a fast-moving interdisciplinary research project. If beginning my work anew, I would devote more effort to better acquainting myself with a broader selection of literature on data collection and analysis methods, to better plan my work with my colleagues, and to frequently update this knowledge. This would not only make my work more transparent and replicable, but also benefit the process of article writing. While far from ideal, this process has provided me with plenty of opportunities to boldly experiment, fail and experiment again. If one of the pedagogical goals of a doctoral dissertation is to teach the student how to properly conduct research, and what to avoid, I consider these lessons learned. The process has also sensitised me to the occasional discrepancy between the narratives produced about the research process and the act of research.

I began this chapter by discussing the role of methodology in media studies in the spirit of Bal and Latour, arguing that methodology means understanding both the ontological and epistemological dimensions of the object being studied and the ability to apply research methods that correspond with these dimensions. Drawing

from Chapter 3, I have suggested that methods for studying affect require the researcher to be sensitive to the complexity of the phenomenon. Having made these arguments, I then described the somewhat messy reality of collecting and analysing the empirical material. Lastly, I have reflected critically on the limitations of the methodological approach I chose for this work. The connecting narrative of this chapter has been that affect is a complex phenomenon, and studying it requires methods and approaches that recognize and are sensitive to this complexity. Executing this sensitivity while adhering to the standards of scientific method and academic writing, however, requires careful balancing between tradition and experimentation.

In the next chapter, I continue critically reflecting on my work as I discuss the ethical aspects and implications of this study.

6 RESEARCH ETHICS AS A PROCESS

Like methodology and concepts, discussion about ethics should ideally permeate every stage of research, from the initial plans to the finished publication (Beninger, 2018; franzke et al., 2020). However, like methods and concepts, questions about research ethics vary depending on the empirical material and research setting. As franzke et al. (2020) note, research ethics is an ongoing, dialogical process. Particularly in areas such as social media research where the conditions of the sites of research are in constant flux, research ethics rarely offer clear-cut and simple solutions. Ethical conduct thus requires the researcher to recognize the potential risks and be sensitive of the implications of every action.

There are several possible angles to research ethics, but since the issues that concern this work are mostly related to the collection and presentation of empirical material, I choose these areas as the starting point. Because all empirical materials used in the publications were collected from online sources, I used two ethical guidelines specialised in internet research as my main points of reference: the Association of Internet Research (hereafter AoIR) ethical guidelines (franzke et al., 2020) and the social media research ethical guidelines for University of Aberdeen (Townsend & Wallace, 2016). I also refer rather extensively to review articles on online research ethics by Östman and Turtiainen (2016; 2013) and consult the general guidelines of the Finnish National Board on Research Integrity (hereafter TENK) (2012).

I address ethical issues related to the news material in Chapter 6.1, which concerns Publications II, III and IV, and issues related to social media data in Chapter 6.2, which is related to all publications except Publication III. In both sections, I discuss the ethical implications and issues related to the empirical material throughout the research process and elaborate on the choices I have made. In Chapter 6.3, I provide a critical reflection on the entire research process.

6.1 Ethics of archived news material

One might assume that there would be few ethical issues related to research use of news produced by professional journalists. News stories are publicly available either online or through libraries and various databases, and they are produced by professionals for public consumption. As Crossen-White (2015) and Deacon (2007) note, the emergence of digital archives has meant broader access to information. Digital archives have also made many practicalities of data collection easier and faster compared to non-digital archives.

However, in a 2007 article, Deacon raises questions about widespread use of the Lexis-Nexis database that are still relevant. He argues, for instance, that the keyword search of Lexis-Nexis may produce distorted results as the system is best suited for searching information about tangible objects instead of themes or issues (Deacon, 2007, p. 8–10). It is highly likely that, when I searched for news about iodide tablets for Publication III from Lexis-Nexis, my search may have yielded incomplete results. As I noted in Chapter 5, the same issue may have affected my searches from YLE's websites, as the site's search function was unreliable.

Deacon (2007, p. 10–11) also criticises the use of Lexis-Nexis and other similar archives for losing the visual element of newspaper reporting, as the databases only index the textual portion of the story but not images or page layouts. This critique also applies to archived online news. As I noted in Chapter 5, due to changes in YLE's website design and functions over the years, a portion of the stories no longer have the original images or videos, or the videos are no longer playable. I was able to save some of the images with Zotero, but more often, the images were lost in the process. According to Deacon (2007), this situation constitutes a problem for analysis, because one element of journalistic meaning-making is deliberately ruled out by the database format.

Deacon (2007) and Crossen-White (2015) also raise the issue of news as a public record of events, and their reliability as such, particularly if one relies on large archives and databases. I suggest, however, that this issue is relative to the object being studied. In this dissertation, the focus is on affect in journalistic representations of the Fukushima Daiichi disaster and on affect in comments in response to these representations. Thus, while the sample of the news material is incomplete, it is sufficient for the purposes of the study.

In addition to issues related to archival data collection, ethical issues that consider news material most often are related to copyright issues, particularly when citing the research material. While citations of news in the research context generally fall under

fair use in the US and under corresponding legislation in the EU (Digital Media Law Project, 2014; Kuula, 2011), extensive citations should be done with the permission of the original publisher. Copyright issues were not an issue in this dissertation, as the citations of the news material were generally just a few sentences per story.

As the brief discussion above notes, ethical issues concerning news material tend to focus on the collection and use of the texts, rather than people. However, research on social media involves several questions that lack easy answers given that the researcher must diligently consider the people behind the data.

6.2 Social media as sites of research

Social media platforms, such as Twitter or Facebook, are very tempting places for scholars interested in all sorts of human behaviour (Beninger, 2018). After all, discussions that used to take place around coffee tables are now, to paraphrase boyd (2010) and Papacharissi (2015a), persistent, replicable, searchable and scalable as they take place in the networked social media platforms that have come to define public discussions in the early 21st century. Because of the technological affordances of these platforms, significant material is relatively easily available in abundance and copiable to researcher's own digital archives. However, these discussions and forms of self-expression are so easily copiable, traceable and shareable that they also render the people who produce them visible and vulnerable (Beninger, 2018; Hine, 2015).

The current landscape of social media platforms is heavily dominated by a handful of actors, of which some are the world's most powerful and largest companies (Fortune 500, 2019) that operate on distinct but opaque logics (see Chapter 4). These corporations generate their revenues through selling and brokering data that consists of the information that can be derived from the content the users generate and share on these platforms (see Chapter 4) (Couldry & Melijas, 2019; van Dijck, 2013b). While these practices have been increasingly criticised, people have not shown any signs of quitting their lives online, and the content created by users continues to make these platforms just as interesting for researchers as well (Beninger, 2018; Saariketo, 2020).

As my deliberation on the concepts of public and social media in Chapter 4 illustrates, questions of publicity and privacy blend together in the contemporary hybrid media environment, including on social media. Due to the interconnectedness of the environment, doing research within that environment involves complex

ethical issues. In general, there are four distinct ethical questions related to a hybrid media environment and social media platforms in particular:

1) questions of informed consent;

2) questions of privacy;

3) legal questions (terms of service, data protection, intellectual property rights); and

4) questions about the blurring boundaries of individuals, their data, and text.

These questions are further complicated by factors such as the sensitivity of the research topic, the sizes of the samples and researched groups or communities, the nature of those communities on the open-closed continuum, and the time of the data collection versus the time of the data production, among other aspects. In the case of this dissertation, while all empirical data is historical (i.e. generated before the time of data collection) and was accessed from public platforms, these sites are far from unproblematic. Next, following the AoIR guideline's view of research ethics as an ongoing, dialogical and reflective process (franzke et al., 2020, p. 4), I discuss three ethical issues that are specific to the publications of this dissertation: issues of *consent*, issues of *privacy*, and issues with *data and the people who produce it*. I address legal questions along the way, as they are connected to the three other issues.

6.2.1 Issues of consent

The question of consent in research should be a no-brainer: informed consent must be obtained from the subject before starting the research. This imperative applies to research on human subjects, such as studies involving medicine and psychology or ethnographic observations, and to interviews, surveys and questionnaires (TENK, 2012). When the research concerns tracing people's actions and thoughts online, informed consent should also not be an issue. For instance, when studying a discussion forum, the researcher should ask the permission of the administrators or the whole community, and make their presence known (Hine, 2015).

However, the varying terms and conditions of social media platforms may complicate the issue. Currently, Facebook explicitly prohibits research on the platform (Bruns, 2019; franzke et al., 2020, p. 14; Freelon, 2018). In the case of Twitter, if the data is obtained through the API, it is in accordance with the terms and conditions (franzke et al., 2020, p. 14). While YLE's current terms and conditions for the commenting platform (YLE, 2019a) have no clause about the use

of the material for research purposes, their data protection clause (YLE, 2019b) states that, in some cases, the material may be given for research.

In addition to terms and conditions, *time* also complicates things. With the exception of Twitter data analysed in Publication I, by the time this dissertation becomes public, the comments and conversations have been written almost a decade ago. The discussions had not been active since late March 2011, so my colleagues and I decided there would be no point in reactivating them by commenting on each thread to announce that I was going to use them in my research. This approach can be justified as a form of nonreactive data collection (Janetzko, 2017), as announcing the researcher's presence would probably have alerted the commenters to react in some way, perhaps altering the data (Janetzko, 2017).

Another question was the relationship of consent with the openness or closedness of the platforms. The comments on YLE's web page were visible to anyone visiting the site if they clicked open the discussion at the end of each article. The Facebook pages for Finnish mainstream news media were set as public, so the posts, likes and comments were visible even for people with no Facebook profile. In the case of Twitter, accounts are public by default, and the data collection through the company's research API only scrapes tweets from public accounts (franzke et al., 2020). The volume of the material was also so large that obtaining informed consent from each individual poster would have been a gigantic task.

After some deliberation, my colleagues in the MECER project and I decided that no consent was needed, for four reasons: 1) the data was publicly available, 2) it was several years old at the time of data collection, 3) it would be anonymised for processing and presentation, and 4) I was interested in the comments, not people who wrote them. The topic of the discussions was also not particularly sensitive, and because the number of individual people commenting was so large, obtaining consent was not deemed necessary. In hindsight, what I should have done in the case of Facebook and YLE material, though, was to contact the administrators of the pages and ask for their permission.

The AoIR ethical guidelines (franzke et al., 2020, p. 10) and Townsend and Wallace (2016) recognize that, in social media research, informed consent is a recurring and particularly thorny issue. However, because the circumstances around each research setting vary, the guidelines offer no clear-cut solutions. For example, the AoIR guidelines on consent (franzke et al., 2020) note that there are several ways to address the question in cases were obtaining so-called first-degree consent is difficult. The most common approaches mirror those I have applied: anonymising the data and treating the original data as separate from the anonymised set (Chapter

5). Moreover, both the AoIR guidelines (franzke et al., 2020, p. 10) and Östman and Turtiainen (2016; 2013) emphasise the sensitivity of topic being researched: the more sensitive the topic, the more careful one must be around issues of consent.

6.2.2 Issues of privacy

Strongly tied to the issue of consent is the issue of privacy. In the case of this study, questions of privacy and publicity are twofold. As I noted above, in social media research, a crucial point is whether the material studied is shared on a public or (to follow AoIR terminology) quasi-public platform (Townsend & Wallace, 2016, p. 5). Questions of privacy also concern the identifying information that may be included in the data and how it is handled in various stages of the research process (franzke et al., 2020, p. 10).

As the AoIR guidelines (franzke et al., 2020, p. 5) note, there are again several ways to approach the issues related to privacy. For instance, the European General Data Protection Regulation and Scandinavian approaches to research ethics strongly emphasise the imperative to protect the basic rights of a human individual as an autonomous citizen of a democratic society, while Anglo-American approaches tend to be more utilitarian and thus more accepting of risks for the individual in case the research advances the common good (franzke et al., 2020, p. 5). This difference affects how one approaches issues of privacy, both concerning the platform where the material is collected from and the way the material is later processed. However, the AoIR guidelines (franzke et al., 2020, p. 7–8, 10), Townsend and Wallace (2016, p. 5) and Östman and Turtiainen (2016, p. 71) all focus on the broader social context of the research: how delicate is the topic of the study, where are the studied interactions taking place, and how vulnerable the people behind the empirical material may be due to their age, social status and other conditions. For instance, studying a password-protected closed discussion forum for transgender teens would require a drastically different approach to privacy than studying discussions about nuclear power on an openly available commenting platform on a mainstream news media site.

Even though the topic of my study is not the most intimate and the material was publicly available, I still cannot do anything I please with it. Because I collected the data manually, I became aware of the identities (names and profile pictures in Facebook, pseudonyms in YLE) of the commenters. Therefore, the material was processed for analysis in a way that these properties were not visible (see Chapter

5.2). When presenting samples of the material, the quotations were slightly amended from the original for readability and translated into English, apart from Publication II, which was published in Finnish. The quotations are always presented alone, fully anonymised, and the rest of the thread is described to provide the reader an overview of the dynamics of the discussion. Through that process, I have hopefully been able to respect the privacy of the commenters. I chose to anonymise the pseudonymous commenters on YLE's platform due to issues related to the perceived privacy or publicness of the platform. Even though one may assume that the user understands their comment to be visible to anyone happening upon the site, without having their explicit consent, one cannot be sure. This lack of certainty applies even further to Facebook, where the graphical user interface of the platform does not very clearly indicate if the user is commenting on a public, closed, or private page or group.

With Twitter, the guidelines are simpler. Most accounts are public as default, and the terms and conditions require researchers and other third-party users to remove data that has been marked as deleted or private (franzke et al., 2020, p. 14; Townsend & Wallace, 2016, p. 5–6). In the case of the study in Publication I, where my co-authors and I used tweets from hashtag #fukushima in March 2016, the focus was on users and actors who could be classified as public figures: journalists, news organizations, politicians and environmental activism organizations. Therefore, there was no need to anonymise or pseudonymise the users.

6.2.3 Studying texts from social media

The third ethical issue related to social media research is summarised in the heading above. To paraphrase, how much can the researcher imply about the person behind the comment, based on the information available? These questions tie into the discussions in Chapters 3 and 5 about what should be considered about so-called reality when the object under study is text. The questions also reflect the notion in the AoIR guidelines (franzke et al., 2020) that research ethics are tied into the methodology and analyses of the research. Boundaries between individuals and the data they generate on social media platforms become increasingly blurred as people share increasing more details about their lives online (Couldry & Melijas, 2019; Lehtiniemi & Haapoja, 2020; Saariketo, 2020). Because the same details are being used to generate revenue for the platforms people use, it is also increasingly important to consider the wider implications of this dynamic, and what it means for

doing research on social media material (Couldry & Melijas, 2019; Lehtiniemi & Haapoja, 2020; Saariketo, 2020).

As I noted in Chapters 3 and 5, all texts are representations, and a representation can never take the place of its referent. Because social media material is also mostly text (or can be understood as such), one should be wary of reading into it something that cannot be deducted from the material itself (cf. Latour, 2005; Suoranta, 2008). Östman and Turtiainen (2016; 2013) also refer to this when discussing the need to have a critical attitude towards sources and data in ethnographically inspired research, and emphasise awareness of the broader context of the empirical material as a way to avoid misinterpretations (Östman and Turtiainen 2016).

When discussing the results of my analysis, I can only indicate what I can read from the texts, and I cannot make any further claims. For instance, when discussing the affective dynamics of the online discussions in YLE's comments and on Facebook in Publications II, IV and V, I can argue that the comments towards people with opposing opinions on nuclear energy were often belittling. As I note in Publication V, even though the overall expression of the comments on the two tabloid papers' Facebook pages was more colloquial, I cannot draw any further conclusions about, for example, the socioeconomic status of the commenters. This approach also respects the boundaries of the authors of the material and does not equate their persons with their data. As I noted in the beginning of this section, even though people are constantly urged to share more of their lives online, each person is a multitude and cannot be condensed into their Facebook updates and GPS-footprints. Research on social media material should always be mindful of this fact.

6.3 Reflection

Undeniably, the largest caveat of this study in terms of research ethics is the question of consent. As I noted above, due to conducting research using historical social media data, obtaining informed consent from the commenters was not deemed necessary or feasible. I should have, however, informed the administrators of the YLE commenting platform and the news media's Facebook pages about my research, which I recognized in Chapter 6.1.1, but this step simply did not cross my mind in 2014. As Janetzko (2017) notes, even if this could be justified as nonreactive data collection, it does not relieve me from the ethical responsibility.

The data has been fully anonymised and presented only in small examples translated in English, so I argue that I have done enough to protect the privacy of

the commenters. Since the data was collected, it has been stored on an external hard drive with no internet connection, so the risk for exposing the unprocessed material has been reduced significantly (franzke et al., 2020; Beninger, 2018). The fact that most of the empirical data of this study is almost 10 years old has been both a blessing and a curse. While it has made obtaining informed consent difficult, the age of the data can be argued to be a protective element, particularly in the context of YLE's commenting platform. The platform was scrapped in 2015 and reopened in 2018 (see Chapter 5), so all comments posted before 2018 can no longer be retrieved. Thus, the only copies of the discussions exist on my external hard drive. While Facebook seeks to become a mnemonic infrastructure with its Memories function, its current algorithms organise the newsfeeds in a way that posts made 10 years ago become increasingly hard to find. Time can thus be argued to be a protective factor here as well.

As research use of manually extracted data is not explicitly prohibited by Facebook (Facebook, 2020) or YLE, I cannot say that I knowingly broke either platforms' terms and conditions. In hindsight, however, I should have been more aware of this and not relied so much on the idea that "if it is publicly available, it's okay to use it for research" (Beninger, 2018; boyd & Crawford, 2012; Turtiainen & Östman, 2013). While this has been a modus operandi for plenty of ethnographically inspired studies on the internet in the past, it does not mean I should have gone along with it.

The case of Twitter is more complex in terms of consent, privacy, time and access to data. The company allows research access through its streaming API to collect tweets related to ongoing phenomena and record the undulations of the discussion as it happens (franzke et al., 2020). Access to historical tweets, however, is more restricted: an ordinary user can only scroll old tweets or a hashtag dependig on the frequency of new tweets, as Twitter caches older tweets at some point. Old tweets can, however, be bought from Twitter in large quantities (Twitter, 2020). As the only widely popular social media platform that currently allows its data to be used for research, Twitter is a very attractive option for research.

Overall, this study has been a valuable learning experience in terms of research ethics and how, if done properly, it encompasses all levels of research, from the early stages of planning a study to the presentation of the results – and beyond. I cannot claim to have produced research that is, on all levels, an example of rigorous ethical practice, as my reflection above illustrates. Yet the process has given me the insight to avoid repeating the same mistakes in the future. With this reflection complete, it is now time to conclude this work.

7 CONCLUSIONS

In Chapter 1, I stated that working on this dissertation has been a journey in both a literal and figurative sense. The journey has been guided by curiosity towards how phenomena that seem to be descriptive of the early 21st century and its media environment unfold simultaneously on several levels in the context of the Fukushima Daiichi disaster, where several complex and interconnected events and phenomena collide in unexpected ways (cf. Allenby & Sarewitz, 2011). In March 2011, many elements of what was assumed to constitute the "normal" for the affluent inhabitants of post-industrial societies were questioned as whole communities in Japan came to a standstill. Travelling became synonymous with escaping, and as my colleagues' work in *Traces of Fukushima* (Valaskivi et al., 2019) illustrates, social interactions became more deeply embedded to the networked media infrastructures as Twitter had its breakthrough in Japan. In the aftermath of the disaster, people reached out for information and each other via all possible means. In Tokyo, telephone lines may have been down, but the internet worked.

Even though the events at Fukushima Daiichi may appear distant to people outside the affected region, the disaster is still ongoing for the thousands who had to leave their homes and livelihoods (Valaskivi et al., 2019). In June 2016 in Namie, time appeared to have stopped. Professors Tanaka and Shineha took my colleagues and I to peer through the windows of a local newspaper's delivery office. On the floor, scattered, lay newspapers from March 13, 2011. On the front page, a bold print exclaimed "What the hell?" in Japanese above a picture of the first hydrogen explosion at Fukushima Daiichi. As the future of the region still appears uncertain, the same question reverberates through many minds, contributing to the affective stickiness of the disaster.

This work is an effort to analyse and understand the mechanisms that enable and sustain circulation of the affective stickiness that surrounds mediated discussions about Fukushima Daiichi. The process has involved a lot of probing and carving a path (Blumer, 1954; McLuhan, 1964; Bal, 2002) among and across interrelated phenomena, concepts and events. To conclude this effort, I recount the key findings and core arguments of this study and reflect on its limitations, before providing final

remarks. In Chapter 1.3, I summarised the three research problematics at the core of this work as follows:

1. What meanings emerged and were layered into news about the Fukushima Daiichi nuclear disaster as the news circulated on social media?
2. How does affect figure into news as a genre?
3. What effects do the sharing of news in social media and the subsequent layering of meanings have on journalism and journalistically constructed publicity?

Next, I address the three problematics by reflecting on the key findings of this dissertation, focusing on empirical findings and theorisation about the notion of *affective discipline*. In Chapter 7.2, I summarise the core arguments of this dissertation, and in Chapter 7.3, I revisit some theoretical and empirical loose ends and parse from them possible future paths for broader discussions, particularly related to technologically oriented approaches to media and affordances.

7.1 Key findings

The publications of this dissertation should be read as independent pieces, but due to their common origins and shared theoretical framework, there is a cumulative or resonant aspect to their findings. Moreover, Publications I and V can be understood as the starting and closing points, respectively, of a circular movement, as the series of publications begins and ends with two of the most popular social media platforms: Twitter and Facebook. The publications share themes that become expressed through the bundle of core concepts of this work: *affect*, *public* and *social media*, and the three key research problematics summarised in Chapter 1.3 and above. Thus, the findings of the publications reflect these themes and concepts, such as affective dynamics of social media discussions and their relationships with mainstream journalism in the contemporary networked media environment, each providing a particular angle to the research problematics of this dissertation.

The three key concepts and the three research problematics come together in the notion of *affective discipline*, which I introduce in Publication III and continue discussing in Publications IV and V. Emerging as an offshoot of the concept of affective dynamics (Paasonen, 2015; Oikkonen, 2017), which I explore in Publication II, affective discipline is my attempt to conceptualise how various actors attempt to influence or manage the affective intensities at play in (networked) public discussions (see Chapter 3.2). Each publication where I use the notion opens a specific angle to

what affective discipline may look like in a different context and how it may be used by different actors in different situations.

While the notion of affective discipline is not explicitly present in Publication I, where my co-authors and I examine tweets about the fifth anniversary of the Fukushima Daiichi disaster, the analysis illustrates how the contemporary media environment allows social processes and practices such as collective mourning and cultural trauma to take new forms while still maintaining the older forms (Publication I, p. 390–391). This kind of hybridity simultaneously amplifies the mainstream media-driven ritualistic aspects of commemoration and opens space for diverse opinions that may be in discord with the forms of commemoration amplified by the mainstream media (Publication I, p. 942). In the hybrid environment, affect and emotion circulate and stick to various narratives about the disaster and its victims, further driving the politization of the discussion about the Fukushima Daiichi disaster (Publication I, p. 942). Publication I provides an effective illustration of a part of the contemporary hybrid environment in which affect and emotion circulate as discussion components, structuring the mode of the discussions in many ways. The analysis of the ritualised aspects of commemoration illustrate how affect and emotion become embedded in structures of social behaviour, and how the circulation of affect renders visible the public and shareable aspects of expressions of emotion that have been mostly discussed as something deeply subjective and personal (Publication I, p. 939–941; see also Chapter 3.2).

In Publication II, I elaborate on the concepts of affective dynamics and affective intensity, which foreground the discussion about affective discipline in Publications III to V. The hybrid media environment, which was in the foreground in Publication I, remains a crucial contextualising component in the four remaining publications. In Publications II and IV, the commenting platform of the public broadcaster YLE's website is approached as a site where affective dynamics of online discussions are examined in relation to questions of authority, (techno-scientific) expertise, public opinion and trust. In Publication III, the contemporary media environment is present as the networks of mainstream media, such as news agencies, newspapers and television channels. Publication V returns the focus on the intersections between mainstream news organizations and social media platforms, as I examine comments made in response to news about Fukushima Daiichi in March 2011 on the Facebook pages of seven Finnish mainstream news media outlets.

In Publication II, I focus on how affective intensities are formed in the comment discussions and whether there are any "sticky nodes of discussion" (Paasonen, 2015) to which affective intensities would attach particularly strongly (Publication II, p.

31). My analysis of affective dynamics confirms the results of previous studies, that online debates tend to become polarised along pre-existing political fault lines, in this case between discussants expressing pro- and anti-nuclear views (Publication II, p. 37). There are also actors that become sticky nodes of the comment discussions, and these nodes are related to the polarization of the discussion. The nodes are the figure of an anti-nuclear commenter, the figure of a pro-nuclear commenter, and figures of political or scientific authority (Publication II, p. 39). The anti- and pro-nuclear figures are present only in the comment discussions, while the figures of political/scientific authority are actors featured in the news articles discussed in the comments. The figures of pro- and anti-nuclear commenters are used by commenters as so-called strawmen, deployed in the discussions by the opposing sides when they wish to ridicule or criticise the other side (Publication II, p. 39). The authority figures, however, attract affective intensities from both sides of the debate. The polarization of the discussions and the affective intensities and dynamics that drive and sustain them reveal the struggle over networked public space and public discussions (Publication II, p. 42).

I introduce the notion of affective discipline in Publication III through an analysis of how emotion is articulated in mainstream media stories about potassium iodide stockpiling and how affective intensities are connected to objects and figures circulating in the coverage (Publication III, p. 107). I address the notion of affective discipline by examining narrative structures and rhetorical strategies through which affective intensities clinging to the fallout from Fukushima are managed (Publication III, p. 110). The main element of this management and mitigation is rationalising the disaster and the local and global responses to it (Publication III, p. 110). Moreover, the analysis illustrates how the journalistic narrative of the stories addresses and portrays the members of the public and the implied readership of the stories (Publication III, p. 111; see also Chapter 4). In the coverage of potassium iodide stockpiling, the public is represented as a fearful, panicking mass while the news addresses the readership of the stories as a rational public. The rationally acting public is distanced from the affective excess of the panicking mass through the narrative choices of the coverage (Publication III, p. 112–113). Through this double image of the public, I describe how acts of affective discipline become visible through acts of naming, rationalising and shaming the emotions and affective excess of the public represented and addressed in the news coverage (Publication III, p. 114–115), reflecting the findings about affective intensities as sites of contestation in Publication II.

In Publication IV, I revisit the empirical material analysed in Publication II and focus on YLE's use of techno-scientific expert sources in the coverage of the Fukushima Daiichi disaster. I describe how experts were being deployed by YLE as a means of affective management and discipline (Publication IV, p. 119). Because of their mediated presence, the experts tend to become affectively sticky nodes of comment discussions (Publication IV, p. 119; see also Publication II). As an example of the affective dynamics of commenting around the experts, I analyse the interview of STUK Director General and the 198 comments it received, focusing on Director General's expert figure as a sticky node of discussion (Publication IV, p. 128–129). I suggest that the comments directed at STUK's Director General illuminate affective intensities that are related to nuclear energy, expertise and trust (Publication IV, p. 130–131). Publication IV can thus be argued to illustrate how mediated representations of scientific expertise can become sticky with affect and tied with complex historical and cultural narratives attached to the issues at hand (Publication IV, p. 132).

Moreover, the attitude STUK Director General expressed during his interview can be understood as an act of affective discipline, as he underscored solution-oriented "engineer's common sense" as the solution to the Fukushima Daiichi disaster (Publication IV, p. 128). In the comments under the Director General's interview, some discussants appeared to express wishes of affective discipline towards the Director General. For example, some commenters argued that the Director General should be ashamed of his remarks (Publication IV, p. 129). These examples illustrate how affective discipline can act in several directions. While the STUK Director General probably did not see the comments urging him to be ashamed, such outcries send a signal to other people participating in the conversation.

In Publication V, I explore the affective dynamics of discussions on the news about the triple disaster of March 2011 on public Facebook profiles of Finnish mainstream news media. I identify several types of affective dynamics, ranging from playfulness, expressions of worry and anger to displays of solidarity and animosity, to be simultaneously present in the empirical material (Publication V, p. 10). The shared feeling of being offended appears to have a particularly strong affective pull, as comments expressing feelings of being offended by either other comments or the original post tended to generate more subsequent comments (Publication V, p. 10). The sense of being offended is often tied to solidarity towards victims of the disaster (Publication V, p. 10). This observation reflects the findings of Publications II and IV, where some commenters felt offended by the remarks of STUK's Director

General. The discussions where commenters expressed their feelings of being offended feature examples of acts of affective discipline similar to those described in Publication IV, as the commenters reprimanded each other or the creator of the original post (Publication V, p. 10–11). In both cases, either the creator of the original post or a single commenter wrote something the other commenters felt was against the implied proper mood of the discussion (Publication V, p. 10-11). Other commenters then demanded the so-called offender to either take back their words, or to leave the discussion altogether (ibid.). These two examples are of rather blatant attempts at affective discipline, but in most cases present in the empirical material, the acts are more subtle and more diverse (Publication V, p. 12).

The findings of Publication V illustrate the diversity of affective dynamics and intensities present at even short online discussions. The findings show multiple ways the participants of the discussions attempted to manage or direct the affective attunements of the discussions (Publication V, p. 13). The Publication V findings also resonate with the findings of Publications II, III and IV, illustrating how affective intensities attached to one issue are also connected to several other issues, events and figures as they circulate in the hybrid media environment.

Examined through the three core research problematics and empirical material of this dissertation, the notion of affective discipline presents an interesting angle for questions about the relationship between journalistic text and its readers, for questions about affect in networked communication and for more methodologically oriented questions about how to study affect in text. I argue that the notion of affective discipline surfaces the struggle that takes place over definitions of the affective attunements of public discussions. These dynamics apply to texts produced by professional communicators and ordinary people alike, which often become entangled in the contemporary media environment. The notion of affective discipline can also act as a conceptualising instrument that allows one to examine more systematically how acts of affective discipline take place and how such acts are used by different actors in different situations. Furthermore, the notion of affective discipline provides an approach to the socially and culturally shared side of affect, as acts of affective discipline appear to rely on naming and highlighting emotions that are culturally coded as acceptable or unacceptable in a given situation. While producing a new concept was not an original goal of my study, this emerging notion holds potential for becoming a sensitising concept (Blumer, 1954) that can provide new hints about what to look for in contemporary forms of communication. With this in mind, I proceed to discuss the core arguments of this dissertation.

7.2 Core arguments

As there are three key concepts and research problematics, there are also three core arguments I wish to make with this dissertation. Much like the key concepts and research problematics, these arguments are interrelated, as the discussion about the notion of affective discipline above may indicate.

First, I argue that the concept of affect, understood through a culturally and socially informed approach, provides a fruitful way to study mediated communication in the contemporary hybrid media environment. This understanding of affect enables scholars to analytically consider the non-discursive, non-deliberative, embodied and experienced aspects of public communication alongside the deliberative and discursive. Following Ahmed's (2004b; 2010b) and Wetherell's (2012; 2015) argument, I maintain that affect is part of the subjective and collective human meaning-making systems and therefore inseparable from all forms of human communication (see Chapter 3). While there are aspects of affect that are highly subjective and embodied within the individual, affect is also social, cultural and historical, as it sticks to human communication – from handwritten notes to markings in a database, from fact to fiction.

I suggest that the ideas of affective dynamics (Paasonen, 2015; Oikkonen, 2017) and affective discipline (Publication III; Publication IV; Publication V; cf. Langlois et al., 2009; Haselstein & Hijiya-Kirschnereit, 2013; Riis & Woodhead, 2010; Wahl-Jorgensen, 2019) may help scholars to understand, in more vivid detail, how various types of discussions and arguments are sustained and driven in the contemporary hybrid media environment. As I noted above, the concept of affective discipline also renders visible contestations and exercises of power that take place in these discussions, providing a way to address social power in the context of affect. I therefore suggest that – in the spirit of Marres (2007), Mouffe (1999), Papacharissi (2015a) and Wahl-Jorgensen (2019) – research on public and political communication should recognize how affect and emotion drive discussions. Instead of treating affect and emotion as something to be removed from disturbing deliberation, they should be taken into account as an integral part of the power struggles around the issues to which they stick (Publication I; Publication V; see also Kaun, 2016; Papacharissi, 2015a; Wahl-Jorgensen, 2019).

Given the above, more attention must be paid to how affective intensities and affective discipline work in networked communication, particularly through the technological affordances of online platforms. Recognizing that several affective dynamics and intensities may be simultaneously at play in an online discussion and

that these may not be mutually exclusive is the first step (see above; Publication II; Publication IV; Publication V). However, acknowledging the multiplicity of affective intensities present in networked communication must lead to a more complex understanding of the overall dynamics of the hybrid media environment and all of its actors, human and non-human. Simply stating that text-based communication does not transmit emotions and expressions as well as face-to-face interaction, or that more moderation is needed, is not enough.

Second, I suggest that the triple disaster of an earthquake, a tsunami and the meltdowns at Fukushima Daiichi provide a strong example of a contemporary hybrid media event (Publication I; Sumiala et al., 2018; Katz & Liebes, 2007). In this specific event, natural causes and man-made misgivings give rise to a series of events that are simultaneously covered and commented on in a media environment that interlinks older and newer forms of media and participation. An event such as Japan's triple disaster of March 2011 and its mediated coverage and remembrance, or the novel coronavirus pandemic of 2020, invite questions about intertwining established media and social media platforms, and about what effects this contemporary hybrid environment may have on politics and democracy.

As all five publications suggest, there is a strong affective element in all communication, particularly during exceptional and disruptive events (Kotisová, 2019; Pantti, 2010; Pantti et al., 2012; Wahl-Jorgensen, 2019). This element applies to news coverage of mainstream media and public appearances of officials and experts, as well as to ordinary people having discussions on social media. Officials, journalists and experts are often expected to maintain a neutral composure and impartial stance towards the events (Publication II; Publication III; Kotisová, 2019; Pantti, 2010; Wahl-Jorgensen, 2019). The implications of objectivity and neutrality norms of journalism are also emphasised during a disruptive event, and the struggle over attention of the public and the ability to define meanings for the events in the hybrid media environment further highlights these demands (Kotisová, 2019; Pantti, 2010; Wahl-Jorgensen, 2019). Furthermore, public officials, techno-scientific experts and mainstream news media act as bulwarks of confirmed information during disruptive events, acting as an intermediary between members of the public and competing types of information (Publication III, p. 108; Kotisová, 2019; Pantti, 2010; Wahl-Jorgensen, 2019).

Publication III also reveals the double role the public plays in disruptive events. During a disruptive event, when verified information is scarce and the situation is in a constant flux, the hybrid media environment and its several actors simultaneously addressing and representing "the public" reveals some of the fault-lines of

contemporary democracies. While communication between various actors of the society has become faster and public officials and experts are pressed to communicate more frequently and openly, this makes them and their messages vulnerable to criticism at best and disinformation campaigns at worst (Chadwick, 2017; Sumiala et al., 2018; Wahl-Jorgensen, 2019).

Therefore, I argue that, in the contemporary hybrid media environment, the communication of public officials, experts and journalists alike should be understood as forms of affective labour (Anderson, 2010; Hardt, 1999; Hopper & Huxford, 2015; Kotisová, 2019; Siapera, 2018; Wahl-Jorgensen, 2019). Public communication should also be seen as acts affective discipline, because in addition to relaying information, it is a way to manage public emotions (Rantasila, 2019; Rantasila, 2020). Coupled with an understanding of affect as an integral part of political communication (Publication V, see also above) and understanding of circulation of affect via networked technology, I suggest that this view on expert communication as affective labour and affective discipline can provide new vistas to fields of journalism, crisis communication and political communication.

Third, the study of affect in the contemporary hybrid media environment (Chadwick, 2017; Sumiala et al., 2016; Sumiala et al., 2018) and in the context of a disruptive event (Sumiala et al., 2016; Sumiala et al., 2018; Katz & Liebes, 2007) that gained global mediated attention, such as the March 2011 triple disaster, calls for novel approaches in methodology, as the amount of information and affect are always in excess to what a single scholar or a group of scholars can learn and study (Sumiala et al., 2018; Valaskivi et al., 2019). Therefore, the articles presented in this study approach the empirical material as a "snapshot" into a wider and more complex array of events and experiences.

In Publication I, my co-authors and I began developing a combination of methods that would allow us to simultaneously examine several angles of a complex phenomenon. A similar, if more sophisticated setting has been employed and further developed by, for instance, Sumiala et al. (2016; 2018). I estimate that this interdisciplinary approach will be the way that many research projects will be conducted in the future and indeed have already been conducted this way for some years. As contemporary mediated phenomena are often highly complex and multidimensional, understanding and theorising even a fraction of them requires multiple skills and research approaches.

Compared with Publication I, Publications II to V may appear methodologically as more concise affairs, as I stick with a method of analysis that follows similar logic in all four publications. This approach also emphasises the role of my research, as it

balances between a multidisciplinary joint research project and individual work. However, I see my analysis in these four publications as another aspect of methods for studying affect in the hybrid media environment. I have aimed to create a method for approaching affective intensities in text through several textual elements, based on previous work, particularly work by Nikunen (2010; 2015), Oikkonen (2017) and Paasonen (2011; 2015) (see Chapter 5).

I now move to reflect critically on the overall research process and the limitations of this work.

7.3 Limitations

As I noted in Chapters 5 and 6, this work has been a learning process, and therefore, the work has certain limitations. Because I have elaborated on issues concerning methods and ethics in Chapters 5 and 6, I keep this reflection relatively brief.

The evolving versions of my research plans and research questions presented in Chapter 1 illustrate how my interest has shifted as my thinking developed. However, they also reflect how I sometimes had difficulties separating the goals of the MECER project from the goals of my personal research project. In retrospect, I should have been clearer in separating the two projects, even though they are interrelated.

While I consider the theoretical framework presented in Chapters 3 and 4 the most solid part of this work, it still has some omissions. As I noted in Chapter 1.1, I have excluded theoretical discussions considering affect and emotion in politics; authenticity and intimacy; emotion and media audiences; and discussions considering disaster and crisis communication. These omissions are unintentional, and I acknowledge that these rich bodies of work share common ground with the literature referenced in this work. However, the theoretical focus of this work has been on discussing affect and emotion in the context of text-based networked communication, and in producing sensitising definitions applicable for the empirical work. I argue the current literature matches this purpose relatively well, and expanding the scope might have led the work in a different direction.

Another aspect that has influenced the current direction of this work is its methodology. As I noted in Chapter 5, this work is, in many ways, a mixed-methods project. While an open attitude to analysis and data collection methods has allowed me to engage in interesting methodological and theoretical experiments, it also means that the methods are the biggest limitation of this work. Furthermore, I have been able to develop an analysis method that suits the purposes of this study, so the

work lacks deep knowledge of a single research method (see Chapter 5.3). Moreover, I should have followed the development of methodological literature more closely. I recognise that, while the findings attained with this method are valid, the current state of the method creates issues for the replicability of this study. That said, this problem is a concern in all research methods that rely on the subjective interpretations of a researcher (Suoranta, 2008; Varto, 2005).

Further limitations that stem from the methods of this study concern research ethics. As I elaborated in Chapters 5 and 6, while the methods of data collection I have used to obtain the social media data for this study can be justified as non-reactive data collection or online observation, the lack of consent from the authors of the observed discussions is problematic. I acknowledge that, even though I have taken the necessary precautions to protect the privacy of the commenters while processing and analysing the data and publishing the results of the case studies, this does not relieve me from the responsibility I have towards the authors of the empirical material.

Despite the issues recounted above, this dissertation stands on its own as a work in media studies that provided me plenty of opportunities to not only sharpen my skills as a researcher but also learn what to further improve in any future projects. If I were to start over, I would exercise a more systematic approach with respect to the theoretical and methodological literature, and would exercise more caution towards research ethics throughout the entire process. Moreover, coupling affect with medium theory could also provide interesting openings in the empirical context of this study, as would theories of complexity and fields of system theory. With these remarks in mind, I proceed to discuss avenues for future research, before concluding this dissertation.

7.4 Ways forward

In addition to being a figurative and literal journey, working on this dissertation has begun to resemble entering a garden maze filled with a variety of surprises. Each question addressed appears to open at least two new questions, each diverging into different and equally exiting directions while still resonating with the previous questions and possible answers. To conclude this work, I focus on some of the possible future directions for my research, including some future theoretical considerations.

A direction I have begun to explore concerns the role of affect in crisis communication, something I address above and in two recent conference papers (Rantasila, 2019; Rantasila, 2020). In an interconnected and interdependent world currently facing an unexpected crisis, and a world that will continue to face many more as climate change progresses, *how* to communicate during a disruptive situation is equally important as *what* to communicate. While the concept of affective labour is most often used in studies that discuss economic relations that revolve around care, nurture and entertainment, Anderson's (2010) and Ritchie's (2015) work attests that the concept can be used to discuss situations that involve the construction of feelings such as security and trust in contexts related to managing emotions in disruptive situations (see also Jukes, 2020; Kotisová, 2019; Siapera, 2018; Wahl-Jorgensen, 2019). In addition to providing instruments for analysing and improving crisis communication, I suggest that analysing forms of communication that tend to surge during disruptive events, such as misinformation campaigns, through the lenses of affective labour and affective discipline could open up further discussion on what misinformation *does*. This approach could also provide ways to counter or diminish the effects of misinformation. However, because these ideas are based on the analysis of journalistic and social media material, they need further theoretical and empirical elaboration.

Further, as I argue above, the notion of affective discipline could provide fertile ground for analysing and theorising the management of affective intensities in contexts other than disruptive ones. As a sensitising concept, the notion of affective discipline could be used to examine how everyday communication involves struggle over affective intensities. However, I acknowledge that, in its current state, the notion requires much more thorough work before it can be deployed as a full-fledged concept in the spirit of Bal's (2002) work.

In the contemporary techno-human condition, developing methodological thinking about affect in various forms of communication and other aspects of contemporary life appears increasingly crucial. While it is wonderful that, in their current form, theories of affect allow for multiple methods and approaches when brought to bear in empirical contexts, I suggest that there is room for even more systematic and robust methodological work in the field. If nothing else, such work might make theories of affect slightly more accessible without diminishing the vibrant variations that make theories of affect so fascinating. As I argued above, theories of affect show their explanatory power best when brought together with other fields, such as questions of power or technology. Next, I sketch two possible approaches regarding these issues.

One way forward is examining the contemporary relationship with so-called smart technologies through the lens of affect. The other way is bringing the theories of affective labour and affective discipline to bear in a more practical manner. Both directions involve the concept of affordance (e.g. Zeilinger & Scarlett, 2019; Vainikka, 2020), which has already made some appearances in this dissertation. I will first discuss the more practical side of things and then move on to the path that leads to profound questions about technology and how it is shaping contemporary societies.

The concept of affordance has travelled from psychology and biology to design and, for instance, science and technology studies. I find the concept of affordance highly resonant with the concept of affect, in particular in relation to affect and technology (Vainikka, 2020). Affordance allows one to ask a very Spinozian question: what is it that this technology can do, and what kind of actions does it enable or disable? As I suggested in Chapter 7.2, different social media platforms afford different types of communication, and therefore, they also enable and disable different affective intensities. In the hybrid media environment, this suggestion has substantial implications regarding how people behave online and how to address unwanted aspects of this behaviour – in other words, to apply acts of affective discipline. Uncivil behaviour has been present in networked communications since the beginning (Paasonen, 2015; Rheingold, 1995). However, the extent of this behaviour has been increasingly deemed problematic and detrimental to democracy (e.g. Binns, 2012; Frischlic et al., 2019; Herring, 1999; Knuuttila & Laaksonen, 2020; Laaksonen et al., 2019; Larsson, 2018; Pöyhtäri et al., 2013).

Yet there have been relatively few studies that approach the issue from the points of views of affordance and affect (see Sumiala et al., 2018 for an exception). While there are some studies that approach uncivil online behaviour through various design-related angles, the concept of affordance rarely figures into these endeavours. Therefore, one possible path for my research would be to delve deeper into questions about affordances of social media platforms and to approach the issue of uncivil online behaviour from this point of view, in concert with further developing the notion of affective discipline.

The second approach would shift the focus from the disruptive to the mundane routines and rhythms of everyday life. In a recent conference paper that I authored together with Minna Saariketo (2020), we sketch a plan about how to study the use of so-called smart technologies in the home. We are interested in how technology becomes embedded into everyday routines, and how it may shape those routines in subtle and not-so-subtle ways (e.g. Ridell, 2019; Saariketo, 2020; cf. McLuhan, 1964).

This approach would allow me to explore the relationship between technological affordances of devices and the affective connections and interactions with which they become meshed.

Furthermore, by revisiting McLuhan's (1964) idea of tools extending the bodily capacities of humans and shaping humans as humans shape the tools themselves (Meyrowitz, 1999; Meyrowitz, 2003), I could study the affective relationships people form with everyday technologies. Taking this approach would force me to address questions about how, in the current hybrid media environment, our tools also collect data about us – sometimes for us and by our own volition. Yet most of the time, the data is for actors and entities we have no access to, and it is collected in ways that we cannot give an informed consent (Couldry & Hepp, 2017; Lehtiniemi & Haapoja, 2020; Saariketo, 2020). In combination with an awareness of the problematics of data collection, asking questions about what technology affords is ever more crucial, as we are entering an era of autonomous technological solutions (Couldry & Meijas, 2019; Eubanks, 2018; Zuboff, 2019). Increases in telecommuting and connecting socially through networked communication technologies will further reshape the role of affects circulated via the hybrid media environment. Thus, these directions feel most acute to pursue.

7.5 Concluding remarks

As the above discussion on future directions for my research illustrates, an end of a dissertation is not an end of discovery. I hope my work on affect and hybrid media environment will inspire others to continue exploring and challenging the complex interrelated relationships that demarcate contemporary media and communication. Moreover, I look forward to engaging in future theorisations on affect in media studies, and I am keen to see how the methodological discussion around the concept continues to develop. I conclude this dissertation with a quote from *The Lord of the Rings*, which captures a sentiment of simultaneous curiosity and uncertainty fitting for this moment:

> The road goes ever on and on. / Down from the door where it began. / Now far ahead the road has gone, / And I must follow if I can, / Pursuing it with eager feet, / Until it joins some larger way / Where may paths and errands meet. And whither then? I cannot say. (Tolkien, 2005 [1954], p. 35)

8 DECLARATION OF AUTHORSHIP IN CO-AUTHORED PUBLICATIONS

Publication I: Anna Rantasila as the primary author, Anu Sirola and Arto Kekkonen as equal contributors, and Katja Valaskivi and Risto Kunelius as secondary contributors.

Publication III: Anna Rantasila as primary author, and Katja Valaskivi, Mikihito Tanaka and Risto Kunelius as secondary contributors.

Publication IV: Anna Rantasila as primary author, and Katja Valaskivi, Mikihito Tanaka and Risto Kunelius as secondary contributors.

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PUBLICATION I

#fukushima Five Years On: A Multimethod Analysis of Twitter on the Anniversary of the Nuclear Disaster

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#fukushima Five Years On: A Multimethod Analysis of Twitter on the Anniversary of the Nuclear Disaster

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This article examines how the fifth anniversary of the Fukushima Daiichi nuclear disaster was commemorated on English-speaking Twitter in March 2016. By combining social network analysis and critical discourse analysis, a research design is developed that can be applied to study the structure of actors and interpretative resources invoked in the crafting of communal remembrance of a disruptive, global media event. In the study, we explore the most visible actors and the most dominant meanings in the #fukushima stream. According to our analysis, the most significant players were the mainstream media and other established organizations. While most of the retweeted messages contained a ritual element of collective memory work, grief, and observance, another prominent feature was the strongly politicized discourse surrounding the aftermath of the disaster.

Keywords: multimethod, Twitter, hybrid media, social network analysis, critical discourse analysis, Fukushima Daiichi

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March 11, 2016 marked five years since the 9.0 magnitude earthquake and subsequent tsunami struck the northeastern coast of Japan's main island, severely damaging the Fukushima Daiichi nuclear power plant 240 kilometers north of Tokyo. From the first tremors of the earthquake to the ongoing remembrance, the media coverage of the threefold disaster has played out in transnational communication networks where legacy media coverage overlaps with the new platforms and practices of social media. In this new kind of evolving media environment, the inherited platforms, brands, forms, and genres of mass media and the emerging modes and affordances of social media platforms interact (Chadwick, 2013; Harder, Paulussen, & Aelst, 2016). This rapidly changing landscape now constitutes a new kind of environment where the meanings of controversial issues and dramatic events are negotiated across national and institutional boundaries. Media research is only beginning to make sense of the consequences of the new dynamics that are in play.

The Fukushima disaster involved an exceptionally dramatic, disruptive, and traumatic series of events. In addition to the human costs, they focused on nuclear power—a particularly loaded energy-policy domain where difficult questions related to science, expertise, economic interests, and political power intersect. Hence, the events of March 2011 caused complex systemic disruptions, ranging from lost lives and contaminated environments to the major policy decisions of nations and energy futures. This potential of meanings and consequences makes the interpretation of the event an exceptionally interesting object of study for understanding how the memory of such a traumatic event is communicated in the networked media landscape.

In this article, we take the microblogging service Twitter as an entry point to the transnational communication networks activated when such commemoration work takes place. In the 2010s, Twitter has emerged as one of the key platforms through which the new conditions of the contemporary media environment are played out. Indeed, in Japan, the aftermath of the 2011 Fukushima Daiichi disaster represented a particular breakthrough moment for Twitter, and the platform has been a focal point for discussion both globally and in Japan since the events began to unfold (Cho & Park, 2013; Friedman, 2011; Li, Vishwanath, & Rao, 2014). In this paper, we focus on the transnational flows of information relating to the Fukushima Daiichi nuclear disaster on English-speaking Twitter during the fifth anniversary of the event, and specifically on two of Twitter's key functions: hashtags (#) and sharing or "retweeting." We treated hashtags such as #fukushima as "hybrid forums" (Burgess, Galloway, & Sauter, 2015) that create a context for discussion and enable different kinds of subforums to form under a particular topic. Our data consists of 17,619 English-language tweets containing the hashtag #fukushima.

This article has two main aims. Methodologically, we wish to develop and test a research design that helps us better understand the use of Twitter as one key locus of the current global media landscape. As an effective tool for both quick commentary and the filtering and redistribution of content, Twitter user data has been used to study various phenomena, from fan cultures to political participation. Much of Twitter research has understandably been quantitative, relying on massive amounts of tweets. However, in addition to revealing the networks of issues and actors, there is an evident need to flesh out a more synthetic approach that lies between the quantitative analysis of network relations and the qualitative analysis of the discourses that articulate these relationships (Marwick, 2014; Sumiala, Tikka, Huhtamäki, & Valaskivi, 2016). More substantially, our aim is to reflect upon the role of Twitter networks in the

context of a traumatic event such as the Fukushima disaster. In particular, we want to explore questions related to the interplay between a moment of commemoration and the political potential opened up by collective, emotionally loaded, attention.

By applying two complementary perspectives—social network analysis (hereafter SNA) and critical discourse analysis (hereafter CDA)—we hope to uncover deeper insights into what remains in discourses relating to a complex disruptive event such as the Fukushima Daiichi disaster five years on, and how these discourses are produced, reproduced, and circulated in the contemporary, global, and transnational hybrid media environment that encompasses various cultures and national media systems from Japan to the EU and the Americas.[2] To elaborate our research object, we identify three analytically distinct "logics" that intersect in commemorating the Fukushima disaster. First, the logic of *hybridity* refers to the interplay of new and emerging institutions and modes of communication in traditional mass media and on social media platforms. Second, the logic of *ritualizing trauma* refers to how collective traumatic experiences are negotiated towards a shared, cultural interpretation of the disaster. Third, the logic of *politicizing memory* refers to the space of opportunity, and the attempts of various social actors to take advantage of it.

Dynamics of the Global Hybrid Media Environment

In recent years, the notion of "hybrid media system" has often been used to capture the blurring institutional boundaries, shifting actor roles, and multimodal representational opportunities of the digitalized media environment. In his influential book in which he coins the term, Andrew Chadwick (2013) uses the concept to zoom in on the changing interface between politics, journalism, and social media. He empirically and convincingly shows one form of hybridity: how old institutions (political parties, mainstream journalism) have been able to incorporate and exploit the new logic(s) of social media (van Dijck & Poell, 2013), partly allowing social media logics to shape these legacy institutions in return.

While our study constructs its *object* somewhat differently, we have drawn inspiration from the theoretical sensibility developed by Chadwick (2013). In crafting the "ontology of hybridity," he recognizes multiple boundaries where the notion of hybridity has been made use of. This inventory stretches from analyses of democratic vs. authoritarian political systems to analyzing new modes of governance through public-private partnerships, and from the reflective and innovative remix of media genres to the blurring of human and nonhuman actors in Actor-Network-Theory (Chadwick, 2013, pp. 9–15). We take seriously this general definition of "hybridity," and note that its ontological anchoring in the existing institutionalized practices of social subsystems—through their sometimes nonlinear and often "contrapuntal" interaction—keeps the systems in a constant state of becoming. However, instead of focusing on specific institutionalized, interacting logics as such, we link the notion of hybridity to a question concerning a social process. We use the networked commemoration work on the Fukushima anniversary as an opportunity to consider how the process of collectively handling the trauma of a dramatically disruptive event plays out in

[2] The article is part of a wider international research initiative on the mediation of the Fukushima nuclear power plant disaster that followed up on five anniversaries of the disaster.

the contemporary networked space. Here, the social theory of trauma outlined by Jeffrey Alexander (2012) offers a useful background.

Starting from a culturalist-functionalist perspective, Alexander (2012) models an institutionally differentiated social process where a society slowly crafts a master narrative of a traumatic event. This involves identifying the loss or pain related to the traumatic events, identifying victims or "carrier groups" (people affected by the loss), and situating the wider audience. Such narrative reconstructions of traumatic events, then, are handled and filtered through a specialized, differentiated institutional order, where legal, aesthetic, religious, scientific, media, and state bureaucratic actors all process parts of the narrative, finally helping "the society" to come (more or less) culturally "to terms" with the event. Finally, in this model, as events become ritualized and normalized, the process allows "members of wider publics to participate in the pain of others" and thus "broaden the realm of social understanding and sympathy" (Alexander, 2012, pp. 15–30).

Such a neo-functionalist approach to social systems has been criticized for theoretical reasons (see Joas & Knöbl, 2010, p. 336). In terms our research object, however, it helps in identifying an intersection between the intensified *hybrid condition of the new media environment* on the one hand and the more generalized, differentiated *elements of the process of cultural trauma* on the other. Reading Alexander's model, we can see that it lies on a theoretical foundation that sees modern society as a set of differentiating social subsystems (or institutions) that usually play a role (through their own logics) in rationalizing and ritualizing disruptive events. Reading Chadwick's build-up of the notion of hybridity, we can begin to see how such a process is situated in a radically new communication context. Analyzing the commemoration of the Fukushima disaster anniversary on Twitter provides an opportunity to reflect on how the old, institutionalized pattern processing of social trauma takes place in the new hybrid media environment. Social media serves as a communication resource for a wide variety of actors and institutions—from science to religion to NGOs and legacy media outlets—and makes their mutual relationships more complex. At the same time, however, these complex mutual relationships can still be seen as a part of an ideal shared collective process.

As elements of a hybrid media environment, Twitter and other social media provide new channels to challenge and negotiate discourses produced by the mass media (Eriksson, 2016). During major media events, such as presidential election debates, interaction between Twitter users appears to be based on retweeting rather than the expression of personal opinions (Lin, Keegan, Margolin, & Lazer, 2014). However, widely retweeted content often seems to be produced by "elite users," such as established media organizations, high-profile individual journalists, political parties or individual politicians, widely known organizations, and celebrities whose Twitter accounts have large numbers of followers (Freelon & Karpf, 2015; Lin et al., 2014). Previous studies also indicate that while Twitter is preoccupied with mainstream media, the relationship is rarely reciprocated (Rogstad, 2016). While the overall production of content by all users of Twitter increases during a media event, the dynamics of attention in the networked media environment clearly reward the aforementioned elite users who have pre-existing large audiences (Lin et al., 2014). Such an uneven distribution of attention is not unique to Twitter; online audiences of mainstream media websites and political blogs are strongly concentrated and follow a "winner-takes-all," power-law distribution (Benkler, 2006; Hindman, 2009). The user's number of followers and followees,

and the length of time they have owned their account, also increases the "retweetability" of their content, as does the presence of URLs and hashtags in a tweet (whereas the user's number of previous tweets does not) (Suh, Hong, Pirolli, & Chi, 2010). Similar dynamics also appear to apply during crises (Bruns, Burgess, Crawford, & Frances, 2012).

Despite the dominance of elite users, all users play a significant role in deciding what is shared, particularly as we look into the differentiated clusters of actors-relations in a Twitter network. Unlike in mass-media contexts, the users' individual decisions (however predictable) ultimately constitute the network. Singer (2014) calls this "a two-step gatekeeping process" in which users have the power to enhance the visibility of content produced by media and other elite users by sharing it with secondary audiences. Indeed, in terms of the most retweeted messages, it is largely the nonelite users that usually upgrade the visibility of content produced by the elite (Lin et al., 2014; Singer, 2014).

Data and Methods

We collected data using Twitter's Streaming API and the Digital Methods Initiative Twitter Capture and Analysis Toolset program (DMI-TCAT; Borra & Rieder, 2014). The former offers almost real-time access to Twitter's global stream, with tweets retrieved using keywords or by focusing on specific users. While the partial matching of keywords is not possible, hashtag versions of keywords are matched (i.e. "fukushima" matches "#fukushima" but not "#fukushimadisaster"). We collected 17,619 English-language tweets that included the hashtag #fukushima between March 10 at 10:00:00 and March 12 at 11:59:59 UTC, 2016.[3,4] Of these, 5,012 were original tweets and 12,607 were retweets.[5] In total, 10,788 users participated or were retweeted in the discussion; 2,377 users produced their own tweets, while the rest only retweeted.

As we are interested in the dynamics of power in the social process of commemorations, this material can be approached from two perspectives and using two complementary methods. While SNA constructs the Twitter feeds as networks, and thus articulates the actor-relationships that are a key aspect of social and political power, CDA looks at another aspect of political power, namely representations of the event and its affective dimension, victims, and political implications.

Social network analysis is a strategy for researching various social structures based on graph theory, a branch of mathematics. In this approach, the research subject is conceptualized as consisting of actors (or nodes) and the connections (or ties) between them. This form of analysis has been used in the

[3] The period in Coordinated Universal Time (UTC) when it was March 11 in at least one time zone on Earth.

[4] To test the reliability of Twitter's automatic language detection, we had two humans code a sample of 1000 tweets as either primarily English or non-English. The human coders then identified tweets where they disagreed on language. We compared the results against Twitter's automatic classification and found a high agreement rate (Cohen's $\kappa = 0.95$). Disagreement mostly concerned extremely short tweets or those containing multiple languages.

[5] Not including "manual retweets" performed using expressions such as "RT @," "MT @," or "via @."

social sciences to provide a deeper understanding of diverse phenomena, including belief systems, alliance and treaty systems, and international and transnational organizations (Cioffi-Revilla, 2010). Data obtained from social networking services such as Twitter can be conceptualized as a network, making SNA a powerful method and a sound starting point for analyzing these services.

We constructed networks from our tweet sample and then examined them visually. Network visualizations are both representations of network structures and a means of communicating them to others[6] (Freeman, 2000). Our approach resembled previously presented models of visual network analysis that focused on iteratively filtering, visualizing, and computing metrics in making sense of network data (Hansen, Rotman, Bonsignore, Milic-Frayling, Mendes Rodrigues, Smith, & Shneiderman, 2009; Huhtamäki, Russell, Rubens, & Still, 2015). An open source network analysis and visualization software Gephi (Bastian, Heymann, & Jacomy, 2009), and its Force Atlas 2 layout algorithm, were applied to visualize the data.[7] As a result, actors that share a large number of connections are situated close to each other in the visualization. Finally, we used modularity to locate communities within the network, and nodes were colored according to the community to which they belonged.[8]

In addition to visualizations, we used degree centrality within a retweet network to identify key users. The weighted degree of node V is the number of times a user's tweets were retweeted by others (for simplicity, we refer to this simply as "degree"). We also differentiated between in-degree (the number of times V's tweets were retweeted) and out-degree (the number of times V retweeted other users' tweets). We then identified the top users from each category. To determine dominant users, we looked at the number of retweets received, the number of retweets made, the number of original tweets posted, or the total number of tweets, and produced Lorenz curves and computed Gini coefficients for these distributions. A Lorenz curve shows the cumulative share of all retweets made or received, or tweets posted, at % y by the bottom % x of users. Thus, if this share is distributed evenly among all users, the Lorenz curve becomes linear, whereas a convex shape indicates that a small number of top users account for a large share of activity. The Gini coefficient can be defined as the ratio of the area that lies between a 45-degree line (representing a perfectly equal distribution) and the Lorenz curve, to the area beneath the 45-degree line. A high Gini coefficient indicates an unequal distribution of attention or activity.

We also examined whether the users whose tweets had been retweeted were the same as those who had retweeted other users' tweets or who tweeted more actively overall. For this, we used the Kendall rank correlation coefficient to measure whether a user's ranking in one category (e.g., retweets received) correlated with their ranking in another category (e.g., retweets made). Therefore, it does not

[6] We understand that visualizations are themselves discursive, and therefore are not objective representations of the data.

[7] Force Atlas 2 is a force-directed layout algorithm, meaning that nodes in the visualization repulse each other while ties draw them together in an attempt to turn structural proximities into visual ones (Jacomy, Venturini, Heymann, & Bastian, 2014).

[8] Modularity (Newman, 2006) is a property of networks that can be used to divide a network into clusters; members of a cluster have a large number of ties between them compared to actors outside the cluster.

depend on the absolute values of these variables. Finally, lists were created of the most popular tweets, news articles, and various other attributes.

CDA extends from linguistically focused microanalysis to broader formations and constellations that shape larger universes of meaning, always focusing on how the use of language is tied to politics and power in society (e.g., Gee, 2014; Gee & Handford, 2014; Maeseele, 2015). The focus of CDA is on the specific meanings that utterances construct and the power relations these meanings shape and reinforce (Blommaert & Bulcaen, 2000; Fairclough, 1995; Wodak, 2013). Through an analysis of how actors and realities are constructed, it provides an opportunity to capture the ritual and political aspects of the meanings that played out in the #fukushima stream. A commemorative moment for a major traumatic disaster offers a strategic moment to study such discursive strategies that naturalize and legitimate social order (van Dijk, 1993; see also Alexander, 2012).

Building on the results of SNA, we focused on tweets that were retweeted at least 10 times (n = 208), and paid attention to the accounts from which they were sent and the affiliations thereof. We looked particularly at the utterances and expressions used in depicting the initial event, and at whether or not the tweet included references to other events or actors. We also focused only on the content of the tweet itself, bracketing out URLs from the analysis. By combining these findings with the results yielded by the SNA, we were able to shed light on the combinations of actors and discourses that came to dominate the #fukushima feed on March 11, 2016.

In the analysis below, we first describe the network structure of the #fukushima stream, with an emphasis on the connections between users and other hashtags used in the discussion. To define the relationships between mainstream mass media organizations and other actors, we also look at the identities of the most influential actors in the network. After depicting this "structure of commemoration," we move on to consider the discursive action in this networked space by taking a more detailed look at the tweets retweeted at least 10 times. Focusing on the most retweeted content allows us to pinpoint the type of discourses that dominated the circulation of meanings, and enables us to explore the relationship between the most circulated discourses and the most influential users highlighted by the SNA. As Sumiala, Tikka, Huhtamäki, and Valaskivi (2016) argue, this kind of multimethod approach is essential in understanding how media events unfold in the contemporary hybrid media environment.

The Network: Structure of Commemoration

We formed networks from our data by interpreting Twitter users and hashtags as actors, and interpreting retweets and mentions of both users and hashtags as connections. In the analysis, connections were treated as directed, meaning that they did not apply the other way around. An adjacency list of connections in the form of {actor, actor} pairs was generated using Python scripts.

We visualized and inspected three networks: 1) a user-hashtag mention network, formed from direct and indirect mentions of hashtags by users; 2) a user-user retweet network; and 3) a network that

showed all direct and indirect connections between users and hashtags.[9] A visualization of this third network (Figure 1) shows some key user and hashtag actors, colored based on their modularity in order to make different communities (or subforums) stand out.

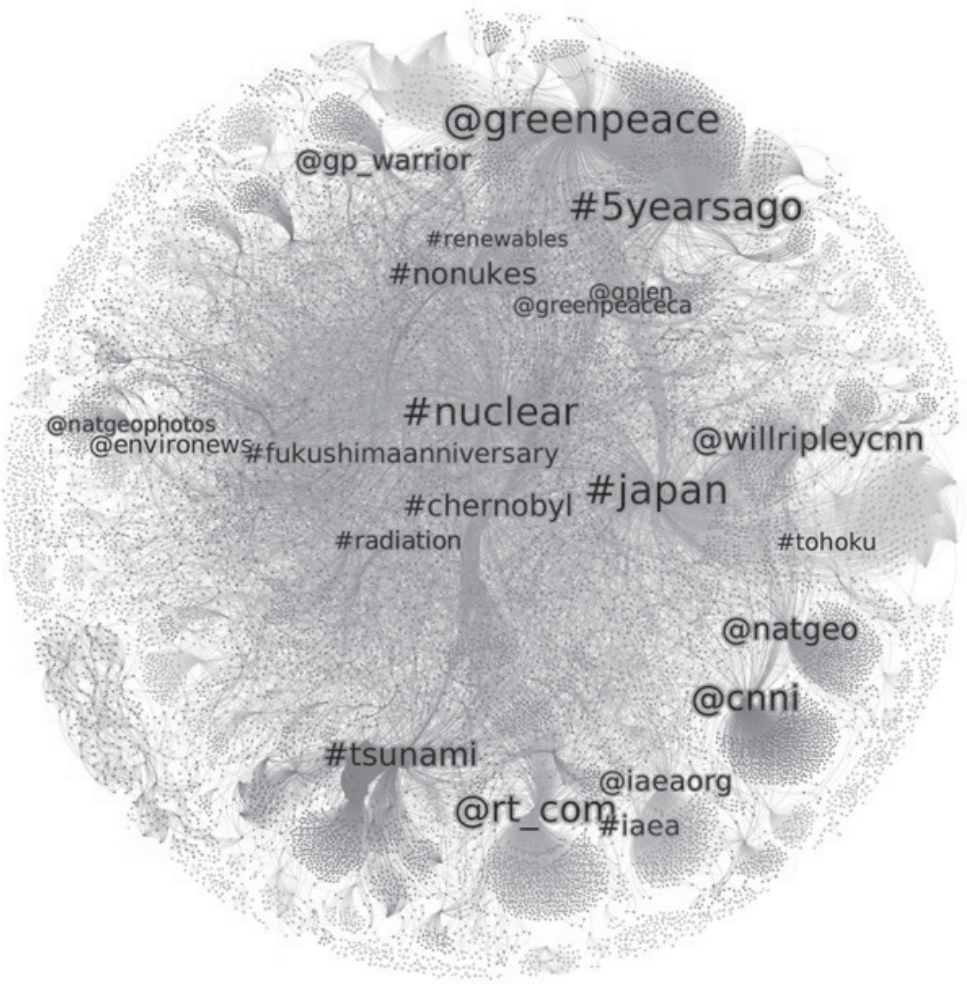

Figure 1. Visualization of user-user and user-hashtag connections. (Several prolific private users within the #nuclear subforum are not shown.)[10]

[9] In this case, if user A posted a tweet that included mentions of user B and hashtag H, the connections shown would be A -> B and A -> H. If user C were to retweet this tweet, the resulting connections would be C -> A, C -> B, and C -> H.

[10] The large concentration of grey nodes at the edges are mostly users who tweeted using only the #fukushima hashtag either directly or by retweeting, and who did not explicitly connect to any of the

Many of the most popular hashtags and key users appeared as the central actors of clusters, which we interpreted as subforums of the larger, hybrid #fukushima forum in the network visualization. As the visualization shows, many of these subforums relate to powerful organizations that either have a stake in the nuclear energy debate or can be characterized as established media institutions.

A Greenpeace subforum, shown in the top-right section of Figure 1, formed around Greenpeace International's user account @Greenpeace and several other Greenpeace-affiliated accounts—such as that of the crew of the Greenpeace ship *Rainbow Warrior III* (@gp_warrior)—and around the hashtags #5yearsago, #nonukes, and #renewables. The activity within this subforum consisted mainly of a large number of retweets of several popular tweets created by Greenpeace and, to some extent, of replies to those tweets. Most tweets that included #5yearsago were authored by Greenpeace or were retweets of such tweets. A smaller subforum appeared on the opposite side of the visualization, centered on the International Atomic Energy Agency (IAEA) (@iaeaorg) and its hashtag #iaea.

Another notable subforum appeared around the hashtag #japan, in which CNN International correspondent Will Ripley (@willripleyCNN) featured prominently. Other media-centric forums could be observed around the Russian state-funded RT[11] (@RT_com, previously Russia Today), Ripley's affiliate channel CNN International (@cnni), and National Geographic (@NatGeo). What these forums had in common is that they included a large number of retweets from users who did not otherwise engage in discussion relating to #fukushima. This is indicated in the visualization by the large number of separate smaller clusters around these accounts. In addition, users who retweeted these influential accounts most likely did not do so for other accounts. For instance, few users retweeted both @RT_com and @Greenpeace.

The center of the network visualization is dominated by a large and sparse forum around the hashtags #nuclear, #radiation, #chernobyl, and #fukushimaanniversary, and by several highly active users that we could not identify as belonging to any established organization. Whereas the aforementioned, more tightly knit, forums formed due to the large number of users retweeting or mentioning content posted by a small number of users, the #nuclear-#radiation forum featured many connections between many users, although it is marked by an absence of users who dominate the forum as a whole. In a formal network analysis, this "forum" looks like a level field of discussion or interaction between diffuse groups of readers. Actors within this forum are also interconnected to the less central parts of the network.

Table 1 lists users who received the most retweets (see Appendix) and who were therefore the most successful in spreading their message during the anniversary discussion. These users notably include international media outlets Agence France-Presse (@afp) and the German channel Deutsche Welle (@dwnews) (cf. Bruns et al., 2012; Lin et al., 2014).

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subforums (at least not by using the appropriate hashtags). In some 8,230 tweets, the only hashtag used was #fukushima.

[11] See, for example: https://www.rt.com/usa/rt-government-broadcasting-radio/ (Accessed October 4, 2016 at 11:52 GMT+2).

The volume of a user's contributions does not provide a simple, reliable approximation of the impact of their tweets (Bruns & Burgess, 2012). Some interesting observations can be made regarding the out-degree values and the number of tweets posted by users in the #fukushima network as a whole. While most users have low out-degree values and tweet counts, a few appear to have been particularly prolific. However, a closer look at the profiles and contributions of these users reveals that some of them engaged in bot-like behavior, tweeting the same tweet multiple times while tagging different users. This type of use of Twitter usually takes place to promote oneself, and may also serve political purposes or even resemble propaganda (Starbird, 2017). In our case, this behavior seems mostly promotional, and indicates that any timely hashtag that is likely to receive attention will also attract bot-like behavior that might or might not be connected with the event or the hashtag itself.

Figure 2 shows the Lorenz curves for the distributions of retweet in-degree, retweet out-degree, number of original tweets posted, and the number of total tweets posted (see Table 2 in the Appendix for a more comprehensive list of Gini coefficients). In general, the distribution of retweets received is highly skewed, meaning that a small number of users received the highest number of retweets. However, the coefficients for retweet out-degrees are lower, indicating that highly active user accounts did not play a major role in retweeting content. Among the users who posted original tweets, prolific individuals accounted for a somewhat larger share of tweets produced. Retweet in-degree and out-degree are weakly correlated, as are retweet in-degree and the number of tweets produced (see Table 2). This reinforces the finding that the users who received attention and the users who tweeted actively were not the same. Examining the profiles of the most active users also supports this notion. These results are in line with previous research on the role of elite users in Twitter discussions (Lin et al., 2014), and on online audiences (Hindman, 2009).

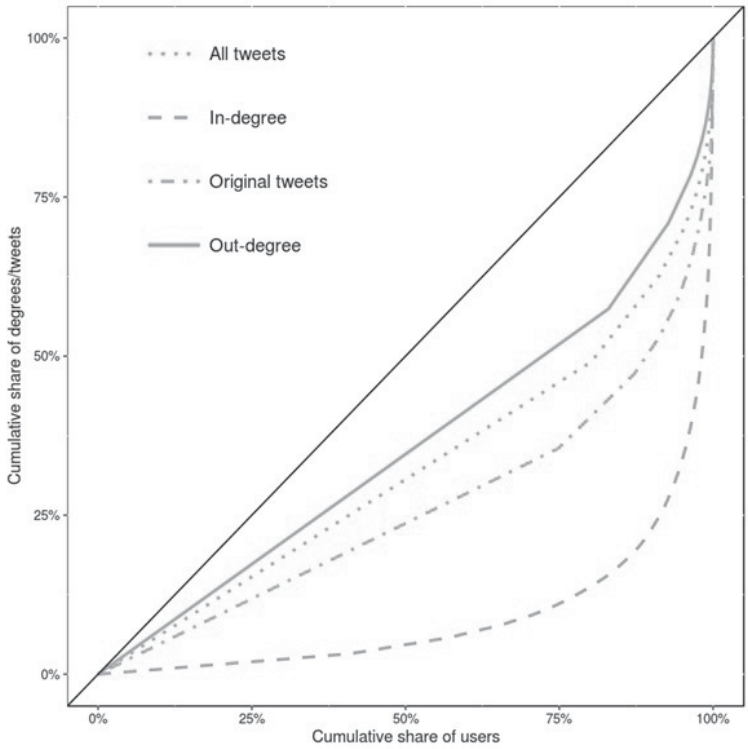

Figure 2. Lorenz curves. The curves shown only include users with a corresponding value higher than zero (e.g., users who have posted tweets, users who have posted original tweets, and so on).

In the introductory chapter, we identified three analytically distinct, intersecting "logics" as the targets of our attention. Of these three (hybrid, ritual, and political), the logics of hybridity in the media environment can best be seen in the SNA data and analysis. Three types of boundary blurring are evident. First, the intertwining practices of older media institutions and social media are evident given that the most prominent (and retweeted) actors are media corporations (CNN, RT) making use of Twitter to circulate their content. This in fact points to how "old" media logic and institutions shape and saturate the content of a new media space, a feature well established in media history (see Chadwick, 2013, pp. 23–41). Second, the hybridization of actor roles is illustrated by Greenpeace, an NGO with strong political aims reaching out directly to audiences through social media. As network actors, then, CNN and Greenpeace carry out relatively similar roles, as both provide content for individual users to retweet. Third, the reach of the network is clearly transnational, crossing the borders of national media "systems." This relates both to international NGOs like Greenpeace and to media actors and international organizations of nuclear policy governance (although these are weaker in the network).

Entangled Discourses: Ritual and political

The Fukushima disaster is a prime example of an unexpected, disruptive media event (Katz & Liebes, 2007). After such an event passes and society re-establishes its routines, the remembrance of the event often takes the form of prescheduled and anticipated events in the mainstream media news flow (Eyre, 2007; Lagerkvist, 2014). These can be seen as media rituals with the power to represent, redefine, and reinterpret the past event, shedding light on the role of mainstream news media in constructing the perceived importance of events (Sumiala, 2013). With the help of media and other social arenas (Alexander, 2012), such public commemorations mark the passage of social and chronological time and place a route marker on the journey toward rehabilitation and recovery following a tragedy (Eyre, 2007). Importantly, mediated and anticipated rituals of commemoration are not only moments of heightened mainstream media power over discourse on tragedies, but are also moments when this power becomes visible, opening the potentially volatile relationship between the power of ritualizing and the (counter) power of politicizing the ritualized moment. This tension was also present in the most circulated tweets in the #fukushima network.

The ritual discourse often combined two elements typical of the commemoration of any major disruptive event: expressions of collective grief and compassion, and inviting the audience to join in on the remembrance. Many of the most retweeted tweets urged a formal commemoration to define the Fukushima Daiichi disaster as a global event that must be remembered and mediated on its anniversary because of its exceptional and unsettling nature. Thus, the anniversary was viewed by some key actors in the network as a moment when the world needs a reminder of what happened. The following tweet by CNN International was the most retweeted tweet in our data, and illustrates this proposal well.

> *@cnni: 5 years ago today, world watched in horror as earthquake and tsunami struck Japan #Fukushima* [573][12]

In this discourse, powerful actors, such as CNN and other news organizations, defined the disaster as a global event that involved the "world" as a horrified spectator. This mode of memorializing invites the spectators to remember the disturbing event and the way in which it marked a moment in time. Such mediated commemoration can be approached both as a post-disaster ritual (Eyre, 2007) and as a preplanned, ritualistic media event (Sumiala, 2013). It is part of a process that Alexander (2012, pp. 26–28) refers to as the slow collective routinization of a traumatic event. Legacy mass media are often a crucial site for this, working together with other institutional actors. By urging the audience—for a moment, together, and from a distance—to remember the immediate shock of an event, such communication can become part of the process of detaching "affect" from the "meaning" of the case (Alexander, 2012, pp. 26–28).

Commemoration also includes an element of expressing compassion toward the immediate survivors and honoring those who passed away. The former can be seen as a moral obligation to address the suffering of others (Kyriakidou, 2014; Sznaider, 1998). Thereby, these tweets create a division

[12] The number after each quoted tweet in this section is the number of retweets it received.

between "us" and "them"—"we" are not directly affected by the disaster but are obligated to feel compassion toward "those" who are the victims. In our data, one object of such compassion was the people evacuated from the areas contaminated by the nuclear disaster. However, due to the threefold damage of the overall tragedy, there were other objects of compassion in the form of the people who were affected by the tsunami and the earthquake but who did not necessarily have any connection with the Fukushima Daiichi accident. Overall, the identification of victims is a core nodal point of the cultural process of handling a collective trauma. It points to the legitimate "carrier groups" and immediate sufferers of the initial injury, and while the considerate honoring of victims is part of the collective routinization of the trauma, such carrier groups are also actively working against the ritualization of their suffering (Alexander, 2012). In our international (English) Twitter networks, however, the victims' own voices remain weak.

A political discourse in the tweets linked the Fukushima anniversary to contemporary disputes and tensions, such as the ongoing radiation problems at the damaged power plant, other disastrous nuclear accidents, or the risks of nuclear energy in general. In our sample, opponents of nuclear energy appeared to be more visible and vocal than its proponents. Moreover, tweets in this discourse emphasized a clear distinction between the time before the accident and the present situation in the affected area, thus indirectly at least speaking in the name of some "carrier groups'" traumatic experiences. For example, a tweet from the National Geographic photography account compared Fukushima's past as an agricultural area to the situation in March 2016.

> *@NatGeoPhotos: Five years after nuclear meltdown, see what remains of once fertile landscape of #Fukushima [158]*

Although we could analytically separate the ritual and political discourse, they also often overlapped, as the discourse of compassion and commemoration became entangled with the politics of nuclear power. Even though the tsunami caused the highest number of casualties, its victims were sometimes associated or confused with those affected by the nuclear disaster in our data (Morris-Suzuki, 2015; WHO, 2014). In addition, in some tweets the loss of life and evacuations resulting from the tsunami became associated with the nuclear disaster. This intertwining is illustrated below in a tweet from the Greenpeace *Rainbow Warrior III* account.

> *@gp_warrior: Rainbow Warrior crew offer 200 flowers to the sea in remembrance of the 20,000 lives lost 5yr ago today #Fukushima [214]*

Here, the number of casualties caused by the tsunami is used in conjunction with #fukushima without explicitly mentioning the giant wave. Conscious of this loose association, several replies criticized the choice of hashtag because it combined the Fukushima disaster and the tsunami victims. Nevertheless, this was the fifth-most retweeted tweet in our data with 214 retweets, and most of which did not comment on the ideological connection made in the original tweet. This case can be seen as an indication of political dialogue taking place, with Greenpeace at least being called on its attempt to confuse the tsunami victims with the Fukushima nuclear accident. Although the event itself was already distant in time, there were those who reacted to factual dissonance and the political utilization of a tragedy.

The way in which the above tweet sparked debate about the perceived severity of the nuclear disaster in relation to the tsunami illustrates the still-rich political potential of the anniversary memory of Fukushima Daiichi in the network (Bird, Haynes, van den Honert, McAneney, & Poortinga, 2014; Hommerich, 2012; Siegrist & Visschers, 2013). Therefore, it is unsurprising that environmental organizations such as Greenpeace took advantage of the moment to highlight their own agendas. Several other actors also used the occasion to campaign for the phasing out of nuclear energy, capitalizing on the emotional charge of the anniversary. While these tweets received a more modest number of retweets compared to the tweet by @gp_warrior above, they accounted for a significant amount of the overall retweeted material. This appears to mirror the findings of previous studies about Chernobyl, specifically that events to commemorate nuclear disasters tend to become highly contested (Kalmbach, 2013; Kasperski, 2012). However, explicitly positive views about nuclear power were rare among the most retweeted #fukushima tweets. The disaster, or even the hashtag #fukushima, perhaps did not offer a context where supporters saw fit to argue for nuclear energy, as it would most likely be seen as offensive considering the strong ritual accents of the discourse in this network (see above).

One way to underline the damage of the disaster in the tweet network was to make use of the comparison with previous nuclear disasters. In the Western popular imagination, the Chernobyl disaster has become synonymous with the dangers of nuclear power, and the health and environmental effects of the catastrophe are still debated 30 years after the event (Kalmbach, 2013; Kasperski, 2012). Comparisons between the two disasters were first made in 2011 (Friedman, 2011), and in the #fukushima stream of 2016 were still visible. A tweet by RT provides an example that also raises questions:

@RT_com: Not as bad as #Chernobyl? 4 biggest lies about #Fukushima disaster. [138]

The above comparison can be seen either as an effort to downplay the severity of the Chernobyl accident or an attempt to further politicize the Fukushima Daiichi disaster. Moreover, while comparisons with Chernobyl were used to provide a historical perspective on events at Fukushima Daiichi, they also added a strong emotional dimension. In our data, two actors in particular—RT and Greenpeace—compared the two disasters. Despite their differences, what the most retweeted tweets from the Greenpeace, RT, and National Geographic accounts have in common is that they focus on the extent and irreversibility of the environmental, material, and psychological damage wrought by the earthquake, the tsunami, and the nuclear disaster, and sometimes combined them with each other. Overall, the implication of the political discourse was to see nuclear power as something dangerous and potentially beyond human control.

Conclusion

The commemoration work in the Twitter network for the fifth anniversary of the Fukushima nuclear disaster demonstrates the interplay of three intertwining analytically distinct logics (hybrid, ritual, and political) that were identified in different ways in our analysis. Elements of hybridity appear most prominently in the SNA mapping of the network and actors, but SNA also sheds light on power-as-actor relations, and thus to the political logics of the networking. Through the CDA we can see collective, ritual logic at the level of representations, but also concrete acts of politicizing the anniversary. This distinction

is, of course, ultimately always analytical. The ritual remembrance of the anniversary of the disaster cannot avoid articulating affects toward survivors and victims, but the political potential of memory is always present at the (unstable) level of representations (cf. Eyre 2007), especially so when intersecting with the logics of hybridity. What makes Twitter and other social media so crucial is that they can help to amplify, diversify, fragment, or bridge the meanings circulated in such a moment of commemoration. The anticipated attention on a tragic anniversary energizes the network with emotional stakes, and the participants share in this affective aspect of the circulation. However, instead of a neatly packaged, mass-mediated commemoration ritual, the social media landscape opens up to become a structured, but more diverse, space of interpretation. This interplay of affective energy and the specific ways in which it can be articulated politically is a crucial topic for further research into how the hybrid media environment operates. In this kind of work, looking simultaneously at both the structures of the networks and the articulation of meaning circulated in the emerging networks is a complicated task.

The prevalence of retweeting is relevant in terms of power relations, as it appears to reinforce the presence of legacy media institutions on the newer platform of Twitter. In addition, our analysis confirms that on Twitter, the mainstream media competes for attention both with actors that previously were more dependent on legacy outlets and with new media outlets that explicitly claim to offer an "alternative" to the mainstream agenda. Beyond technological affordances, this refers to social and political media hybridity, which creates an interesting dynamic in which the legacy media content plays a major role on a newer media platform (Li et al., 2014; Singer, 2014) but at the same time becomes increasingly exposed to unpredictable recontextualization and interpretation.

Although elite users arguably have the power to define events for wide audiences, this power is a complex one. On the one hand, the network structures and subforums serve as "secondary gatekeeping" (Singer, 2014). This redistribution role of some key actors can be seen in light of the original two-step flow model of media influence (Katz & Lazarsfeld, 1955), where opinion leaders were crucial in mediating the effect of mass media. On the other hand, serving mostly as redistributing agents means that the power of noninstitutional users is largely limited to enhancing (or degrading) the visibility of content created by elite sources. This moderates their influence in two ways. First, retweeting is also an act of recognition, which normalizes and reinforces dominant discourses and sources as they are circulated. A high occurrence of retweeting a certain kind of content may work to dismiss other aspects of the past, such as discourses that challenge the mainstream discourses or core actors related to the event. The type of political discourse present in our data may reflect the above phenomenon, as the political discussion around #fukushima appears to have been dominated by Greenpeace and other actors associated with a loosely defined antinuclear political agenda. Second, in order to gain the kind of interpretative authority that characterized the classic opinion leaders, there probably needs to be a level of coherence that supports the communication inside the subforums we identified. Our initial findings suggest that sometimes this may be the case, but merely analyzing the network relations is not sufficient to confirm it.

There are some limitations to our study. First, our data was limited to English-language tweets and did not incorporate most of the discussion in Japan or elsewhere. At best, this is an analysis of a transnational space of hybrid commemoration work. Moreover, by focusing only on the hashtag #fukushima, and the English-language content relating to it, we have accessed only a fraction of the

possible variety of discussions that took place on Twitter during March 2016. Thus, we cannot make any claims about how dominant the tweets about Fukushima Daiichi were in the overall commemoration of the triple disaster, or about which actors and discourses dominated other Twitter networks outside the #fukushima one. Second, a major shortcoming is that the number of tweets retrieved using the Streaming API cannot exceed one percent of Twitter's global traffic (Morstatter, Pfeffer, Liu, & Carley, 2013). If the number of tweets matching the search terms used is larger than this, some of them are discarded. During our data collection period we hit this limit several times, meaning that some data was lost. However, the incompleteness of any data obtained from Twitter is a well-known problem (boyd & Crawford, 2012; Driscoll & Walker, 2014). Another significant limitation is that keyword-based matching collects only those tweets that include the keyword. In our case, since we were looking for tweets that included the hashtag #fukushima, replies to those tweets were included only if they, too, included the hashtag (Bruns & Burgess, 2012; Lorentzen & Nolin, 2015).

Studying a transnational media event in the hybrid environment demands that we simultaneously map the formation of networks and the circulation of meanings and discourses therein. This requires both a systematic multimethod approach and a healthy dose of humility regarding the conclusiveness of the evidence. Comparing different anniversaries over time would provide a deeper understanding of how discourses around remembrance are developed and shaped, and of the identity of those actors who gain the visibility and power required to reconstruct the event. Although Twitter is well suited to research focusing on dominant actors and discourses in large datasets, it will be important to study other media platforms to better understand the dimensions of the hybrid media environment and its workings during major events such as disaster anniversaries. One important step for future studies would be to examine how content circulates through multiple platforms in the hybrid environment.

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Appendix: Tables

Table 1. Users With Highest Degrees in the Retweet Network (Ranked by Their In-Degrees).

User	In-Degree	Out-Degree	Degree	Description
@Greenpeace	1472	4	1476	Greenpeace (environmental organization)
@RT_com	837	1	838	RT (TV/news network)
@cnni	587	5	592	CNN (TV/news network)
@willripleyCNN	585	2	587	Will Ripley (CNN International correspondent)
@NatGeo	407	0	407	National Geographic (magazine)
@iaeaorg	321	0	321	International Atomic Energy Agency
@gp_warrior	282	3	285	Rainbow Warrior (Greenpeace ship)
@newsbreakslive	278	0	278	BreakingNewsFeed.com (news aggregator)
@environews	216	4	220	Enviro News (alternative environmental news website)
@greenpeaceCA	194	3	197	Greenpeace Canada
@gpj_english	162	11	173	Greenpeace Japan
@NatGeoPhotos	158	0	158	Photographs by National Geographic
@TEDtalks	149	0	149	TED (nonprofit organization that hosts conferences with speakers from various disciplines)
@greenpeaceusa	144	0	144	Greenpeace USA
@naturenews	143	0	143	Nature (academic journal)
@efmania	133	0	133	Japanese account posting Formula 1-related content
@doomsdayscw	121	177	298	Noninstitutional user
@dwnews	112	3	115	Deutsche Welle (international public broadcaster)
@afp	103	0	103	Agence France-Press (news agency)
@frediteres	98	23	121	Noninstitutional user

Table 2. Gini Coefficients and Correlations.

Type	N / Gini / correlation
A: Users who tweeted at least once	10,788
Gini retweet in-degree	0.99
Gini retweet out-degree	0.42
Gini all tweets posted	0.36
Gini original tweets posted	0.89
Correlation rt in-degree and rt out-degree	-0.32
Correlation rt in-degree and all tweets posted	0.20
B: Users who tweeted and were retweeted	884
Gini retweet in-degree	0.82
Gini retweet out-degree	0.67
Correlation rt in-degree and rt out-degree	0.14
Correlation rt in-degree and all tweets posted	0.26
Correlation rt in-degree and original tweets posted	0.27
C: Users who posted original tweets	2377
Gini original tweets posted	0.48
Correlation rt in-degree and original tweets posted	0.22
D: Users who posted original tweets and were retweeted	873
Gini retweet in-degree	0.82
Gini normal tweets posted	0.61
Correlation rt in-degree and original tweets posted	0.27

PUBLICATION II

Tahmaiset affektit. Fukushima Daiichin ydin- onnettomuus YLE:n uutisoinnin verkkokommenteissa

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TAHMAISET AFFEKTIT
Fukushima Daiichin ydinonnettomuus YLE:n uutisoinnin verkkokommenteissa

Maaliskuussa 2011 suomalainen uutisyleisö sai päivästä toiseen nähdä ja lukea raportteja ja asiantuntijoiden arvioita siitä, mitä 8000 kilometrin päässä Japanissa Fukushima Daiichin ydinvoimalassa tapahtui. Uutisointi kirvoitti vilkasta verkkokeskustelua, jonka affektiiviset intensiteetit kietoutuivat sekä asiantuntijoiden että muiden kommenteissa esiintyvien hahmojen ympärille. Artikkeli tarkastelee Yleisradion verkkosivujen Fukushima-uutisten kommentointia affektin näkökulmasta ja pyrkii tekemään näkyväksi verkkokeskustelujen affektiivista dynamiikkaa voimakkaita tunteita herättäneen tapausesimerkin kautta.

Johdanto

Verkkokeskusteluiden affektiivista dynamiikkaa koskevaa tutkimusta on viime vuosina esitelty laajasti sekä kotimaisissa että kansainvälisissä median ja viestinnän alan julkaisuissa (ks. esim. Nikunen & Pantti 2017; Oikkonen 2017; Pantti 2016; Nikunen 2015; Paasonen 2014; 2015; Papacharissi 2002; 2014). Aikaisempi tutkimus verkkokeskusteluista on osoittanut, että niin yhteiskunnalliset ja politisoituneet aiheet, kuten esimerkiksi maahanmuutto tai rokotukset, kuin pintapuolisesti ajateltuna arkiset aiheet, kuten auton renkaiden vaihto, herättävät verkossa hyvin intensiivistä ja polarisoitunutta keskustelua (Nikunen & Pantti 2017; Zummo 2017; Pantti 2016; Rost & al. 2016; Nikunen 2015; Paasonen 2014).

Affektin käsite on edellä mainittujen ja lukuisten muiden aikaisempien tutkimusten perusteella osoittautunut oivalliseksi työkaluksi verkottuneen viestinnän ja siinä vaikuttavien voimien ja niiden suhteiden tutkimiseen, olipa kyse ihmisten välisestä viestinnästä tai ihmisen ja teknologian välisistä suhteista verkottuneilla viestinnän alueilla. Affektin käsitteen kautta on mahdollista analysoida niitä verkkokeskustelun piirteitä, jotka rationaalista debattia korostavasta näkökulmasta tehdyssä tutkimuksessa saattaisivat rajautua pois tai tulla kuitatuksi huonona argumentaationa (Paasonen 2014,

30; Papacharissi 2002; Koivunen 2008), sillä kuten Paasonen (2014, 24; 2015, 28–30) huomauttaa, tunteiden ryöpsähtely on ollut oleellinen osa verkkokeskusteluiden dynamiikkaa internetin alkuajoista saakka (ks. myös esim. Rheingold 2000; Rost & al. 2016).

Suurimmassa osassa aikaisemmista sekä affektinäkökulmasta että muista lähtökohdista tehdyistä verkottunutta julkisuutta, eli internetin eri areenoilla käytävää julkista keskustelua tarkastelevista tutkimuksista huomio on suuntautunut ennen kaikkea erilaisten sosiaalisen median palveluiden, erityisesti Twitterin ja Facebookin, kautta syntyneiden ilmiöiden ja niiden affektiivisen dynamiikan tarkasteluun (esim. boyd 2010; Paasonen 2014; Papacharissi 2014). Perinteisempien verkkokeskustelun paikkojen kuten keskustelufoorumeiden tai erityisesti valtavirran median kommenttipalstojen tutkimus on sen sijaan jäänyt 2010-luvulla vähemmälle (Kangaspunta 2016, 24–25).

Vastaan tähän tutkimusvajeeseen lähestymällä verkottuneen julkisuuden affektiivista dynamiikkaa globaalin uutistapahtuman, maaliskuussa 2011 tapahtuneen Fukushima Daiichin ydinvoimalaonnettomuuden, kautta tutkimalla Yleisradion (jatkossa YLE) verkkosivuilla onnettomuudesta julkaistuja uutisia ja niistä kirjoitettuja lukijakommentteja. Fukushima Daiichin onnettomuusuutisten kommentointi tarjoaa erityislaatuisen mahdollisuuden tarkastella verkkokeskustelun affektiivista dynamiikkaa ja siinä avautuvia intensiteettien vaihteluita, sillä ydinvoimalaonnettomuuden kaltaisen globaalin, paljon erilaisia mielikuvia herättävän uutistapahtuman avulla on mahdollista tarkastella sekä affektin hetkellisiä, reaktiivisia ulottuvuuksia että avata samojen reaktioiden sosiaalis-kulttuurillis-historiallisia taustakytkentöjä myös yleisemmällä tasolla (Ahmed 2004, 91, 194–195; Oikkonen 2017; Wetherell 2012; ks. myös Pantti & al. 2012).

Vaikka Fukushima Daiichin ydinvoimalaonnettomuudesta on tätä artikkelia kirjoittaessa yli seitsemän vuotta, artikkelin empiirisen aineiston kautta on mahdollista tehdä yhtäältä päätelmiä siitä, millaiset erilaiset voimat mahdollisesti ohjasivat suomalaista politisoitunutta verkkokeskustelua vuonna 2011 ja toisaalta tarkastella affektin teoreettisia ulottuvuuksia verkkokeskusteluiden tutkimuksessa. Artikkeli kiinnittyy täten teoreettiselta otteeltaan mediatutkimuksen kulttuurintutkimukseen suuntautuneeseen haaraan kahdelta suunnalta: yhtäältä affektin teoretisointia hyväksikäyttävän analyysiotteensa ja toisaalta kulttuurintutkimuksellisesti suuntautunutta internetin ja median tutkimusta hyödyntävän teoriansa kautta.

Täten artikkelin tutkimuskysymys on: miten affektiivinen intensiteetti muodostuu ja suuntautuu Fukushima Daiichin ydinonnettomuutta koskevien uutisten kommenteissa YLE:n verkkosivulla, ja muodostuuko kommentteihin nk. ”tahmaisia kiinnekohtia”? Tutkimuskysymykseen vastatakseni analysoin laadullisilla menetelmillä YLE:n verkkosivuilla maaliskuussa 2011 julkaistuja, Fukushima Daiichin ydinvoimalaonnettomuutta käsitteleviä uutisjuttuja, joihin oli avattu kommentointimahdollisuus. Esittelen analyysimetodiani tarkemmin alla.

Kaikkiaan YLE julkaisi maaliskuussa 2011 verkkosivuillaan Japanin maanjäristyksestä, tsunamista ja ydinvoimalaonnettomuudesta 304 juttua, joista 59:ään verkkosivujen ylläpito oli avannut kommentointimahdollisuuden. Näistä jutuista 24 käsitteli Fukushiman ydinonnettomuutta tai sen vaikutuksia Suomeen. Fukushiman onnettomuutta käsittelevät uutiset saivat hyvin vaihtelevan määrän kommentteja. Eniten (198 kappaletta) keräsi Säteilyturvakeskuksen (jatkossa STUK) pääjohtaja Jukka Laaksosen haastattelu (YLE Uutiset 16.3.2011, ”STUKin pääjohtaja arvostelee kovin sanoin Japanin

pelastustoimia”), ja kolme muutakin juttua keräsi yli sata kommenttia (YLE Uutiset 13.3.2011, 146 kommenttia; YLE Uutiset 14.3.2011a, 137 kommenttia; YLE Uutiset 14.3.2011b, 101 kommenttia). Toisaalta seitsemän juttua 24:stä sai alle kymmenen kommenttia, ja koko otoksen kommenttien lukumäärän keskiarvo on 45. Eniten juttuja avattiin kommentoitavaksi 15.3.2011, jolloin kommentoitavia juttuja oli kuusi. Sekä 14.3. että 16.3. Fukushiman onnettomuutta käsitteleviä juttuja avattiin kommentoitavaksi neljä.

Kuvakaappauksia YLE:n maaliskuussa 2011 verkkosivuillaan julkaisemista Fukushima Daiichin onnettomuutta käsittelevistä uutisista, joiden kommentteja tässä artikkelissa analysoidaan.

Aineiston analyysissa hyödynnän sekä Paasosen (2014, 24; 2015, 27–42) esittelemää lähestymistapaa, joka keskittyy verkkokeskustelun sellaisten piirteiden erittelyyn, jotka tavalla tai toisella pyrkivät vaikuttamaan keskustelun affektiivisiin intensiteetteihin, että Oikkosen (2017, 685–686) analyysiotetta, jossa tarkastelun kohteeksi nousevat myös verkkokeskusteluissa ja uutisissa rakentuvat narratiivit ja niiden taustalla vaikuttavat kulttuurisesti jaetut mielikuvat (ks. myös Jasanoff ja Kim 2009).

Tahmaiset affektit kulttuurisessa vuorovaikutuksessa

Sovellan artikkelissa Oikkosen (2017, 683) ja Paasosen (2014, 24) näkemyksiä siitä, että kulttuurisesti jaetun viestinnän kontekstissa affekti ja tunne sekä niiden erilaiset representaatiot ovat hyvin vaikeita erottaa toisistaan. Toisin sanoen, kun tämän artikkelin yhteydessä puhun affektista, viittaan sillä sekä kehollisiin, diskursiivisesti jäsentymättömiin intensiteetteihin ja niiden vaihteluihin että diskursiivisesti ilmaistuihin, nimettyihin tunteisiin (Oikkonen 2017, 683, 697). Affektia ja tunnetta voi teorian tasolla käsitellä erillisinä, mutta arjen kokemusten tasolla ne liukuvat toistensa yli, sekoittuvat ja tarrautuvat toisiinsa jatkuvassa vuorovaikutuksessa (Ahmed 2010a, 32; Paasonen 2014, 25; Oikkonen 683, 697). Tiedostan, että tunne ja emootio on myös mahdollista erottaa toisistaan, mutta tässä artikkelissa käsittelen niitä yhdessä.

Pohjaan näkemykseni affektista ennen muuta Sara Ahmedin (2004; 2010a; 2010b) tulkintaan, jonka mukaan affekti on yhtäältä sekä kehollista ja subjektiivista että kulttuurisesti ja sosiaalisesti jaettua (ks. myös Wetherell 2012). Ahmedin mukaan affektiivisuus on vuorovaikutusta kehojen, kuvien, tekstien, ajatusten, muistojen ja opittujen asioiden välillä (2004, 4–16; 2010a, 32–33; ks. myös Paasonen 2014, 24–25). Hän esittää, että affektin diskursiivinen ilmaisu ei ole irrallaan kielen performatiivisuudesta, vaan tunteen nimeäminen edellyttää usein tunteen tuntijan ja kohteen erottelua, ja sitä kautta erilaisten sosiokulttuuristen valtasuhteiden määrittelyä (2004, 13–14, 194; 2010a, 32–33). Kun esimerkiksi Fukushiman ydinvoimalaonnettomuuden seurauksia Suomen ydinvoimateollisuudelle käsittelevän jutun otsikko ilmoittaa, että ”Loviisa pelkää Japanin vaikutuksia ydinvoimapäätöksiin” (YLE Uutiset 15.3.2011), Loviisan kaupungista tuotetaan paitsi ihmisyksilön tavoin kokeva taho, se luodaan myös otsikon lukijan tunteen kohteeksi (Ahmed 2004, 13). Pelon aiheuttajaksi otsikossa asemoidaan Japani, joka hahmottuu asiaksi, jota pelätä (emt.).

Verkkokeskustelujen affektiivisen dynamiikan tutkimuksen kannalta olennaista Ahmedin affektinäkemyksessä on hänen ajatuksensa affektin tahmaisuudesta ja kierrosta (2004, 44–45, 90–92, 194–195). Ahmed (2004, 45) esittää, että affekti toimii eräänlaisena pääomana, jonka arvo on riippuvainen merkkien ja kohteiden kierrosta: mitä enemmän merkki kiertää, sitä affektiivisempi siitä tulee. Tahmaisuus ei kuitenkaan ole kohteen ominaisuus, vaan affektiivinen tahma tarttuu vuorovaikutuksessa toisten kohteiden kanssa. Kiertäessään kohteesta tulee tahmainen, ja mitä tahmaisempi se on, sitä voimakkaammin affekti siihen tarrautuu (Ahmed 2004, 46, 91, 194–195; Ahmed 2010a, 32–33). Lisäksi asiat tulevat tahmaisemmiksi kohdatessaan muita tahmaisia asioita. Toisin sanoen tahmaisuus voidaan käsittää sekä asialle annetuksi huomioksi, että asioita yhteen vetäviksi mielleyhtymiksi (Ahmed 2004, 91).

Asetelma toimii eräänlaisena itseään ruokkivana spiraalina, sillä mitä affektiivisempi kohde on, sitä tahmaisempi siitä tulee, ja se kerää lisää affektii-

visuutta itseensä (Ahmed 2004, 91; Paasonen 2014, 25–26). Yllä esittämässäni otsikkoesimerkissä ”Loviisa pelkää Japanin vaikutuksia ydinvoimapäätöksiin” (YLE Uutiset 15.3.2011) pelko tarrautuu Japaniin. Lisäksi otsikon ”Japani” on jo itsessään tahmainen, sillä koko valtioon viittaavaan sanaan on implisiittisesti liitetty ajatus Fukushima Daiichin ydinonnettomuudesta ja sen mahdollisista vaikutuksista muualla maailmassa. Fukushiman ydinonnettomuudesta tulee toisin sanoen Japanin konnotaatio eli sivumerkitys. Asiasta voi tulla tahmainen myös toiston kautta (Ahmed 2004, 91–95; Nikunen 2015). Toisto muodostaa yhteyksiä tahmaisten asioiden välille, mutta se voi myös estää uusia merkityksiä tarrautumasta asioihin (Ahmed 2004, 91). Jos esimerkiksi pakolaisiin viitataan toistuvasti tulvana, tulee tulvivuudesta, hallitsemattomuudesta osa pakolaisuutta (Ahmed 2004, 91; ks. myös Nikunen 2015; Nikunen & Pantti 2017).

Osana verkkokeskusteluiden affektiivista dynamiikkaa keskusteluiden intensiteetti voi myös keskittyä keskusteluun osallistuvien tai siinä muuten mukana olevien hahmojen ympärille, tehden näistä hahmoista keskustelun tahmaisia kiinnekohtia, joiden läsnäolo suuntaa keskustelun intensiteettiä ja dynamiikkaa. Lisäksi näyttää siltä, että paljon kommentteja (tai Facebookin ja Twitterin tapauksessa tykkäyksiä) keräävät verkkokeskustelut ovat affektiivisesti tahmaisempia niiden saaman huomion takia kuin keskustelut, jotka keräävät vain vähän kommentteja. Tämä tahmaisuus omalta osaltaan tuottaa ja ylläpitää muiden keskustelijoiden kiinnostusta aiheeseen (Paasonen 2014, 24; Paasonen 2015, 28–30, passim.).

Edellä hahmotellun perusteella tarkoitan tässä artikkelissa *affektiivisella intensiteetillä* sitä (Paasonen 2014, 24–25; Oikkonen 2017, 683), miten affekti virtaa, tarrautuu ja asettuu suhteisiin YLE:n uutisista käydyissä verkkokeskusteluissa kiertävien merkitysten ja tulkintojen kanssa. *Affektiivisella dynamiikalla* puolestaan viittaan siihen, miten verkkokeskusteluissa tuotetaan, suunnataan tai ohjataan affektiivisia intensiteettejä, eli mihin suuntaan keskustelun lukijoiden ja siihen osallistujien huomiota halutaan suunnata ja mistä heidän halutaan vaikuttuvan (ibid.). Havainnollinen esimerkki ovat verkkokeskustelun sanavalinnat: se, millaisilla sanoilla kommentoijat viittaavat kanssaan eri mieltä oleviin, tai esimerkiksi kommentoitavassa uutisessa esiintyviin henkilöihin, kertoo siitä, millaisia mielleyhtymiä ja tunteita he haluavat muissa herättää – tai hillitä.

Tarkastelen tässä artikkelissa alla esittelemäni affektiivisen tahmaisuuden käsitteen avulla erityisesti sitä, miten verkkokeskustelijat omissa kommenteissaan tuottavat ja suuntaavat keskustelun affektiivista intensiteettiä ja dynamiikkaa.

YLE:n Fukushima-verkkouutisoinnin kommentointi analyysin kohteena

YLE:n verkkouutiset valikoituivat artikkelissa esiteltävän tutkimuksen aineistoksi, sillä olen kiinnostunut siitä, miten affektiivisuus toimii ja ilmenee verkottuneessa julkisessa keskustelussa Fukushima Daiichin ydinvoimalaonnettomuuden kaltaisissa globaaleissa kriisitilanteissa. YLE:n verkkosivujen kommentointiominaisuus on myös kiehtova kulma verorahoin tuetun julkisen palvelun mediayhtiön tuottamaan julkisen keskustelun verkottuneeseen tilaan: yhtäältä YLE päätti, mihin verkkouutisiin kommentointi avattiin ja milloin se suljettiin, ja keskustelulle annettiin suhteellisen tiukat raamit (YLE 2010). Toisaalta kommentointi onnistui nimimerkin takaa, eikä se tuolloin

vaatinut sivujen käyttäjäksi rekisteröitymistä (vrt. YLE Uutiset 2017). Tämä tarjoaa mielenkiintoisen kontrastin suurimmalle osalle verkkokeskusteluiden affektiivista dynamiikkaa koskevalle tutkimukselle, joka käsittelee pääosin Facebookin ja Twitterin kaltaisia hyvin löyhästi, jos lainkaan, moderoituja eli valvottuja julkisia keskusteluja. Vaikka aineisto on kerätty seitsemän vuotta sitten, sen analyysi tarjoaa mahdollisuuden teoretisoida verkkokeskusteluiden affektiivista dynamiikkaa ja siihen vaikuttavia tekijöitä tavoilla, jotka ovat relevantteja verkon erilaisilla alustoilla käytävää, affektiivisesti ryöpsähtelevää julkista keskustelua ajatellen, joka ilmiönä on tuskin katoamassa.

Keräsin aineiston jutut kommentteineen YLE:n verkkosivuilta syksyllä 2014. Koostin kommentit tekstimuotoisiin taulukoihin, joissa anonymisoin ne antamalla jokaiselle kommentille juoksevan numeron alkaen ensimmäisenä jutun alla näkyneestä kommentista. Mikäli kommenteissa viitattiin toisten kommentoijien nimimerkkeihin, korvasin tämän vastaavalla numerolla. Lisäksi järjestin aineistoa sekä juttujen julkaisuajankohdan että kommenttien määrän mukaan selvittääkseni, vaihteliko päivässä kommentoitavaksi avattujen juttujen määrä ja juttujen saamien kommenttien määrä eri päivinä.

Yllä kuvatulla analyyttisella prosessilla pyrin pääsemään kiinni verkkokeskusteluissa mahdollisesti esiintyviin ja niiden affektiiviseen dynamiikkaan vaikuttaviin kulttuurisesti vakiintuneisiin tapoihin, joilla esimerkiksi ydinvoimasta keskustellaan (Weart 2012; Jasanoff & Kim 2009). Vaikka analyysini päämielenkiinnon kohteena ovatkin tavat, joilla keskusteluissa kierrätetään ja suunnataan affektiivisia intensiteettejä, esitän, että käytetyt ilmaisut eivät valikoidu tyhjästä, vaan ne kietoutuvat kulttuurisesti ja historiallisesti jaettuihin käsityksiin ihmisestä, yhteiskunnasta ja luonnosta. Lisäksi, kuten Ahmed (2004, 46) huomauttaa, toistolla on merkittävä rooli siinä, millaiset ilmaisut tarrautuvat kiertäviin hahmoihin ja millaisia tunteita ne alkavat vetää puoleensa.

Analyysini eteni siten, että luin lähilukuna sekä uutisjutun että siihen annetut kommentit useita kertoja kiinnittäen jokaisella lukukerralla huomiota tekstien eri osiin. Ensimmäisellä lukukerralla merkitsin juttuihin ja kommentteihin kaikki selkeät tunnesanat, adjektiivit, metaforat ja metonymiat (vrt. Ahmed 2004, 12). Toisella kerralla kiinnitin huomioni siihen, millaisia sanoja sekä uutisissa että kommenteissa käytettiin viittaamaan ihmisiin ja toimijoihin niin tekstien sisällä kuin niiden ulkopuolella. Samalla tavoin panin merkille, miten teksteissä viitattiin Fukushiman ydinonnettomuuteen tai muihin tapahtumiin. Näin onnistuin erittelemään, millaisia mielleyhtymiä teksteissä muodostui ihmisistä, muista toimijoista ja onnettomuudesta itsestään (vrt. Oikkonen 2017).

Kolmannella lukukerralla keskityin siihen, millaisella tyylillä kommentit oli kirjoitettu ja esiintyikö kommenteissa Paasosen (2014, 24) erittelemiä elementtejä, kuten nimittelyä tai provosointia, jotka voisi tulkita yritykseksi suunnata keskustelujen affektiivista intensiteettiä. Neljännellä kerralla puolestaan tarkastelin sitä, millaisen kokonaisuuden kommentit muodostivat, ja kiinnitin huomiota siihen, miten kommentoijat viittasivat sekä kommentoinnin kohteena olevaan uutiseen että aikaisempiin kommentteihin ja kommentoijiin, eli millainen kommenttiketjun sisäinen dynamiikka oli. Viidennellä lukukerralla kiinnitin huomioni siihen, oliko kommenteissa toistuvia elementtejä, ja millaisissa yhteyksissä nämä toistuvat elementit esiintyivät. Erityisesti olin kiinnostunut siitä, oliko toistuvien elementtien joukossa viittauksia ihmisryhmiin, yksittäisiin ihmisiin tai organisaatioihin.

Lähiluvun lisäksi pyrin hahmottelemaan analysoitujen uutisten ja kommenttien sisällä rakentuvaa tarinaa Fukushima Daiichin ydinvoimalaonnetto-

muudesta. Erittelin uutisjutuissa ja kommenteissa esiintyviä viittauksia muihin kulttuurisiin ilmiöihin, sekä mielikuvia ja mielleyhtymiä, joita teksteissä rakennettiin. Näiden perusteella hahmottelen esille laajempaa kulttuurista maisemaa, johon uutisten ja kommenttien affektiiviset intensiteetit suhteutuvat ja kiinnittyvät.

Yllä kuvatun lähiluvun ja erittelyn tarkoituksena oli nostaa kommenteista esiin elementtejä, jotka aikaisemman tutkimuksen perusteella voivat antaa vihjeitä tekstien affektiivisista intensiteeteistä ja niiden välisistä tahmaisista yhteyksistä. Aikaisemman tutkimuksen perusteella olisi esimerkiksi syytä olettaa, että keskustelu kommenteissa oli hyvin todennäköisesti riitaisaa ja kahtiajakautunutta, ja että keskusteluiden sävy oli negatiivista (Nikunen & Pantti 2017; Zummo 2017; Pantti 2016; Rost & al. 2016; Nikunen 2015; Paasonen 2014). Alla esittelemieni analyysitulosten perusteella keskustelu Fukushiman ydinonnettomuudesta YLE:n verkkosivuilla sisälsi aikaisemmissa tutkimuksissa havaittuja elementtejä, mutta sillä oli myös omat erityispiirteensä.

Ydinturmakeskustelun poliittiset ja affektiiviset jakolinjat

Tutkimukseni otoksen 24 uutisjuttua jakautuvat tarkastellulle ajanjaksolle varsin epätasaisesti. Ensimmäinen kommentoitavaksi avattu juttu, ”Paine nousee Japanin turmaydinvoimalassa – tuhansia evakuoitu”, julkaistiin perjantaina 11.3.2011 kello 14.09 Suomen aikaa, noin seitsemän tuntia sen jälkeen, kun voimakkuudeltaan yhdeksän magnitudin maanjäristyksen nostattama tsunami oli osunut Fukushima Daiichin ydinvoimalaan Japanin koillisrannikolla (YLE Uutiset 2011). Muita turmavoimalaa käsitteleviä juttuja ei tuona päivänä avattu kommentoinnille. Samoin sekä lauantaina 12.3. että sunnuntaina 13.3. kommentoinnille avattiin vain yksi juttu, mutta sunnuntain juttu ”Katainen toivoo malttia ydinvoimakeskusteluun” (YLE Uutiset 13.3.2011 klo 12.04) sai 146 kommenttia, toiseksi eniten koko otoksessa. Suurin osa otoksen jutuista ja kommenteista tuotettiin maaliskuun 14. ja 17. päivän välisenä aikana, ja kommentointi hiipui pian sen jälkeen. Maaliskuun 18. ja 31. päivän välisenä aikana kommentointi avattiin vain neljään juttuun, joista kaikki saivat alle kymmenen kommenttia.

Kommenteissa ei niitä kerättäessä ollut näkyvissä muuta aikatietoa kuin kommentin julkaisemispäivämäärä, mutta kommentointi vaikuttaa tapahtuneen ryöpsäyksittäin. Esimerkiksi kaikkiin neljään yli sata kommenttia saaneeseen juttuun (YLE Uutiset 13.3.2011; YLE Uutiset 14.3.2011a; YLE Uutiset 14.3.2011b; YLE Uutiset 16.3.2011) jätettiin valtaosa kommenteista saman päivän aikana. YLE:n kommentointiohjeen (YLE 2010) mukaan kommentteja julkaistiin arkisin aamun kello puoli kahdeksan ja illan kello kymmenen välisenä aikana ja viikonloppuisin puolestapäivästä iltakymmeneen. Esimerkiksi aineiston kaksi kommentoiduinta juttua, 13.3. julkaistun silloisen valtiovarainministeri Jyrki Kataisen haastattelu ja 16.3. julkaistun STUK:n pääjohtaja Jukka Laaksosen haastattelu, julkaistiin noin puolilta päivin. Kataisen haastattelun tapauksessa kommentteja olisi ennen kommentointiajan päättymistä jätetty tuolloin liki 15 kappaletta tunnissa, ja Laaksosen haastattelun tapauksessa lähes 20 kommenttia tunnissa, jos kommentteja olisi tullut tasaisesti.

Ydinonnettomuusuutisoinnin kommentoinnin yleinen sävy oli aikaisempiin nettikommentointia koskeneisiin tutkimuksiin (esim. Kangaspunta 2016; Paasonen 2014; 2015; Pantti 2016; Zummo 2017) verrattuna jonkin verran hillitympää: vaikka viestit oli kirjoitettu puhekieliseen tyyliin, niissä oli hyvin

vähän esimerkiksi kiroilua, vaikka kommentoijat käyttivät välillä voimakkaitakin ilmaisuja kuvaillessaan esimerkiksi turhautumistaan Fukushiman onnettomuutta koskevaan uutisointiin tai toisiin kommentoijiin. Kommenttitekstien rakenne oli enimmäkseen selkeä ja napakka. Myös monille verkkokeskusteluille tyypillinen häiriökäyttäytyminen kuten floodaus, eli yhden käyttäjän nopeasti peräjälkeen syytämät viestit, tai tahallinen räikeä provosointi loistivat kommenteista poissaolollaan, samoin kaikenlainen meemimateriaali (vrt. esim. Paasonen 2014; 2015; Pantti 2016) – lukuun ottamatta toistuvia viittauksia Eppu Normaalin ydinvoimakriittiseen *Suomi-ilmiö*-kappaleeseen (1980).

Vaikka keskustelu kommenteissa oli siivompaa kuin aikaisemman tutkimuksen perusteella olisi voinut olettaa, keskustelun negatiivisuus vastasi ainakin osittain aiempia havaintoja. Fukushima Daiichin onnettomuuteen suhtauduttiin kommenteissa vakavasti ja siihen viitattiin muun muassa ”valtavana tragediana”, ”murhenäytelmänä” ja ”maailmanluokan katastrofina”. Kommentoijat sanoittivat tuntemuksiaan ydinonnettomuudesta ennen kaikkea huoleksi ja peloksi.

Useissa kommenttiketjuissa Fukushiman tilannetta pyrittiin myös suhteuttamaan voimalaonnettomuuden liikkeelle sysänneiden maanjäristyksen ja tsunamin aiheuttamiin tuhoihin, erityisesti kuolonuhrien määrään. Kommenteissa, joissa tällaista sangen banaalia vertailua tehtiin, pyrittiin usein vakuuttamaan toisia kommentoijia siitä, että tilanne Fukushimassa ei ollut yhteismitallinen maanjäristyksen ja tsunamin kanssa, koska kukaan ei ollut kuollut ydinvoimalaonnettomuuden takia. Näin asian muotoilee Fukushimassa tapahtuneesta toisesta vetyräjähdyksestä kertoneen, 14.3.2011 kello 04.35 julkaistun jutun ”Fukushiman ydinvoimalassa toinen räjähdys” 27. kommentti:

> @ [22. kommentin kirjoittaneen kommentoijan nimimerkki]: Niin, kokonainen kaupunki on pyyhkiytynyt mereen, mutta ydinvoimalat seisovat pystyssä. Sehän osoittaa niiden juuri olevan niitä vaarallisimpia.
>
> Ja mitä sitä puhumaan kaupungin 10.000 kuolleesta asukkaasta, kun ydinvoimalan säteilylle on altistunut pari sataa ihmistä.

Zika-virusuutisoinnin affektiivista dynamiikkaa koskevassa tutkimuksessaan Oikkonen (2017, 689) esittää, että uhriluvilla ja niiden vertailulla on merkitystä affektiivisten intensiteettien suuntaamisessa. Kuten edellä lainatussa kommentissa, Oikkosen mukaan Zika-uutisoinnissa lukuja vertailemalla pyrittiin rakentamaan käsitystä tapahtuman suuruusluokasta ja merkittävyydestä ja siten ohjaamaan myös tapahtumaan tarrautuvaa affektia.

Maanjäristyksen ja tsunamin kuolonuhrien vertailu Fukushiman onnettomuuden aiheuttamiin vahinkoihin kietoutui varsin tiukasti kommentoijien ydinvoimakantoihin, jotka jakoivat keskustelua ehkä melko ennalta-arvattavastikin. Vaikka kommentoijat eivät käyttäneet toisistaan kovin karkeaa kieltä ja viittasivat toisiinsa yksilötasolla vain harvoin, sarkasmin ja vähättelyn kautta toisen kannan alentaminen toistui kommenttiketjusta toiseen. Yllä kuvatun kaltaisten kommenttien lisäksi ydinvoiman kannattajat pyrkivät myös korostamaan omaa teknologista tietämystään ja vähättelemään vastustajiaan. Ydinvoiman vastustajia nimiteltiin muun muassa ”ituhipeiksi”, ”viherpiipertäjiksi” ja ”hihhuleiksi”, ja ydinvoimaa pidettiin näissä kommenteissa usein länsimaisen elämäntavan kannalta välttämättömänä. Ydinvoiman kannattajat saivat puolestaan lukea olevansa esimerkiksi ”onnettomia ääliöitä” tai ”hulluja porvareita”, joita kiinnostavat ihmisten ja ympäristön hyvinvointia enemmän

taloudelliset voitot. Ydinvoiman vastustajia syytettiin usein pelon ja paniikin lietsonnasta, ja ydinvoiman kannattajia tilanteen vakavuuden vähättelystä.

Kommentoijat kohdistivat sekä ydinvoiman vastustajiin että kannattajiin myös moraalista närkästystä. Useissa kommenteissa ydinvoiman vastustajien, erityisesti vihreiden arvojen kannattajiksi miellettyjen poliitikkojen tai ympäristöjärjestö Greenpeacen edustajien, kuvailtiin toimivan moraalittomasti, häpeällisesti tai hyvän tavan vastaisesti hyödyntäessään Fukushima Daiichin onnettomuutta ydinvoiman vastaisen kantansa edistämisessä. Ydinvoiman kannattajien sen sijaan koettiin toimivan moraalittomasti suosiessaan teknologiaa, joka pettäessään vaarantaa ihmisten turvallisuuden vuosikymmeniksi, ja josta syntyvä jäte on vaarallista vielä kauan sen jälkeen, kun voimalat ovat sammuneet. Myös ydinvoiman kannattajat hyödynsivät ympäristönäkökulmaa paheksuntansa ilmaisemiseen: ydinvoiman vastustajien koettiin tekevän karhunpalvelus ympäristölle, jos nämä suosivat ydinvoiman sijaan esimerkiksi hiiltä. Vertailut hiilivoiman ja ydinvoiman välillä sisälsivät usein myös edellä ydinonnettomuuden ja tsunamituhojen yhteydessä kuvatun kaltaista kuolonuhrien vertailua, jonka tarkoituksena oli osoittaa hiilen haitallisuus suhteessa ydinvoiman mahdollisiin haittoihin. Vastaavasti ydinvoiman vastustajat käyttivät viittauksia aikaisempiin ydinvoimalaonnettomuuksiin, erityisesti vuonna 1986 nykyisen Ukrainan alueella tapahtuneeseen Tshernobylin onnettomuuteen osoituksena ydinvoiman vaarallisuudesta.

Kommenttien muista tutkituista verkkokeskusteluista poikkeavat piirteet selittynevät todennäköisesti ennen kaikkea YLE:n verkkosivujen kommentointiohjeilla, kommentoinnin aktiivisella valvonnalla ja näiden kahden kautta muodostuneella käytöskulttuurilla (YLE 2010; vrt. YLE 2017). Kommentoijia neuvottiin esimerkiksi pitäytymään uutisen kommentoinnissa sen sijaan, että he olisivat keskustelleet ensisijaisesti keskenään (YLE 2010), joten kommenttien affektiivinen dynamiikka muodostui toisenlaiseksi kuin esimerkiksi Paasosen (2014; 2015) tai Pantin (2016) tutkimuksissa, joissa verkkokeskustelu hyvin pian erkanee alkuperäisen päivityksen aiheesta. Lisäksi esimerkiksi linkkien jakaminen kommenteissa oli sääntöjen mukaan suoraan kiellettyä (YLE 2010), mikä selittänee esimerkiksi meemimateriaalin puuttumisen. Lisäksi keskustelun valvojan tuli hyväksyä jokainen kommentti ennen julkaisua. YLE toisin sanoen pyrki kommentointiohjeilla ja valvonnalla aktiivisesti vaikuttamaan keskusteluiden affektiivisiin intensiteetteihin estämällä sellaisten viestien julkaisun, jotka voisivat suunnata keskustelua esimerkiksi rasistiseen tai herjaavaan sävyyn (ibid.).

Keskustelun tahmaiset keskukset

Ydinvoiman historiaan aina radiumin löytämisestä lähtien on liitetty vahvasti erilaisia myyttejä hulluista tieteilijöistä avaruusajan utopioihin, jotka kaikki kuvastavat, kuinka mielipiteitä jakavasta asiasta on kyse (Weart 2012). 1950-luvulta alkaen ydinvoiman käyttö on sekä länsimaissa että muualla liitetty vahvasti kansallisen edistyksen ja modernisoinnin projektiin, ja ydinvoiman käyttöönottoa on pidetty edellytyksenä talouskasvulle niin Suomessa, Japanissa kuin Etelä-Koreassakin (Vehkalahti 2017; Shun'ya & Loh 2012; Penney 2012; Jasanoff & Kim 2009). Ydinvoimaa voidaan toisin sanoen pitää esimerkiksi Zika-viruksen tapaan teknis-tieteellisenä ilmiönä, johon on tarrautunut hyvin monenlaisia toiveita ja pelkoja, jotka liittyvät erityisesti ihmisten ja ympäristön tulevaisuuteen ja terveyteen (Oikkonen 2017, 682). Tätä kulttuurihistoriallista

taustaa vasten tarkasteltuna Fukushiman uutisoinnin kommenttien voidaan nähdä tekevän näkyväksi ydinvoimaan, (tieteelliseen) asiantuntijuuteen ja luottamukseen liittyviä affektiivisia kytkentöjä.

Fukushima Daiichin uutisointia kommentoivista keskusteluista voi edellä esittelemäni erittelyn perusteella tunnistaa ainakin kolme hahmoa, joita voidaan pitää Paasosen (2014; 2015) kuvaamina keskustelun tahmaisina solmukohtina: ydinvoiman vastustajat, kannattajat ja asiantuntijan tai auktoriteetin roolissa esiintyvät henkilöt. Ensin erittelen jokaisen hahmon ja siihen tarrautuvia affektiivisia intensiteettejä ja merkityksiä yleisemmällä tasolla, jonka jälkeen käytän otoksen kahta kommentoiduinta juttua esimerkkeinä siitä, kuinka hahmot toimivat kommenteissa ja vaikuttavat keskustelun affektiiviseen dynamiikkaan.

Ydinvoiman kannattajan ja vastustajan hahmot toimivat keskustelussa ennen kaikkea viholliskuvien tapaan (vrt. Pantti 2016; Nikunen & Pantti 2017). Esimerkiksi kuvaillessaan ydinvoiman vastustajia hysteerisiksi hipeiksi, jotka vaativat paluuta esiteolliseen aikaan, Fukushima Daiichin onnettomuuteen liittynyt pelko ja arvaamattomuus tarrautuu vastustajan hahmoon, mutta samalla kommentoija tuottaa käsityksen itsestään rationaalisena ja modernia länsimaista elämäntapaa edustavana toimijana. Ydinvoiman vastustajien vastustajiksi itsensä asemoineet kommentoijat pyrkivät lisäksi usein korostamaan omaa teknologista tietämystään.

Ydinvoiman kannattajia vähättelemään pyrkivissä kommenteissa puolestaan ydinvoiman kannattajan hahmossa tiivistyi ihmisen erehtyvyys ja ahneus. Tällaiset kommentoijat asemoivat itsensä ydinonnettomuuden ja luonnonkatastrofin uhrien puolelle ja pyrkivät herättämään empatiaa muissa kommentoijissa. Toisin sanoen molemmilla hahmoilla pyrittiin suuntaamaan keskustelun affektiivisia intensiteettejä, jos ei oman näkökulman puolelle, niin toista vastaan (vrt. Paasonen 2014; 2015).

Kolmas keskustelun tahmaiseksi solmukohdaksi muodostunut hahmo asettuu niin ikään suhteeseen ydinvoimakantojen kanssa, sillä se veti puoleensa sekä ydinvoiman kannattajien että vastustajien kiinnostusta ja reaktioita. Asiantuntijahahmon tahmaisuus havainnollistuu hyvin STUK:n pääjohtaja Jukka Laaksosessa, joka esiintyi yhteensä seitsemässä otoksen jutuista, joista yksi oli aineiston kommentoiduin (”STUKin pääjohtaja arvostelee kovin sanoin Japanin pelastustoimia”, YLE Uutiset 16.3.2011). Kommentoiduimmassa jutussa Laaksonen kritisoi voimakkaasti japanilaisia viranomaisia Fukushiman pelastustöiden hitaudesta ja huonosta tiedottamisesta. Kommentoijat nostivat esiin erityisesti kontrastin Laaksosen lausuntojen ja STUK:n oman toiminnan kriisitilanteissa. Jutun kommentti 101 kiteyttää näkökulman:

> Täytyy ihmetellä miten Jukka Laaksosella on varaa arvostella Japanin pelastustoimia, kun STUK:n oma toiminta vaikuttaa täysin koulupoikamaiselta. Nettisivut kaatuu muutamista käyttäjistä ja viiden päivän ”harjoituspäivystyksestä” Japanin kriisin yhteydessä STUK:n edustaja valittaa TV:ssä, että heidän henkilöstö ei enää kestä jos kriisi vielä jatkuu. Herääkin kysymys, valvooko kukaan onko STUK kykenevä organisaatio hoitamaan sille annettua tehtävää?

Samanhenkisissä kommenteissa nostettiin usein esille STUK:n verkkosivujen ongelmien ja organisaation edustajien vaihtelevien mediaesiintymisten lisäksi Olkiluodon ydinvoimalatyömaan viivästykset sekä STUK:n epäonnistunut kriisitiedottaminen Tshernobylin ydinonnettomuuden aikaan vuonna 1986 (ks. Timonen & al. 1987). Kommentoijat pitivät edellä mainittuja tapauk-

sia viitteenä siitä, että STUK:n asiantuntijat eivät kenties Suomea koskettavan kriisitilanteen sattuessa olisi luotettavia tai puolueettomia hoitamaan säteilyturvallisuuden valvontaa tai kansalaisille suunnattua kriisitiedotusta. Erityisesti kommentoijat, jotka viittasivat STUK:n toimintaan Tshernobylin onnettomuuden aikana, ilmaisivat selkeää epäluottamusta keskusta kohtaan. Samassa yhteydessä kommentoijat syyttivät STUK:ta joko paniikin lietsomisesta tai Fukushima Daiichin tilanteen hyssyttelystä. Toisin sanoen kommentoijat arvelivat myös STUK:n pyrkivän tavalla tai toisella ohjaamaan aiheen ympärillä käydyn keskustelun affektiivista dynamiikkaa.

Laaksoseen ja hänen edustamaansa asiantuntijahahmoon liittyi myös voimakasta paheksuntaa. Kommentoijat pitivät erityisesti Laaksosen kommentteja YLEn 16.3. julkaistussa haastattelussa asiattomina, sillä hän kritisoi avoimesti japanilaisia Fukushima Daiichin jäähdytystöiden huonosta hoitamisesta ja aprikoi syyn olevan japanilaisessa kulttuurissa (”STUKin pääjohtaja arvostelee kovin sanoin Japanin pelastustoimia”, YLE Uutiset 16.3.2011). Kommentti 143 tiivistää tämän osan Laaksoseen kohdistuneesta kritiikistä:

> Uskoman arroganttia roskaa tuottaa mies merkittävässä asemassa…. harvoin olen kuullut vastaavaa besserwisseriä näin vakavassa asiassa. Itsekin reilut 20 vuotta säteilyvalvonnan kanssa toimineena kehottaisin käyttämään vähän rakentavampaa asennetta.

Laaksosen koettiin toisin sanoen rikkovan asiantuntijapositioon liittyviä oletuksia hillitystä ja harkitusta käytöksestä. Lisäksi, kuten yllä mainittujen Greenpeacen ja ydinvoimavastaisten poliitikkojen tapauksessa, myös Laaksosen koettiin toimivan tilanteen vakavuuteen nähden sopimattomasti. Tässä yhteydessä monissa kommenteissa Laaksosen hahmoon liitettiin häpeää ja myötähäpeää, niin voimakkaasti kommentoijat kokivat Laaksosen rikkoneen sopivan käytöksen rajoja (Every 2013; Probyn 2005). Laaksosesta toisin sanoen muodostui tilannetajuttoman esimiehen stereotyyppi, joka erään kommentoijan sanoja mukaillen ”latelee mielipiteitään tuhansien kilometrien päästä kahvikupin ja kampaviinerin ääreltä” ymmärtämättä käytännön työn realiteetteja (”STUKin pääjohtaja arvostelee kovin sanoin Japanin pelastustoimia”, YLE Uutiset 16.3.2011, kommentti 36).

Laaksosen kommenteille löytyi myös ymmärtäjiä. Laaksosen lausuntoja puolustavissa kommenteissa peräänkuulutettiin hänen itsensäkin mainitsemaa mutta sen tarkemmin määrittelemätöntä ”insinöörijärkeä”. Tulkitsen sen tarkoittavan rationaalista teknologia- ja ratkaisukeskeistä suhtautumista Fukushima Daiichin ydinvoimalaonnettomuuteen, jonka vastakohdaksi rakentuu edellä kuvattu hysteerinen ydinvoiman vastustaja. Laaksosen kanssa samaa mieltä olevat kommentoijat pitivät japanilaisiin kohdistettua kritiikkiä oikeutettuna ja perusteltuna.

Tästä näkökulmasta tarkasteltuna Laaksosen edustamaan asiantuntijahahmoon liittyi luotettavuutta ja varmuutta, eikä hänen asiantuntijuuttaan tai tilannetajuaan kyseenalaistettu. Vähättelemällä japanilaisia ja korostamalla suomalaista ydinvoimaosaamista Laaksonen ja häntä tukevat kommentoijat uusintavat niin sanottua ydinvoiman turvallisuusmyyttiä (Jasanoff & Kim 2009; Penney 2012; Weart 2012), jonka mukaan ydinvoima voi toisten käsissä olla riskialtista, mutta omassa kansallisessa kontekstissa turvallista. Asiantuntijoihin kriittisesti suhtautuneet kommentoijat puolestaan kokivat saman näkökulman esimerkkinä ihmisen hybriksestä luonnon edessä.

Kaikki edellä luonnostellut kolme hahmoa nousevat kiinnostavalla tavalla esiin muun muassa otoksen toiseksi kommentoidummassa jutussa ja sen kommenteissa (”Katainen toivoo malttia ydinvoimakeskusteluun”, 13.3.2011 klo 12.04, 146 kommenttia). Lyhyessä haastattelussa silloinen valtiovarainministeri ja kokoomuksen puheenjohtaja Jyrki Katainen toivoo ”[…] ettei Japanin luonnonkatastrofia yritettäisi hyödyntää lyhytkatseisesti kotimaan politiikassa” ja toteaa, että ”Olisi järkevää, ettei hypitä haudoilla ennen kuin on saatu tietää, mitä oikeasti on tapahtunut ja mitä ei ole”. Lopuksi Katainen ilmoittaa STUK:n olevan Suomessa paras taho arvioimaan ydinvoiman riskejä. (Ibid.)

Kataisen lausunnot asettuvat edellä referoidussa jutussa ja alla lainatussa kommentissa asiantuntija- tai auktoriteettihahmon lisäksi osaksi ydinvoiman kannattajan hahmoa. Viittaamalla ”haudoilla hyppimiseen” Katainen ilmaisee paheksuntansa hänen mielestään liian pikaisia johtopäätöksiä tehneitä kohtaan, ja kommenttien tarjoamasta kontekstista voi päätellä, että tällä viitataan ydinvoiman vastustajiin. Lisäksi Katainen tukee lausunnollaan STUK:n asiantuntijuutta, vakuuttaen yleisöään siitä, että järjestö on tilanteen tasalla sekä Suomen että Japanin tilanteen suhteen.

Jutun ainoana haastateltuna vaikuttajana Katainen asettuu auktoriteetin asemaan, ja kuten STUK:n Laaksosen tapauksessa, hänen kommenttinsa jakoivat kommentoijien mielipiteitä. Osa koki Kataisen kommentit asiattomana puuttumisena julkiseen keskusteluun, ja osa piti niitä tarpeellisena muistutuksena harkinnasta. Esimerkiksi kommentti 126 edustaa Kataista tukevaa kantaa:

> Ihan oikein Katainen kommentoi. Eikös Arhinmäki jo sanonut et ydinvoimaloiden rakentaminen pitäisi perua ja perustelee näkemystään Japanin ydinvoimalaonnettomuudella. Tätä suuremmalla syyllä tänne Suomeen pitäisi rakentaa enempi ydinvoimaa! Eikä noihin tsunami&maanjäristys riskialueille.

Kuten yllä oleva kommentti havainnollistaa, Vasemmistoliiton silloisesta puheenjohtajasta Paavo Arhinmäestä muodostui Kataisen haastattelun kommenteissa hänen vastakohtanaan toimiva tahmainen hahmo, joka edusti ydinvoiman vastustusta. Vaikka Arhinmäen lausuntoja käsitellyt uutinen ei valikoitunut analysoituun otokseen, koska sitä ei ollut syystä tai toisesta avattu kommentoinnille, häneen viitattiin Kataista käsitelleen jutun kommenteissa kuudesti ja useita kertoja myös muiden uutisten kommenteissa. Myös Kataiseen viitattiin muiden uutisten kommenteissa toistuvasti, usein esimerkkinä oikeistopoliitikkojen ydinvoimamyönteisyydestä (vrt. Ruostetsaari 2017). Kummankin poliitikon hahmo myös ylläpiti keskustelua vetämällä puoleensa uusia kommentteja: kommentteihin, joissa viitattiin jompaankumpaan, vastattiin hyvin usein ja kärkkäästi.

Ydinvoiman vastustajan ja kannattajan sekä asiantuntijan affektiivisesti tahmaiset hahmot tuovat esille, miten ydinvoimaan liittyvät poliittiset arvotukset kietoutuvat kommenttikeskusteluiden affektiivisiin intensiteetteihin. Jokainen kolmesta hahmosta vetää puoleensa sekä keskustelijoiden mielenkiintoa, hyväksyntää että torjuntaa ja suuntaa keskustelujen intensiteettejä ja tuottaa erontekoja keskustelijoiden välille (vrt. Paasonen 2014, 29), kuten edellä kuvatut esimerkit havainnollistavat. Nämä eronteot ja niihin kietoutuva tahmainen affekti pitää keskustelua yllä ja saa sen versomaan uusiin suuntiin – vaikka YLE:n kommentointiohjeistus estikin tilanteen, jossa keskustelu alkoi elää niin sanotusti täysin omaa elämäänsä.

Fukushima Daiichin onnettomuuden uutisten kommentointi ja sen affektiivinen dynamiikka vahvoine polarisaatioineen teki näkyväksi, kuinka

monimutkaisiin teknis-tieteellisiin ilmiöihin liittyy voimakkaita affektiivisia intensiteettejä, jotka ovat usein kytköksissä kulttuurisesti jaettuihin kertomuksiin kyseisestä ilmiöstä. Esimerkiksi toistuvat viittaukset Tshernobylin ydinonnettomuuteen ja sen vaikutuksiin ihmisiin ja ympäristöön heijastavat tapaa, jolla ydinvoimaonnettomuuksiin liittyvät kertomukset tarjoavat vertailukohdan ja resonoivat affektiivisesti uuden, epävarman tilanteen kohdatessa. Samoin Fukushima Daiichin uutisointi ja sen kommentit nostavat esiin puoluepolitiikkaan liittyviä arvotuksia tieteestä, teknologiasta, ympäristöstä ja taloudesta (ks. myös Jasanoff ja Kim 2009). Esitän, että nämä intensiteetit yhdessä edellä kuvatun polarisaation kanssa vaikuttavat siihen, millaiseksi keskustelujen affektiivinen dynamiikka muodostuu, ja miten ne vetävät keskustelijoita puoleensa.

Lopuksi

YLE:n verkkosivuilla käydyt kommenttikeskustelut, niiden voimakas polarisaatio ja esimerkiksi toistuvat syytökset paniikinlietsonnasta ja hyssyttelystä tekevät näkyväksi kamppailun julkisesta verkottuneesta tilasta ja siellä käydystä keskustelusta. Fukushima Daiichin onnettomuusuutisten kommenteissa esiintyneiden affektiivisesti tahmaisten hahmojen kautta kommentoijat pyrkivät määrittelemään, kenellä on oikeus ilmaista julkisesti mielipiteitään ydinvoimaonnettomuudesta (vrt. Vehkalahti 2017; Kangaspunta 2016).

Keskustelun jakolinjojen voimakkuutta selittänee ainakin osittain se, että Fukushiman ydinonnettomuus osui yhteen huhtikuun 2011 eduskuntavaalikampanjoinnin kanssa, ja julkisen keskustelun ilmapiiri oli siksi jo valmiiksi latautunutta. Tähän viitaisi myös artikkeliin analysoidun aineisto-otoksen toiseksi kommentoiduin juttu (”Katainen toivoo malttia ydinvoimakeskusteluun”, YLE Uutiset 13.3.2011), jossa kokoomuksen puheenjohtajana tuolloin toiminut Jyrki Katainen viittasi epäsuorasti vaalikampanjoinnissa Fukushima Daiichin onnettomuuden hyödyntämiseen.

Oikkosen (2017) sekä Weartin (2012) havaintoihin sekä Ahmedin (2004, 91) näkemykseen affektin ja sen tahmaisuuden suhteesta aikaisempiin tapahtumiin perustuen esitän, että ydinvoiman kaltaisen, ilman erityistä kriisin tuntuakin ihmisiä vahvasti jakavan poliittisen aiheen affektiivinen tahma lisäsi YLE:n verkkosivujen keskusteluiden vetovoimaa. Lisäksi se, että Japanin maanjäristyksen, tsunamin ja ydinonnettomuuden kolmoiskatastrofia käsiteltiin suomalaisessa uutismediassa akuuttina kriisinä yli 8000 kilometrin maantieteellisestä etäisyydestä huolimatta, saattoi vaikuttaa siihen, että kommentoijat kokivat asian keskustelun arvoiseksi (vrt. Ahmed 2004, 76–77; Pantti et al. 2012).

Fukushima Daiichin voimalan tapahtumia ja onnettomuuden vaikutuksia käsitelleiden uutisten kommentit havainnollistavat hyvin myös sitä, miten affekti kiertää ja käy tahmaiseksi toiston kautta (Ahmed 2004, 91–95). Toiston voima korostuu sekä asiantuntijoiden rauhoittelupuheessa että viittauksissa Tshernobylin ydinvoimaonnettomuuteen. Molemmissa tapauksissa toiston affektiivinen vetovoima ei liity vain asioiden välillä eksplisiittisesti muodostuviin yhteyksiin, vaan se toimii myös implisiittisellä tasolla (Ahmed 2004, 93).

Esimerkiksi Tshernobyl-viittauksissa eksplisiittinen taso on melko selvä: sekä Fukushima Daiichissa että Tshernobylissä on kyse poikkeuksellisista ja vaikutuksiltaan laajoista onnettomuuksista. Implisiittisellä tasolla Tshernobyl-viittaukset kuitenkin heijastavat kulttuurisesti jaettuja pelkoja, jotka liittyvät

ydinvoimaan ja ydinaseisiin: syövän, sairauden ja kuoleman pelkoa (Weart 2012). Ahmedia mukaillen, viittaamalla Fukushima Daiichin yhteydessä Tshernobyliin, niiden välille muodostuu yhteys ja Tshernobylin affektiivisesta painolastista tulee osa Fukushima Daiichin painolastia. Samalla tavoin asiantuntijapuhe ydinvoiman turvallisuudesta suomalaisessa kontekstissa pyrkii muodostamaan yhteyden suomalaisuuteen liitettyjen ominaisuuksien ja ydinvoiman välille.

Vaikka artikkelin empiirinen aineisto poikkeaa tyypillisestä 2010-luvun verkkokeskustelujen dynamiikkaa käsittelevästä tutkimuksesta, analyysini vahvistaa lukuisia aikaisemmin tehtyjä havaintoja, ennen kaikkea koskien verkkokeskusteluiden polarisaatiota ja ärhäkkää politisoitumista. Vaikka analysoimistani keskusteluista puuttui räikein häiriökäyttäytymiseksi mielletty ilmaisu, keskustelijoiden tapa asemoida itsensä yhteen leiriin ja alentaa toista heijastelee esimerkiksi Paasosen (2014; 2015) havaintoja siitä, että verkkokeskustelijat pyrkivät aktiivisesti saamaan irti reaktioita toinen toisistaan, ja että voimakkaasti ärsyttävät tai liikuttavat aiheet houkuttavat enemmän keskustelijoita.

Yllä analysoimieni STUK:n pääjohtaja Laaksosen ja valtiovarainministeri Kataisen haastatteluiden tapauksessa valtaosa kommentoijista ilmaisi närkästystä joko jutussa esiintynyttä henkilöä tai muita kommentoijia kohtaan. Toisin sanoen juttujen aiheen affektiivinen intensiteetti ja tahmaisuus vetivät kommentoijia puoleensa, ja keskustelu pysyi yllä kommenttien ja niissä toistuvien hahmojen ja teemojen kautta. Lisäksi keskusteluiden affektiivisen dynamiikan tarkastelun kannalta analysoimani aineiston ilmaisun siistiys verrattuna muihin verkkokeskusteluihin antaa epäsuorasti viitteitä siitä, että verkkokeskusteluiden affektiivisen dynamiikan aktiivinen hallinta todella auttaa hillitsemään esimerkiksi avoimen rasistista puhetta.

Verkottuneessa julkisuudessa affektiivinen intensiteetti kiertää jaettujen merkitysten ja tulkintojen mukana, tarrautuen toisiin ideoihin, kuviin tai kehoihin toisiin enemmän ja liukuen toisten yli. Fukushima Daiichin tapauksessa affektiivisesti tahmaiset siteet sitoivat onnettomuuskertomuksen osaksi laajempaa kulttuurista narratiivia ydinvoimasta ja ydinvoimaonnettomuuksista, jonka ympärille kietoutuu erilaisten pelkojen ja toiveiden tiheikkö (vrt. Oikkonen 2017). Verkottuneen julkisuuden affektiiviset intensiteetit toisin sanoen toimivat sekä kehollisen, hetkellisen affektin tasolla että luovat tahmaisia yhteyksiä menneen, tulevan ja nykyisyyden monien tasojen ja tulkintojen välille. Verkottuneet viestinnän välineet verkkouutisista sosiaalisen median sovelluksiin tuovat nämä yhteydet ja niistä käydyt määrittelykamppailut aikaisempaa paremmin näkyville avaten uusia näköaloja tutkimukselle ja teorialle.

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PUBLICATION III

The Global Circulation of Affect: The Case of the Iodide Tablets

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Traces of Fukushima. Trajectories of mediated emotion in time and space, 101-117
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CHAPTER 6

The Global Circulation of Affect: The Case of Iodide Tablets

Abstract This chapter examines the Fukushima Daiichi nuclear disaster through circulation of affect in a hybrid media environment. Using the news coverage of potassium iodide tablet buying sprees in the Northern Hemisphere in March 2011 as its case study, this chapter examines how affect sticks and circulates in the news coverage, as areas outside Japan anticipated and speculated about the possible nuclear fallout from Fukushima Daiichi. The chapter introduces the notion of affective discipline and uses it to illustrate how distinct cultural tropes are used to manage circulation of affect during a crisis. Moreover, this chapter suggests that acts of affective discipline render visible the dual role of the public in crisis reporting: represented as panicky but addressed as rational.

Keywords Circulation of affect • Hybrid media environment • Potassium iodide tablets • Fukushima disaster

One of the main reasons the triple disaster of March 2011 was so momentous had to do with the sudden loss of human life. Media audiences across the globe were confronted with the destruction of the Tohoku area in North-East Japan in the wake of the tsunami, and with dramatic images of hydrogen explosions at the nuclear power plants. These images not only

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relayed what had happened but also circulated messages saturated with strong emotion. By mediating the disaster, the media showed how people were feeling, and also offered models for how they were supposed to feel.

In this chapter and the next, we look at slices of media coverage from the point of view of how affects became articulated as public emotions, how emotions became represented and how affective intensity was attached to different actors and moments in the flow of messages. We try to capture the flow of affect in the transnational, hybrid media environment by illustrating how affects were circulated in mainstream news media content about Fukushima Daiichi in March 2011. We are interested in how flows and intensities of affect play out over time and space, and in how mediated affect can be used to direct attention and guide public response in a time of crisis.

6.1 Circulating and Sticky Affect

Several theorizations describe affect as referring to the bodily, non-discursive and implicit sensations and intensities that bodies encounter in their interactions (Gregg and Seigworth 2010; Oikkonen 2017; Paasonen 2015). Emotion, in turn, is used to refer to explicit, discursive, culturally and socially structured, identifiable expressions of affect, such as 'I have a bad feeling about this' (Ahmed 2004b, pp. 4–14; Oikkonen 2017, p. 683).

Massumi (2002) and others have argued for the autonomy of affect and its ontological distinction from emotion. We agree that this distinction is necessary on the level of theorization and consider it to provide a useful vocabulary for distinguishing between affective potential and expressed emotions. However, we also agree with Ahmed (2004b, 2010a, b) and others (cf. Oikkonen 2017; Paasonen 2015; Wetherell 2015) that on the level of lived experience and empirical research, affect and emotion cannot be neatly separated as they constantly blend and blur together. Thus, our distinction between explicitly expressed emotions and their underlying affective intensities that flow in encounters between bodies, texts and technology is an analytical one (Ahmed 2004b; Paasonen 2015) and aims to capture a continuum (Oikkonen 2017, p. 697). Affects as embodied intensities often cannot be symbolically expressed exhaustively, whereas emotions are cultural and historically contextual efforts to make sense of the affective intensities in which bodies become involved (Ahmed 2004b, 2010b; Oikkonen 2017; Paasonen 2015; Wetherell 2015). As symbolic representation can never quite take the place of its referent, affective inten-

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sities carry an excess of potential that escapes the naming and managing of emotions. In this sense, affect is primary to emotion.

In the context of networked communication, Ahmed's (2004a, pp. 119–120, 2004b, pp. 44–45, 90–92, 194–195) model of circulation and stickiness of affect has proved to be a powerful approach for understanding how and why events, symbols and figures become laden with meaning and intensity (cf. Oikkonen 2017; Paasonen 2015; Papacharissi 2014). According to Ahmed (2004a, p. 120, 2004b, p. 45), affect acts as a kind of capital. It does not reside in a subject, but rather refers to the intensity invested in a subject. Through such relational value attached to subjects, affects circulate with the movement of symbols and shared meanings, drawing some subjects and objects together while pushing others apart. Affect accumulates more value over time and creates a surplus of intensity, making some emotions more intense while others fade (Ahmed 2004a, p. 120, 2004b, 2010b; Oikkonen 2017; Paasonen 2015). For example, the more a link to a video is shared, the stickier it becomes, as the popularity expressed by linking and sharing it becomes an index of its affective value (Paasonen 2015).

To refer to *what* becomes circulated, we use the term *affective intensity* (Oikkonen 2017; Paasonen 2015). This denotes the analytically and ontologically primary investment of affective potential circulated between actors, signs and objects, for instance in references to nuclear energy in the news coverage of Fukushima Daiichi. To discuss how affective intensities flow in mediated communication, we use the notion of *affective dynamics* (Oikkonen 2017; Paasonen 2015). Affective dynamics denotes the way the affective potential invested in an issue, object or event plays out in actual communication, for example, in what emotions become articulated and emphasized in news reports about Fukushima Daiichi, and how the articulated emotions are responded to.

Journalistically produced content and social media reactions play an important role in building and disrupting affective attunements during a crisis, in its aftermath and in its remembrance. We build our argument about this around the notion of *communicative and affective disciplines* (Langlois et al. 2009; Riis and Woodhead 2010), and previous studies on group dynamics, networked publics and crisis communication (Coleman and Wu 2010; Pantti et al. 2012; Papacharissi 2014; Rost et al. 2016; Solove 2007). By communicative and affective discipline, we refer to how members of a public can manage affective dynamics of conversations taking place within that particular public (cf. Langlois et al. 2009; Riis and

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Woodhead 2010). Acts of affective discipline may include moderation of online discussions, public appearances of officials in mainstream media or other strategies of crisis communication (cf. Chung and Lee 2016). Moreover, affective discipline can be seen as a dynamic that sustains and drives these publics through shifting intensities between different discourses and narratives about the topic concerning the public (cf. Paasonen 2015). Furthermore, acts of affective discipline render visible otherwise ephemeral affective intensities, as they need to be recognized and acted upon.

The notion of affective discipline is crucial to making sense of the communication flows and the strategies of its key implementers. By this, we denote actions that aim to manage affective intensities that grow around an issue or an event. Sometimes this means emphasizing a particular emotional interpretation of the intensity at play, such as a sense of solidarity towards the victims of a disaster. To paraphrase, affective discipline and affective dynamics open up different perspectives on understanding how affective intensities play out. For example, news coverage of the Fukushima Daiichi disaster articulated concerns about the damaged power plant, while experts and officials sought to reassure the public that there was no such danger—at the same time acknowledging that precise concern.

Circulation, flow and sticking of affect are tied to the two main crucibles of this book: temporality and spatiality. Affective intensities that surround 'Fukushima' are circulated in hybrid, global communication networks. They move from one geographical, temporal and cultural context to another following various different logics, such as those of the mainstream news media, political organizations and personal reactions from grief to outrage to empathy—and relief (cf. Chaps. 2 and 3). The circulation of affective intensities occurs both in interpersonal communication and in networked spaces enabled by contemporary technologies that wrap together news media, political organizations and all other possible combinations of people (Chadwick 2017; Sumiala et al. 2018). While affects that stick to the figure of Fukushima circulate in these spaces, they change as some meanings of the disaster accumulate more excess affect than others. For instance, for the people displaced by the disaster, the grief may over time turn into frustration and anger, which in some cases can lead to political action (cf. Assmann and Assmann 2010). Or, in the case of the international environmentalist organization Greenpeace, the political affects of the anti-nuclear movement may seek to assimilate feelings of solidarity towards the disaster survivors (see Chap. 3; cf. Rantasila et al. 2018).

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The rest of this chapter develops an analysis of affective discipline through a targeted case study on the news coverage about potassium iodide tablets in March 2011. By addressing affective discipline, we hope to render visible cultural dynamics that underlie discussions about nuclear energy and crisis preparedness, and to address questions about relationships between the public and journalists, officials and experts in the context of crisis coverage.

6.2 Iodide Tablet Stockpiling in the Northern Hemisphere

Within hours of news breaking about the first hydrogen explosion at Fukushima Daiichi on 12 March 2011, mainstream news media began to report that people were buying potassium iodide and other supplements across the Northern Hemisphere. The number of stories grew steadily over the next days.

The issue stayed on the news agenda as rescue crews at Fukushima Daiichi struggled to bring the overheated reactors under control. However, by 20 March 2011, coverage about events at Fukushima Daiichi and about iodide stockpiling gradually began to wind down, and ceased before the end of the month. Figure 6.1 below illustrates the rise and decline of iodide reports in March 2011.

By analysing mainstream news stories about iodide buying, we can, in one way, trace how affective intensities are mediated across the globe, and how they blend with local political and social contexts during their circulation. Mainstream news media accounts of the phenomenon give us an understanding of how established actors in various societies reacted to the situation. This can yield new findings on how societies seek to shape and control affective intensities set in motion by disruptive events, and how members of the public contest these attempts at affective control through their own actions.

The data for this case study comprises two samples. Sample 1, which was used as a pilot sample to confirm that iodide buying was not an isolated incident, contains 47 web news stories from Finnish and Anglo-American mainstream media outlets from 11 to 31 March 2011. The news outlets were selected in advance to include different types of media with large readerships. They are two Finnish television stations, two Finnish tabloids, the *British Broadcasting Corporation*; the US-based *Cable News*

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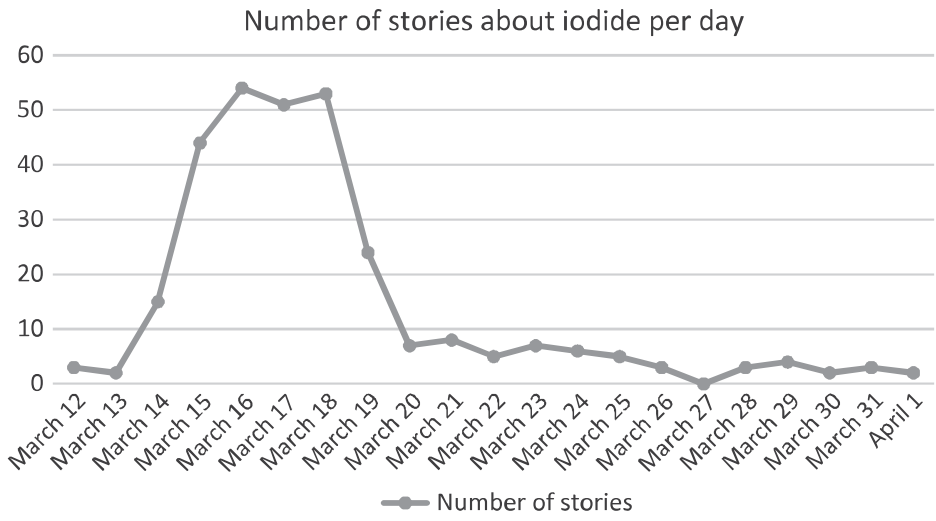

Fig. 6.1 Number of stories published about iodide tablets between 12 March and 1 April 2011

Network; and the global news wire service *Thompson Reuters*' US and UK editions. Articles were retrieved from each outlet's web pages with the following keywords: 'japan' and 'iodide' and 'fukushima' and 'iodide'.

Sample 2 contains 254 news stories published across the globe in 101 English-language newspapers and 20 news wire services between 11 March and 1 April 2011. We collected the sample with three searches on the LexisNexis newspaper database with the broad All News search function. The keywords used for each search were the same as in sample 1. The newspapers featured in sample 2 include so-called quality papers with a global readership such as *The International Herald Tribune*, national papers such as *Times of India*, regional and local dailies such as *South China Morning Post* and *Daily Camera* of Boulder, Colorado, the USA, as well as tabloid papers such as the *Daily Mail* from the UK. The stories featured in the samples ranged from short pieces of 36 words to long reads of more than a thousand words. Both samples combined, the total number of stories analysed for this chapter is 301. Because of the language choice of our searches, the data is skewed towards Anglo-American papers and is thus far from representative, but we argue that it helps us to understand the emotional trajectories of one side of the Fukushima disaster.

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In order to examine how affect is circulated and articulated in the news stories, we conducted a mixed methods qualitative content analysis on each story. Our approach brings together elements of discourse, metaphor and frame analysis in order to tease out the various elements that make up expressions of affective intensities and dynamics in textual media (Oikkonen 2017). In our analysis we focused on

1. how events, people and actions are described,
2. what kind of connections are made between them, and
3. how emotions are articulated in these news stories,
4. what kinds of affective intensities were connected to the various objects, images, connotations and figures that occurred in the news stories,
5. what kinds of words were used to refer to iodide buying sprees and the people who were involved in them, and
6. what kinds of words, analogies and metaphors were used to describe the potassium iodide tablets and the Fukushima Daiichi disaster and other nuclear disasters in these stories.

Through this set of questions, we identified the most common recurring narrative themes from the stories. This kind of method that addresses multiple elements of news stories on the levels of story structure, narrative and language, is essential in teasing out the intertwining layers of culturally shared emotion and embodied affect (Oikkonen 2017). Based on this mix of questions, we will draw a picture of the affective intensities that circulated in mainstream news reports about potassium iodide buying in March 2011.

6.2.1 Five Intertwined Interpretative Themes

Based on the elements described above, we identified the five most common interpretative themes from the stories. Each theme addresses affective intensities from a distinct angle, and includes recurring symbols or figures. They also link intertextually with culturally shared narratives about science, technology, medicine and expertise (Gamson and Modigliani 1989, pp. 3–5; Jasanoff and Kim 2009; Oikkonen 2017; Weart 2012). Most stories contain elements from all five themes, which also partially overlap, as our more detailed analysis illustrates below.

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Fallout Fallout was by far the most outstanding and frequently recurring theme in the sample. Understandably, most stories about potassium iodide were also concerned with the movements of the nuclear emissions or so-called 'plume' and the potential fallout. Stories from US newspapers speculated when the 'plume' would reach the West Coast, while stories in European and Asian papers focused on reassuring the public that there would be no ill effects from the fallout because of wind direction and other factors. In all these cases, the figure symbolizing the threat was the invisible cloud of potential harm. Through visualizations and textual references, the 'plume' became a nodal point for this theme, a signifier to which affective intensities of threat and anticipation stuck and through which the whole issue was narrated. Anxiety and anticipation were also linked to narratives about previous nuclear accidents, particularly the 1986 Chernobyl disaster. The imagery of the fallout was mobilized and discussed in two seemingly separate contexts: the threat of contamination in Japan, and the fallout outside Japan. The fallout also served as a way of offering context to and rationalizing of people's motivations for buying potassium iodide.

The following four themes can be understood as attempts to mitigate, direct or manage explicit and implicit fears and concerns about the fallout from Fukushima Daiichi.

Bulwark of Expertise In addition to focusing on the fallout narrative, the majority of the stories also relied on experts such as public health and nuclear safety officials, who were often the only cited source in a story (cf. Gamson and Modigliani 1989, pp. 7–8), serving as a bulwark against the (fear of the) fallout. Reports following this theme worked through a juxtaposition of rumour and disinformation, with officials and experts brought in to respond and correct the false claims. One could perhaps argue that the rumours–expertise dualism replaced the fallout–reassurance dualism: there was little that experts could do to protect people from the nuclear fallout, but they could claim to be able to protect them from the fallout of misinformation (cf. Oikkonen 2017, p. 692). In this context, officials and experts made direct references to emotions such as fear as they sought to soothe the public. This theme often also contrasted the actions of the public (i.e. stocking up on potassium iodide) with official advice. The fallout theme and the official theme frequently overlapped, as the officials had the information on the spread of radiation from Fukushima

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Daiichi. As mentioned above, the fallout theme was used to contextualize iodide buying, while the official theme was employed to reassure and discourage people from buying or consuming iodide.

Distance The third narrative theme was that of distance. This theme emphasized the geographical distance between Japan and the location of the news outlet's readership, and it was particularly prominent in Finnish, British and US stories. Geographical distance was frequently used to separate the threat to individuals in Japan from the (hypothetical) threat to people in the news outlet's readership area. This theme was often applied together with the expertise theme, as the geographical location of Japan and weather conditions in Fukushima prefecture were facts with which experts assured the public that the disaster would pose no threat to them. While references to distance are on the surface commonsensical, they can also be seen as powerful metaphorical strategies aimed at dissolving the readerships' anxieties and fears. Distance serves as a rhetorical vehicle which suggests that even if radiation were to reach 'us', it would be reduced over the distance it had to travel. One can argue that, just as in the case of expert transference, this has little to do with the real threat and everything to do with symbolically managing the anxiety caused by the 'fallout'.

Self-Correcting Science/Technology The fourth frequently recurring theme emphasized the techno-scientific or medical nature of the events. It focused on describing the disaster predominantly as a scientific issue with a technological solution, and on discussing the effects of radioactive particles on the human body as a medical issue with a medical solution, namely potassium iodide (cf. Oikkonen 2017; Gamson and Modigliani 1989, pp. 5–6). This theme mobilizes a cultural repertoire closely related to the expertise theme and suggests that there is nothing mysterious about radiation: we know what we are dealing with. By implication, this builds up the authority of the experts, positioning knowledge against emotion. Stories applying this theme often discussed what potassium iodide was and why people were looking for it. However, the myth of science and technology as a rhetorical trope showed its power in stories where potassium iodide was described as almost a panacea for radiation-related illnesses. For instance, it was referred to as 'a radiation antidote'—even though it only protects the thyroid from the radioactive iodine if taken

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right before or after exposure. Through the medical-scientific-technological angle, this theme addressed fear of cancer and radiation sickness as the main reasons for buying potassium iodide. Moreover, references to the Chernobyl disaster and the atomic bombings of Hiroshima and Nagasaki were used to provide context to the sense of medical emergency some people and experts were expressing. The Chernobyl disaster was also mentioned in a technological sense, as a way of looking for possible solutions to the situation at Fukushima Daiichi.

A Prepared Society/Community The fifth theme we identified was that of disaster preparation. In particular, stories from the USA and China used potassium iodide buying as a springboard for discussion about overall disaster preparedness. For example, several stories from the US West Coast moved from iodide buying to the issue of earthquake preparedness—and to emphasize the safety of local nuclear power plants. In stories from China, local officials insisted that the country's food supply would not be affected, and that officials had taken precautions should something serious happen. Interestingly, this theme was almost absent from the Finnish and British stories in sample 1.

The four themes above provide an overall view on the narrative structures and rhetorical strategies with which we suggest the coverage on potassium iodide buying anticipated, received and managed affective intensities that condensed with the figure of the fallout. Far from providing an exhaustive list of the symbolic devices at play in this collective taming of the disruptive affective potential of the event, our analysis here points to a deeper 'cultural grammar' of collective rationalizing that cannot not take place—even if it is clear that we are dealing with matters that cannot be exhausted by rationalizing.

This reference to cultural grammar is neither an attempt to dispute the reality of what happened, nor to dispute the scientific facts. Rather, we suggest acknowledging how, in an intensive moment of an affectively loaded media event, seemingly and self-consciously rational discursive practices such as science and journalism rationalize the event in both senses of the word: explaining some of its aspects while repressing others.

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6.3 From Grammar to Stories About the Public

To give more nuance to how the analytically described themes above were mobilized in news reporting, we provide a close reading of two stories. By doing so, we also wish to open a crucial *synthetic* question related to the mediation of affect in disruptive media events: the ambiguous figure of the *public*.

Let us first look at a story from *San Jose Mercury News* (hereafter SJMN), a local paper in the state of California, published on 14 March 2011. Headlined 'So far, very low risk of West Coast contamination from Japanese nuclear accident, experts say',[1] and running to 699 words, the story focuses on the concerns of US citizens about the possibility of the fallout from Fukushima Daiichi reaching the West Coast. Five people are quoted in the story, all of them either scientific experts or public officials.

Most of the story focuses on one public health official, two scientists and one nuclear expert addressing technical questions about Fukushima Daiichi, preparedness in the West Coast area and the intensity of the possible fallout. The story then states that 'some Bay Area residents' have sought to buy potassium iodide. A second public health official is brought in to discourage others from doing the same:

> '*There is no reason for doing it,' he said. 'I understand that people are afraid of the unknown. Even with earthquakes, we're used to them. It's a scary thing when people say 'nuclear contamination.' It's something you can't see, and because you can't see it, people are afraid. It's a normal human reaction. But there's no risk at this point.*'

The story plays heavily on the fallout theme, while also invoking the theme of geographical distance. The theme of experts as a bulwark is present through the officials and scientists, and the quote above brings in the scientific remedy and disaster preparedness themes. The cultural grammar is routinely and effectively at work through the cooperative production of news: in a moment of disrupted sense of security, mainstream news offers a space in which official reactions can handle the anxieties of the public.

In addition to providing an example of how the themes of iodide coverage intertwine, this excerpt opens an interesting angle on how affective intensities and dynamics work inside the overlapping themes. The story follows a structure in which the situation at Fukushima Daiichi is discussed at length, while experts simultaneously downplay the significance of the

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disaster for people in the USA. The fallout theme, mostly present in the text attributed to the journalist, and the themes of distance and techno-science present in the quotations from officials and experts, alternate throughout the story, constructing a discursive division of labour. This interplay builds an affective dynamic into the text, as the affective intensities stick mostly to two figures: that of the fallout, and that of the potassium iodide tablets. Intensities of fear and anxiety stick to the figure of fallout, as it becomes something to be feared, to paraphrase Ahmed (2004b, pp. 7–8), through references to Chernobyl and the links of radiation to cancer. The figure of the iodide tablet, which is referred to as 'a precaution' by an official, becomes a contrast to the threatening fallout, accumulating a vague sense of security.

Apart from the two juxtaposed affective registers, a different kind of affective dynamic is also at play in how the story addresses its readers. The 'public' in the story is described as fearing that the nuclear emission from Japan might contaminate the West Coast, and this fear appears to be the cause for their actions. However, several experts, including the official quoted in the above excerpt, counter the public's fear with technical, medical and scientific information. There is a subtle sensitivity to the way the story approaches and talks about the 'public', as the official in the quotation above understands their fear but also dismisses it as baseless and irrational.

This is an interesting example of affective discipline that begins with the recognition of affective intensity, that is, the public's fearful response to the fallout. At the same time, the potential excess of the affective intensity is seen as something to be disciplined before it is circulated further. Naming the affective intensities of the public as being 'afraid of the unknown' renders them visible as a 'normal human reaction', but this also means they can be disciplined through the official's dismissal. In a sense, we can see how the dialectic between the two classic figures about the 'people', as a crowd prone to emotional mob-like behaviour and as a 'public', a collective capable of reasoning (e.g. Tarde 1901), constitute the core rhetoric of the experts' address and affective management. In other words, this is a news story that talks about the public as emotionally misled, to a public as an informed readership.

Our second example is a report about a salt buying spree in China, published by the *Associated Press* (hereafter AP) on 17 March 2011. Several Anglo-American papers reprinted the story between 17 and 19 March, and other outlets, such as *Xinhua* and *The International Herald*

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Tribune, published similar reports. Headlined 'Panic buying triggered by nuke crisis sweeps China',[2] it provides a starker example of the gulf between the official response and the public reactions. The first paragraph of the story reads:

> *Worried shoppers stripped stores of salt in Beijing, Shanghai and other parts of China on Thursday in the false belief it can guard against radiation exposure, even though any fallout from a crippled Japanese nuclear power plant is unlikely to reach the country.*

The story focuses on two things: salt stockpiling and the rumours circulated in the social media that triggered it. As in the previous example, the fallout theme serves as the main point of reference, providing context for the rumours and the actions of the salt buyers. Compared with the SJMN story above, the affective intensities of the AP report are more pronounced, with words such as 'panic', 'worry' and 'harmful' appearing frequently in the text. Like the SJMN story, the AP story is structured around a juxtaposition between panicked people fooled by rumours, and officials and experts who have everything under control. The story employs the themes of official expertise, distance and techno-science in parts attributed to the journalist, while also introducing them through statements by officials to debunk and dismiss the rumours. If the officials quoted in the SJMN story can be said to have shown a dismissive attitude, the journalistic narrative in the AP story plays along with the dismissal of the public's anxieties and provides little sympathy for those who fell for the rumours. It is also worth noting that as a Western news agency, AP attaches the overflowing anxiety about Fukushima Daiichi to the cultural other, in this case, the Chinese. The story distances the affective excess of the Chinese from the intended audience of the story and in this way, engages in recognizing and directing the flow of affect.

While the affective dynamics of the AP story are somewhat similar to the SJMN story, the affective intensities that make up these dynamics stick to different figures. In addition to the sticky figure of the fallout, which again evokes images of past nuclear disasters via repeated references to radiation poisoning and cancer, the figure of salt, a mundane everyday object, becomes sticky with affect. Unlike the figure of potassium iodide in the previous story, the figure of salt becomes sticky not with a sense of security but with desperation, as panicked shoppers are described scouring supermarkets. Linked with the figure of salt is the figure of rumour-

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spreader, which is the target of the officials' frustration and legal actions such as fines. The rumour-spreader acts as a contrast to the officials, and is something the officials can target and act upon—unlike the invisible fallout. As in the SJMN story, the public's panicked affect is the main target for affective discipline in this story. However, the rumour-spreaders as the inciters of the panic can be seen as the real targets of the disciplining.

In addition to being fearful, the public in both stories cited above, and in several others, is often described implicitly as sceptical about the expert advice. While rarely explicitly articulated, this scepticism may stem from previous blunders of the nuclear industry, officials and the news media. Gamson and Modigliani (1989, pp. 14–24) argue that since the 1960s, there have been several nuclear power plant accidents other than Three Mile Island in 1979 in the USA, but they were often underreported (cf. Weart 2012). Likewise, China and Russia and other parts of the former Soviet Union have had industrial and environmental disasters other than Chernobyl that have been ignored by officials and the local media. These findings reflect how affect can glue historical incidents together to the same cultural narrative, as Chernobyl and TMI references attach Fukushima Daiichi to the narrative of nuclear accidents.

6.4 Affective Dynamics Beyond Fukushima Daiichi

The above two stories highlight how mass mediated representations of reactions to disaster contribute to directing, sustaining and controlling the same reactions. Acts of affective discipline that become visible through the mass media are a key part in society's cultural process of trauma, as society seeks to routinize and ritualize the disaster response in order to maintain its business as usual (Alexander 2012). The iodide tablet news provide a poignant example of how mainstream media play a well-rehearsed part in recognizing, representing and managing the affective intensities aroused during disruptive media events. By both acknowledging the fear of the members of the public and by seeking to reassure their sense of safety with a set of familiar rhetorical themes and figures, the mainstream news media balance the emotional reaction with the need for information and a sense of order. The potassium iodide tablet news shows the modern, traditional form of news and its synchronization with institutionalized sources, reproducing the 'myth' of the centre of society where the rational voice of expertise retains its detached authority from the public (Couldry 2003).

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In Chap. 2 we showed that this calm authority works even in the eye of the crisis, as evidenced by the reaction of the Japanese audience to Cabinet Secretary Yukio Edano, whom they regarded as trustworthy. The #edano_nero case, however, also pointed to an affective dynamic that remains largely invisible in the mainstream coverage, as it revealed how the 'public' was mobilized not merely by fear but also by feelings of solidarity towards the expert. Both cases, however, show the importance of the symbolic—and even personalized—representation of the imagined 'centre' of society in a moment of crisis (Couldry 2003).

The cases of affective discipline and circulation of affective intensities explored in this chapter offer a glimpse into a trajectory of affects taking place during a disruptive media event in the hybrid media environment. We have pointed to certain patterns that the coverage of a dramatic, disruptive media event assumes in relation to affect circulation and control (cf. Zelizer and Allan 2011). Of course, the examples here are neither a sufficient explanation nor an exhaustive description of a whole cultural grammar of dealing with the trajectories of affect in such moments. More work needs to be done in order to unravel the interplay between mediated affective dynamics and discipline as they play out over time and space in the hybrid media environment. Our findings would suggest, however, that a disruptive media event does indeed have an affective trajectory, and that it aims at restoring the social order disrupted by the disaster (cf. Alexander 2012; Sumiala et al. 2016, 2018).

A particularly central issue in these dynamics is the dual image of the 'public'. We have pointed out how the public is objectified as an irrational crowd, an image that helps officials and experts to reproduce the legitimacy of the symbolic centre of the society. Yet, there is the other powerful aspect of the 'people' addressed and articulated as a collective capable of reasonable action. We have seen how this figure is a necessary part of the vocabulary in mass media coverage, even though it often needs the irrational crowd as the 'other', and also how the hybrid media environment can enable its articulation in other ways (cf. Chap. 2). A hybrid media environment seems to be capable of reproducing the dominant ideology and agonistic subject positions simultaneously. This reflexive cycle may be a key vantage point for describing how communication in the hybrid media environment actually works.

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Notes

1. https://www.mercurynews.com/2011/03/14/so-far-very-low-risk-of-west-coast-contamination-from-japanese-nuclear-accident-experts-say-2/. Accessed 20 September 2018.
2. https://www.deseretnews.com/article/700119238/Panic-buying-triggered-by-nuke-crisis-sweeps-China.html. Accessed 20 September 2018.

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PUBLICATION IV

Affective Entanglements of Expertise – The Finnish Case

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CHAPTER 7

Affective Entanglements of Expertise: The Finnish Case

Abstract This chapter examines the role of experts and expertise in the news coverage of Fukushima Daiichi disaster by the Finnish broadcasting company *Yleisradio* (YLE) between March 2011 and December 2016. The chapter analyses both YLE's news coverage and online comments about the news of Fukushima Daiichi. Reflecting findings from previous studies on perceptions on nuclear energy, expertise and affect, this chapter argues that experts often become nodal points of discussion that become sticky with affect. Moreover, the presence of sticky figures such as the experts appears to influence affective dynamics of online comments by often dividing the commenters into opposing positions.

Keywords Affect • Expertise • Online comments • Fukushima disaster

In this chapter, we set out to capture some aspects of the complex sticking and sliding of mediated affect in the context of Fukushima Daiichi by analysing two kinds of affective dynamics that were at play in Finnish news coverage of the disaster in March 2011. After outlining this coverage, we move on to examine some of the dynamics of a public that congregated in the comment sections of the *Finnish Broadcasting Company YLE's* news website. Then, we proceed to look at how affect stuck to expertise in the comments of these stories. In the previous chapter, we were mainly interested in how the public and their affective reactions were represented in

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the coverage. We now turn our attention to the opinions and outbursts of the members of the public themselves. This approach allows us to investigate affect both as a public response and as a textual object constructed and circulated by mainstream news media.

In comments posted to online news stories about the Fukushima Daiichi disaster, people were quick to voice their opinions and feelings, particularly towards two kinds of actors. On the one hand, affective intensities were directed at the experts trying to rationalize the event (cf. Chap. 6); and on the other hand, emotionally loaded comments were aimed at other commenters. Both cases raise questions about how affect can create and unravel senses of community within the same discussions, as online debates tend to become polarized (Paasonen 2015; Oikkonen 2017; Papacharissi 2014). This polarization is created in the interplay of community and animosity, as the discussions often appear to be tied to the roles that commenters implicitly or explicitly assume other commenters or people featured in the stories are playing.

Expert performance in media interviews can be seen as an often routinized and effective technique of affective discipline exercised by experts and journalists together, as our analysis in the Chap. 6 suggested. During disruptive moments and events, however, affective attachments of scientific and technological expertise are rendered more visible—and more vulnerable. In moments of crisis, mediated affect can support expertise and it is needed as a shared background for the plausible rationalization of events (cf. Mazzarella 2009). At the same time, the intensity of the events, their various links and associations with memories of past events and political tactics, also complicate the work of experts. In order to elaborate this dynamic, we approach expertise as a set of figures that become sticky with affective excess while circulating in the hybrid media environment (Ahmed 2004, pp. 4–16; 2010a, pp. 32–33). One aim of this chapter is to untangle some of the affective attachments that are tied to expertise in the context of Fukushima Daiichi.

One particularly useful way of unravelling the cultural complexity of this terrain is the notion of *sociotechnical imaginaries*, as developed by Sheila Jasanoff and Sang-Hyun Kim (2009, 2013). This term binds together social imagination about nation states and technological and scientific progress. While Jasanoff and Kim (2009) do not refer to affect in their definition of sociotechnical imaginaries, the concept resonates strongly with Ahmed's (2004, 2010b) and Oikkonen's (2017) sociocultural understanding of affect. For instance, in her analysis of the Zika outbreak coverage in the New York Times, Oikkonen (2017) demon-

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strates how questions of science, technology and risk are often sticky with hopes and fears. Based on Oikkonen's notions and previous studies of the cultural and social history of nuclear energy (cf. Gamson and Modigliani 1989; Jasanoff and Kim 2009, 2013; Weart 2012), we analyse *YLE's* coverage of Fukushima Daiichi and reader comments to these stories, and ask what kind of affective dynamics are at play when sociotechnical imaginaries are mediated and reproduced.

As geographical and cultural distance is one of our key concerns (see Chaps. 4 and 5), data from Finland opens an angle on the scholarly discussion about Fukushima Daiichi that is distinct from the existing scholarship in various respects. Unlike some European nations such as Germany or Italy, Finland did not establish a moratorium on building new nuclear power plants in the aftermath of Fukushima Daiichi, nor did it choose to phase out nuclear energy. Instead, the Finnish government decided to push on with two ongoing nuclear power plant projects (International Atomic Energy Agency (IAEA) 2018). Moreover, the Fukushima Daiichi disaster did not prompt much public debate in Finland about the safety of nuclear energy, even though the accident occurred during the campaign for parliamentary elections (Laihonen 2016; Vehkalahti 2017; Ruostetsaari 2017). Rather, as our analysis below indicates, the disaster was used to reinforce belief in the safety of Finnish nuclear energy. Finland thus went against the grain in the EU, and, in terms of nuclear energy policy, it aligned itself more with countries like Turkey and India, which have continued to build new nuclear power despite the Fukushima Daiichi disaster (IAEA 2018; Laihonen 2016; Vehkalahti 2017).

After elaborating the concept of sociotechnical imaginaries, we begin our analysis with a quantitative overview of *YLE's* coverage of Fukushima Daiichi over the five-year period from 11 March 2011 to 31 December 2016, in order to give a general sense of how *YLE* employed expert sources in its coverage. Then, we conduct a qualitative analysis with a mixed methods approach similar to the one used in Chap. 6 on stories from March 2011 and their comments.

7.1 Sociotechnical Imaginaries, Cultural Memory and Trauma

Since the advent of commercially produced nuclear energy, use of nuclear power has been tied to nation states' self-images as scientifically advanced societies and to the narrative of economic success (Jasanoff and Kim 2009,

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2013; cf. Weart 2012; Gamson and Modigliani 1989). According to Jasanoff and Kim (2009), this national self-image is constructed through science policy, legislation and their implementation on the levels of industry, politics and research. These national self-images are defined as sociotechnical imaginaries, 'collectively imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects' (Jasanoff and Kim 2009, p. 120). They reside in cultural norms, metaphors and meanings that operate between imagination and action, discourse and decision, and public opinion and state policy (ibid., pp. 122–124). They are instrumental, futuristic, and articulate what is desirable and worth attaining, while also warning against the risks and undesirable outcomes of technology (ibid.).

Sociotechnical imaginaries are not static belief systems, as there are always several competing imaginaries at play at the same time (Jasanoff and Kim 2009; cf. Gamson and Modigliani 1989, p. 6). However, some imaginaries tend to be more persistent and widespread than others because social and cultural institutions that circulate, reinforce and renew them share (at least to some extent) the same interests as the nation state (Jasanoff and Kim 2009, pp. 122–123). This, in turn, means that framing science and technology projects and policies in mediated and other discourses remains closely linked with nation-building, and that in reproducing sociotechnical imaginaries national entities themselves are being reproduced (Jasanoff and Kim 2009, p. 124). They thus act as powerful cultural resources that help shape social responses to science and technology both among those developing national policies and among members of the general public (Jasanoff and Kim 2013, p. 190).

While sociotechnical imaginaries are circulated in mainstream news media as part of narratives about science and technology, they differ from media frames because they are explicitly future-oriented and are associated with the active exercise of state power (Jasanoff and Kim 2009, pp. 122–123). While media frames rely on the circulation of words and images, sociotechnical imaginaries are reflected in state-level science policy (ibid.) However, sociotechnical imaginaries are not dreamed up in a vacuum. Images and associations circulating in the hybrid media environment contribute to shaping national policies and their implementation. For instance, Weart (2012) argues that popular culture clichés about mad scientists and heroic engineers have influenced popular perceptions of nuclear industry and policy since the discovery of radioactivity in the nineteenth century.

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Sociotechnical imaginaries, while dealing with the futures attainable through technology, are also about social power and order (Jasanoff and Kim 2009, 2013). Thus, American and South Korean imaginaries about nuclear energy, for instance, are intertwined with state-society relations and evolving ideas about democracy (Jasanoff and Kim 2009, p. 141; cf. Abe 2013). In the USA, the nuclear imaginary revolved for decades around the concept of containment (Jasanoff and Kim 2009, p.141). This eventually resulted in a situation where a deep opposition was created between nuclear industry and science experts, and between nuclear industry and the general public that was deemed irrational and incapable of evaluating technical information (Jasanoff and Kim 2009, p. 142; cf. Gamson and Modigliani 1989). Weart (2012) addresses this divide by noting that those in power in a society tend to gravitate towards a more positive image of nuclear energy, while those who are in less privileged positions tend to have more cautious views (cf. Ruostetsaari 2017, 2018).

In Finland, nuclear energy has been strongly tied to the nation's rapid industrialization, economic prosperity and energy self-sufficiency since the 1950s (Laihonen 2016; Vehkalahti 2017). While the 1986 Chernobyl nuclear disaster and the Fukushima Daiichi disaster caused a temporary rise in anti-nuclear opinion, a narrow majority in Finland has been consistently pro-nuclear (Energiateollisuus 2016; Laihonen 2016; Vehkalahti 2017). There are currently two nuclear power plants, with two reactor units each, in Finland. One reactor unit has been under construction since 2005 (Teollisuuden voima 2018) and plans for a new power plant have been going on since 2010 (Fennovoima 2018).

While neither Jasanoff and Kim nor Gamson and Modigliani make explicit reference to affect, their examples help us to grasp how questions of science and technology are sticky with various kinds of affective intensities (cf. Oikkonen 2017). Traumatic and disruptive events like the Fukushima Daiichi disaster challenge sociotechnical imaginaries and self-images of nations (Oikkonen 2017) in ways that require societies to readjust them in order to return to status quo. Thus, in the case at hand, what Alexander (2012) describes as the ritualization of traumatic events necessarily involves the renegotiation of sociotechnical imaginaries and a response to the possible counter-imaginaries or counter-narratives (Sonnevend 2016) that may emerge from the aftermath of disruptive events.

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7.2 Experts in YLE's News Coverage Between 2011 and 2016

The data for this case study was collected from *YLE's* online Finnish-language news portal yle.fi/uutiset (yle.fi/news) between 2014 and 2016. The entire sample consists of 554 online news items published between 11 March 2011 and 31 December 2016. News stories were retrieved from *YLE's* news website by using the site's search function with the keywords 'Fukushima*', 'Japan*', and 'säteily' (Finnish for 'radiation'), and by running corresponding searches on Google. In the section about online comments to *YLE's* news coverage on Fukushima Daiichi, we focus on stories published in March 2011 (N = 304) that were open for comments at the time of data collection (N = 59).[1]

To focus on questions of expertise, we selected stories that featured either direct or indirect mentions of expert sources for a more detailed qualitative analysis. We define 'expert' rather loosely as *a person commenting on developments at Fukushima Daiichi on behalf of an organization, a business, or a governmental body; or as an academic or other specialist, based on knowledge about nuclear energy and related issues.* The number stories about Fukushima Daiichi containing either mentions of or direct or indirect quotations by such actors totalled as 205, or 37 per cent of the total sample, for the six years examined. The number of direct quotations is notably lower: among the 205 stories, 73 stories or roughly 36 per cent included direct quotations. Out of those 73 stories, 49 were published in 2011. Figure 7.1 illustrates the distribution of the stories with references to experts for the entire period and the number of direct quotations for each year.

After 2011 both the number of stories about Fukushima in general and stories featuring experts fell significantly, as illustrated by Fig. 7.1. This follows a common and well-documented pattern in crisis coverage, in which news media turn their interest elsewhere after the initial situation is stabilized (cf. Pantti et al. 2012; Galtung and Ruge 1965). The uptick in 2013 is most likely explained by news about leaks of contaminated coolant water at the stricken power plant.

Even though most stories with mentions of experts were published in 2011, the number of direct quotations is relatively low: out of 127 stories only 49 (38 per cent) had direct quotations from 43 different people. The experts cited most frequently in direct quotations are The Finnish Radiation and Nuclear Safety Authority Säteilyturvakeskus (hereafter STUK) representatives: eleven different people from the authority are

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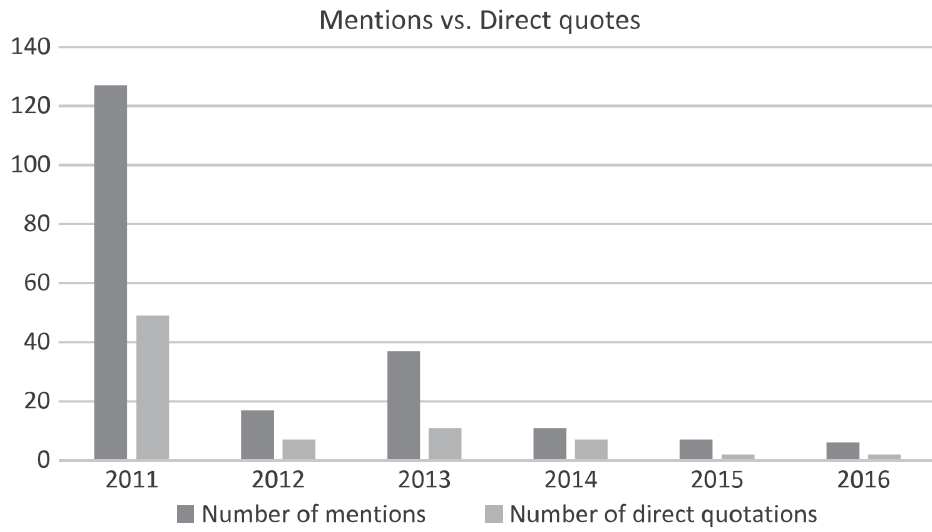

Fig. 7.1 Number of mentions compared to number of direct quotations of experts from 2011 to 2016

consulted. In addition, 6 other STUK experts are quoted indirectly, bringing the total number of individual STUK experts to 17. One of them (Director General Jukka Laaksonen) was quoted in seven stories, while most of the quoted experts appeared in only one. Moreover, the sourcing pattern of coverage in March 2011 was heavily domesticated: out of the 43 individuals quoted, 30 were Finnish and 13 other nationals. Out of these 13 people, 8 were identified as Japanese.

These findings show that *YLE's* coverage of Fukushima Daiichi in 2011 was dominated by a Finnish official expert perspective, with STUK's Director General Jukka Laaksonen having a particularly pronounced role. This suggests a strong link between official nuclear energy policy and expertise and the public sense-making of the initial disaster. It also betrays a link between quick response crisis journalism and expertise: when in need of authoritative sources, the news media are liable to turn to nationally sanctioned experts.

Next, we provide a more detailed qualitative analysis of STUK's role in *YLE's* Fukushima Daiichi coverage in March 2011. First, we examine stories with STUK experts in a more general level, focusing on articulating expertise. Then we provide a close reading of an interview by STUK's Director General Jukka Laaksonen and its online comments from the perspective of affective dynamics and discipline.

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7.3 Construction of Expertise in YLE's STUK Stories

Generally speaking, *YLE's* coverage of the Fukushima Daiichi disaster in March 2011 was heavily technology-oriented. Most stories concentrated on describing the events at the damaged nuclear power plant and on explaining technical details. Stories that featured STUK experts were concerned with specific issues, particularly the possibility and probability of a meltdown, and the amount of radiation released from the damaged reactors. The focus was on events at the Fukushima Daiichi plant site, while the people living in the affected area were mentioned only in passing.

The language used in these stories, both in the quotations and the journalistic narrative, was relatively neutral but filled with numbers and special terms. Interestingly, while the stories focused mostly on narrating the events at the Fukushima Daiichi site and not on the people in the affected area, *YLE* did publish two stories about the effects of radiation exposure on 'the human body'.[2] With detailed fact boxes about radiation dosage and exposure limits, this abstracted the imagined radiation victims into anonymous objects. These stories offer a telling example of how journalism adopted the experts' narrative styles and vocabulary—and by doing so, took active part in disciplining the affective intensity circulating around the event.

As we have shown above, most of the experts mentioned in *YLE's* coverage of Fukushima Daiichi in 2011 were Finnish. This baseline practice of domestication was often accentuated with another distinction. That is, a notable number of stories constructed a juxtaposition between Finnish and non-Finnish (mostly Japanese), or Western and Japanese experts, illustrating the overlapping of expert authority with national identification. For instance, a story about radiation levels at Fukushima Daiichi and the International Nuclear and Radiological Event Scale (hereafter INES) grading of the disaster published on 15 March 2011[3] discusses the situation at the Fukushima Daiichi site, and the information is credited to STUK—even though it concerns Japan and is hardly produced by Finnish experts. Moreover, when the story was published, Japan had classified the disaster at INES 4, while the French nuclear authorities suggested a higher level, INES 6. In the story, STUK experts are indirectly paraphrased, stating that while the local authorities decide on the INES classification, STUK agrees more with the French interpretation. In the whole story, which is 300 words long, there are only two indirect references to Japanese

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experts. Textually speaking, the narrative structure of the story quietly legitimizes the expertise of STUK, while undermining the expertise of the Japanese.

Such tendencies became more pronounced as time progressed from 11 March: there was more and more explicit criticism of Japanese experts and official crisis management in the sample. The most glaring examples are five interviews with STUK Director General Jukka Laaksonen, in which he openly berates the Japanese for their handling of the disaster, while at once emphasizing the high standards of Finnish nuclear expertise.[4] We will return to one of these interviews below.

In *YLE's* coverage, the disaster at Fukushima Daiichi was domesticated by using mainly Finnish experts and by legitimizing these experts against other possible sources of expert information. Moreover, these stories made visible the blended role of STUK in Finland. As a public authority, STUK is charged with informing citizens about nuclear safety issues, but in *YLE's* coverage, the organization and its experts are effectively given a monopoly over commenting on developments at Fukushima Daiichi in March 2011. As months and years pass, though, coverage of the disaster relies increasingly on news service material, and Japanese officials and the Fukushima Daiichi plant operator TEPCO are given more space in the stories. After the most acute phase of the disaster in 2011, appearances by STUK officials dry up almost completely, except for August–September 2013 when leaks of contaminated coolant water climbed onto the international news agenda.

7.4 A Moment of Affective Dynamics

While the well-known institutional instincts and routines of news co-production created a nationally anchored and authoritative position for official domestic expertise in the hybrid, interactive news space of 2011, this was not the whole story. In order to capture a different perspective, we now move on to examine *YLE's* news comments section in March 2011. To illustrate the dynamics at play in the comments, we focus on the story that received the largest number of comments.

YLE published a short interview with STUK's Director General Jukka Laaksonen at 12:18 AM on 16 March, five days after the earthquake and the tsunami struck Fukushima Daiichi. The story—*STUK Director General Strongly Criticizes Japan's Rescue Effort*[5]—running to just 158 words, was based on Laaksonen's interview to *YLE's* Radio 1 morning show. The

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online version of the story was written in a question-and-answer format to follow the original radio interview. The bulk of the story consists of four long direct quotations from Laaksonen; the rest is in the form of short remarks or additional questions from the journalist, who is not identified.

In the four quotes, Laaksonen tells the journalist how he and his colleagues at the IAEA have been wondering why the Japanese appear to have had such difficulty in organizing the rescue effort at Fukushima Daiichi. He further speculates that the reason for this apparent inefficiency lies in the 'complicated and inflexible' Japanese management style, which 'values formal rules and rank over best practices and engineering common sense'. He then goes on to express his surprise as to why rescuers at Fukushima Daiichi have not used fire engines to spray water into the damaged reactors, and finally quips that he thinks the whole affair should have been brought under control days ago, 'but it seems they [rescue staff at Fukushima Daiichi] are constantly having some kind of difficulties'.

Not surprisingly, the interview provoked a reaction. The story attracted 198 comments on *YLE's* website, all on the same day. While the time stamps on the comments only state the *day* of posting, they hint at an intense reaction. If the responses were spread out evenly from the moment of publication (12:18 AM) until 10 PM when the commenting was closed (YLE 2010), approximately 20 new comments were added each hour. As a small snapshot of networked affective intensity—and the nuanced way it becomes articulated at the interface of mainstream and social media—these comments deserve a separate short analysis.

Compared to previous research on online commenting (e.g. Binns 2012; Jane 2014; Matamoros-Fernández 2017; Paasonen 2015; Pantti 2016; White and Crandall 2017), the language of the comments to Laaksonen's interview was almost businesslike. Even though most of the comments were in colloquial Finnish, they contained very few profanities and had a clear, concise structure. The absence of outright cursing, blatant provocation, memes and flooding—all staples of present-day online debate on open fora—was striking. While the commenting may at first glance appear unexpectedly civilized, a closer examination shows that the commenters were in fact forcefully airing their views and feelings about the Fukushima Daiichi disaster, their understanding of *YLE's* news coverage, and their frustration with STUK and its Director General—but all within the limits set by *YLE's* guidelines. The exceptionally decent behaviour of *YLE's* commenters can in part be explained by rigorous moderation and enforcement of *YLE's* commenting guidelines (YLE 2010). For instance,

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rules prohibited direct linking to non-YLE-affiliated websites, and commenters were instructed to comment on the news item in question, and not to comment on or reply directly to other commenters (ibid.).

Because the story consisted mostly of Laaksonen's answers, it is not surprising that most of the affective intensities in the comments were directed at him. This made him a sticky node of the discussion, as Paasonen (2015, p. 35) describes the situation where affective intensities in an online discussion focus around one particular figure, causing it to accumulate more affective value than other figures present in the discussion (cf. Ahmed 2004). Most commenters said they felt Laaksonen's remarks were impertinent, and he was criticized for arrogance and lacking in empathy towards the Japanese victims. Apart from lacking in empathy, Laaksonen was seen as a prime example of a stereotypically incompetent, know-it-all boss. This was made apparent by several sardonic comments suggesting that Laaksonen (and often other STUK experts as well) should 'pack their pumps and catch a plane to Japan so that they could give a hand to the exhausted workers there', and by repeated references to a proverb which says 'it's easy to give good advice from dry land when there's trouble at sea'.

Not only frustration and disappointment, but also shame stuck to Laaksonen's figure in its various forms. On the one hand, several commenters said his remarks made them feel embarrassed to be Finnish. On the other hand, several commenters said Laaksonen should be ashamed of himself. Shame can be used to exclude unwanted individuals from communities, but it can also be used to force people to correct their behaviour (Every 2013, pp. 668–669; Probyn 2005, pp. ix–x, 75–94). Many commenters who felt Laaksonen had brought shame both on himself and on other Finns thought he should retract his words and apologize. It was rarely specified, however, to whom Laaksonen should apologize: to his fellow Finns for embarrassing them, or to the Japanese first responders and disaster victims for his tactlessness. In these comments Laaksonen's figure was engulfed in shame, but it also became entangled with notions of Finnishness and concern about what people outside Finland might think of Laaksonen's remarks—and by the same token of other Finns. Interestingly, Laaksonen's remarks did not produce any public outcry other than the disapproval of *YLE's* commenters.

However, Laaksonen's remarks also found strong emotional resonance among several commenters. Many shared both his dismay at why the reactors at Fukushima Daiichi had not been stabilized and his speculation that the apparent tardiness of the rescue and cooling efforts were explained by

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certain aspects of Japanese culture. Some of these sympathetic views also expressed racist stereotypes about Japanese people as untrustworthy and submissive to hierarchies, and they even included explicit expressions of negative affect such as mistrust towards the Japanese (cf. Ahmed 2004, pp. 46–47). However, openly racist comments were quite few and far between, which in the light of current research on racism in online discussions is rather unusual (e.g. Pantti 2016, p. 366; Matamoros-Fernández 2017). While *YLE's* rigorous moderation may mostly explain the absence of blatant racism, we suggest that the intensity, suddenness and scale of the disaster may have evoked a sense of solidarity towards the victims in commenters that outweighed any sense of animosity (see also Chap. 2).

7.5 Experts as Sticky Figures

Against the cultural and social backdrop described above, the remarks by STUK Director General Laaksonen about the rescue operation at Fukushima Daiichi and the comments posted to his interview can be interpreted as having made momentarily visible the volatile political affective associations about nuclear energy, expertise and trust.

Many of the comments critical of Laaksonen spilled over into a critique and distrust towards STUK as an organization. Comments critical of STUK often made the point that the organization had been slow and contradictory in its response during the Chernobyl accident in April 1986, when a cloud of radioactive fallout from the explosion of the Soviet reactor had hovered over Finland for some days before people were informed (Timonen et al. 1987). This general sense of suspicion also had a paradoxical double articulation as several comments accused STUK of either fear mongering or withholding information about events at Fukushima Daiichi. In other words, despite their contradicting interpretations, the commenters assumed that the organization was trying to manipulate the discussion in some way. It is also worth pointing out that many of those who supported Laaksonen's views accused other commenters of overreacting, reflecting the division we described in our analysis of the iodide tablet news in Chap. 6.

Accusations thrown around by both sides of the argument render visible how various actors compete over the power to define and direct the public discourse on nuclear energy. Comments aligned with Laaksonen's point of view often called for what Laaksonen himself described as 'engineering common sense', which we interpret as a rationalistic, matter-of-

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fact approach to nuclear energy that sees the disaster at Fukushima Daiichi as a technological problem with a technological solution. This approach juxtaposes and identifies itself against its self-made opposite: a supposedly emotion-driven view of nuclear energy as an example of human hubris. However, this figure of the 'irrational' crowd does not correspond to our reading of the reactions provoked by Laaksonen's interview.

However, Laaksonen's remarks about the presumed incompetence of the Japanese are certainly at odds with the normative expectations of a scientific expert's calm and collected behaviour and affective expression. His open frustration may explain why some commenters responded so harshly to his remarks, which were considered highly insensitive in view of the scale of the disaster. Moreover, by discrediting the Japanese and extolling the high standards of Finnish nuclear expertise, Laaksonen and the commenters who shared his views renew the so-called myth of the safety of nuclear energy (Jasanoff and Kim 2009; Penney 2012; Weart 2012; Abe 2013), which asserts that nuclear energy may be risky when used by others, but is safe in domestic use. The relationship between experts and the myth of safety is a complex one. On the one hand, in a crisis, experts are expected to manage the affective dynamics of the discussion by reassuring the public that everything is under control. On the other hand, the same reassurance and attempts at quelling panic can be interpreted as an attempt to downplay the risks and discredit critique (Weart 2012; cf. Chap. 6).

7.6 Unwrapping Affective Intensities of Expertise and Technology

Our analysis has shown how state-level sociotechnical imaginaries become visible and are reproduced in mediated representations of a crisis that involves science and technology. Expert citations are a co-productive practice of affective disciplining of the public between news media and experts (cf. Chap. 6). Previous studies of media discourses about nuclear energy suggest that by favouring a science and technology heavy approach, mainstream media have contributed to creating 'a myth of the safety of nuclear energy', which was also apparent in the aftermath of the Fukushima Daiichi disaster (Gamson and Modigliani 1989; Penney 2012). Recurring assurances of the safety of nuclear energy in the 'right hands' and putting the blame for the accident on the Other rather than the technology itself, can be seen as a strategy of status quo maintenance after a potentially traumatic but fortunately geographically and culturally distant disaster (Alexander 2012).

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However, by illustrating the mediated ripples of the disaster in a culturally and geographically distant location, we have shown how mediated representations of scientific expertise become sticky with affect that resonates with cultural and historical hopes and concerns attached to nuclear energy—and to scientific progress more broadly. The news coverage of Fukushima Daiichi in Finland and particularly the role of STUK in that coverage also made visible the links between domestic sociotechnical imaginaries of nuclear energy and expert authority, even though the momentary reactions to the crisis revealed the weak points of the myth of the safety of nuclear power.

Moreover, the same affective intensities that stick to notions of expertise in the context of nuclear energy also played a part in how members of the public reacted to mediated representations of the Fukushima Daiichi disaster and expert interpretations of the situation, and in how affective dynamics of online communities played out in this particular context. For example, our analysis of comments to the interview with STUK Director General Laaksonen showed how comments that voiced disagreement with Laaksonen's remarks focused their critique on certain negative notions of expertise, such as the stereotype of a know-it-all boss. Similarly, comments that agreed with Laaksonen found resonance with more positive interpretations of expertise, such as the figure of a capable engineer. The senses of community and animosity that drive online discussions are therefore linked not only with affective intensities that circulate in the discussions, but also with the values and assumptions that each commenter brings along into the discussion.

The confusion and concern raised by the material and humanitarian toll of crises such as Fukushima Daiichi even in geographically distant locations, and society's attempts to respond to these intense emotions, render visible a very human need for sense-making and rationalization. By analysing the affective dynamics that drive this need, we hope to encourage further studies on similar topics and critical reflection from crisis communication professionals.

Notes

1. Commenting feature on YLE's online news was not automatically available to all stories published on the site, but it was switched on only in selected stories, between 7.30 AM and 10 PM on weekdays and 12 PM to 10 PM on weekends (YLE 2010).

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2. Fukushiman säteilystä ei suoraa haittaa terveydelle [No direct harm for health from Fukushima radiation] https://yle.fi/uutiset/3-5325035 and STUK: Japanin tilanteella ei terveysvaikutuksia Suomeen [STUK: No health effects in Finland from situation in Japan] https://yle.fi/uutiset/3-5325745 (Accessed October 24, 2018).
3. STUK: No health effects… https://yle.fi/uutiset/3-5325745. (Accessed October 24, 2018).
4. Säteilyturvakeskus: Reaktorin sydämen sulaminen mahdollista, mutta epätodennäköistä [Radiation and Nuclear Safety Authority: Melting of the reactor core possible but unlikely], https://yle.fi/uutiset/3-5323973. (Accessed September 25, 2018); STUK: Suuri päästöriski japanilaisvoimalasta [STUK: High risk of emission from Japanese power plant], https://yle.fi/uutiset/3-5324075. (Accessed September 25, 2018); Sähkön puute perussyy ydinvoimalaongelmiin [Lack of electricity main reason behind nuclear power plant trouble], https://yle.fi/uutiset/3-5324717. (Accessed September 25, 2018); STUKin pääjohtaja arvostelee kovin sanoin Japanin pelastustoimia. [STUK Director General harshly criticizes Japan's rescue operations] https://yle.fi/uutiset/3-5326479. (Accessed May 17, 2018, comments harvested in September 2014); STUKin Laaksonen: Meillä on ehkä paras kuva Japanin tilanteesta [STUK's Laaksonen: We probably have the best insight on Japan's situation], https://yle.fi/uutiset/3-5332677. (Accessed September 25, 2018).
5. STUKin pääjohtaja arvostelee kovin sanoin Japanin pelastustoimia. [STUK Director General harshly criticizes Japan's rescue operations] https://yle.fi/uutiset/3-5326479. (Accessed May 17, 2018, comments harvested in September 2014).

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PUBLICATION V

Managing unpleasant moods: Affective discipline in Facebook discussions

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