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Deliberation or Polarisation in the Norwegian Online Climate Change Debate

A Netnography of Facebook Comment Fields

Master's thesis in Media, Communication and Information Technology

Supervisor: Tomas Moe Skjølvold & Ida Marie Henriksen

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Abstract

This spring, several European governments have declared climate change a national crisis. Thousands of high school students worldwide went on strike to illustrate their discontent with current climate politics, in the Fridays for Future movement created by Greta Thunberg. These activities follow in the wake of numerous reports and articles concluding that temperatures are increasing, ice is melting, sea levels are rising, and that these factors are affected by human activity. But on the Norwegian online comment fields, a completely different story is unfolding. The notion of anthropogenic climate change is described as propaganda, manipulation, fear mongering, hysteria, fiction and a money machine for the elite. Most of the debate participants do not believe in human made climate changes, in contrast to results from surveys concluding that only 4% of the Norwegian population are climate sceptics. In this study, I perform an online ethnography and investigate the debate between those who believe in anthropogenic climate changes, and those who do not. With theories of deliberative democracies and echo chambers as a framework for the analysis, I evaluate whether the discussion is deliberative or polarising; I discuss the possibility of the existence of more climate sceptics than what the surveys tell us; I debate how the online climate sceptics can affect the society; and finally, I discuss if the type of comment sections observed in this study can be vehicles for deliberation, or if their socio-material features rather push the debate in a destructive direction. The analysis is presented in three chapters, first exploring the debate between conspiracy theories and the scientific consensus, then investigating how fatigue is countered with arguments of ethics and responsibility, and finally, I explore the comments that ridicule climate change and climate policies.

Sammendrag

Denne våren har flere europeiske regjeringer erklært at klimaendringer er en nasjonal krise. Tusenvis av ungdomsskoleelever over hele verden streiket for å illustrere sin misnøye over dagens klimapolitikk, i Fridays for Future-bevegelsen startet av Greta Thunberg. Disse aktivitetene kommer i kjølvannet av utallige rapporter og artikler som konkluderer med at temperaturene øker, isen smelter, havnivå stiger, og at disse faktorene er påvirket av menneskelig aktivitet. Men på norske kommentarfelt er historien en helt annen. Menneskeskapte klimaendringer blir kalt skremselspropaganda, manipulasjon, hysteri, fiksjon og en pengemaskin for eliten. Flesteparten av de som deltar i debatten tror ikke på menneskeskapte klimaendringer, hvilket står i sterk kontrast med resultater fra spørreundersøkelser, som viser at kun 4% av den norske befolkningen er klimaskeptikere. I denne avhandlingen utfører jeg en online etnografi, hvor jeg undersøker nettdebatten mellom de som tror på menneskeskapte klimaendringer, og de som tviler. Med teorier om deliberative demokratier og ekkokammer som rammeverk evaluerer jeg hvorvidt diskusjonen er deliberativ eller polariserende; jeg undersøker muligheten for at det kan eksistere flere klimaskeptikere enn hva spørreundersøkelser viser; jeg utforsker hvordan klimaskeptikerne på nett kan påvirke samfunnet; og til slutt diskuterer jeg om kommentarfelt av den typen jeg har observert bidrar til et deliberativt demokrati, eller om deres sosiomaterielle egenskaper heller dytter debatten i en destruktiv retning. Analysen er presentert i tre kapitler, hvor jeg først utforsker debatten mellom konspirasjonsteorier og vitenskapelig konsensus, og deretter undersøker hvordan klimaretthet blir møtt av argumenter basert på etikk og moral, og til slutt presenterer jeg kommentarene som latterliggjør klimaendringer og klimapolitikk.

Preface

Before commencing the journey that the creation of this master's thesis has been, the only thing I really knew was that I wanted to write about the environment. The issue of climate change and the ensuing debate has always been very interesting to me, so I have thoroughly enjoyed writing my thesis upon this topic. And the first people I want to thank for having given me this opportunity are my supervisors Tomas Moe Skjølvold and Ida Marie Henriksen, as without their unwavering support and guidance I would probably still be banging my head against the wall, wondering where to start. Secondly, I am grateful to our course supervisors, and particularly Lisa Reutter, for her useful feedback and readiness to respond to all my e-mail queries. Finally, I am thankful to friends, family and classmates for their moral support, and perhaps Hedvig Tønnesen in particular, as our workdays and her input on my thesis have been immensely helpful throughout this process.

Hailey Kristianne Hammer

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1 Introduction

1.1 Climate Change: Crisis or Conspiracy?

This spring has seen governments worldwide declaring climate change a national crisis (Fjeld, 2019). Thousands of high school students in 123 countries went on strike in the Fridays for Future movement created by Greta Thunberg, to illustrate their discontent with current climate politics (Fjeld & Lote, 2019). Numerous reports and articles have been published just this year, concluding that temperatures are increasing, sea levels are rising, that these changes are affected by human activity, and that action is needed to stop these developments (Eriksen, 2018; IPCC, 2018; Lepperød, 2019; Simpson, Breili, & Ravndal, 2019; Torgersen, 2019; United Nations, 2019).

But in the virtual world, a different story is unfolding. On Norwegian comment fields, climate change is being called propaganda, manipulation, fear mongering, hysteria, fiction and a money machine for the elite. A majority of the commentators are certain that human made climate change is a conspiracy, created either for economic reasons or to gain control. For instance, on an article from the news site forskning.no about rising sea levels this February, one person wrote:

The majority has stopped believing in god and the devil and that's why the power needs to invent a new threat. It's all about fear mongering and terrorisation of the world's population.

And this severe contrast of opinion is what I will investigate in this study. I will look at comment fields on articles from three different publications, evaluating the debate between those who believe in human made climate changes, the climate believers, and those who do not – the climate sceptics. I will try to ascertain the fruitfulness of the debates by asking this question: are the debates characterised by civil deliberation, or rather polarisation and segregation? With technological determinism as a starting point (McLuhan, 1964), I will embark upon a theoretical journey exploring the public sphere (Habermas, 1962/1989), deliberative democracy and cyberdemocracy, and apply these when evaluating deliberation (Tsagarousianou, Tambini, & Bryan, 1998; Young, 2000), whilst I will use the spiral of silence theory (Noelle-Neumann, 1993) and echo chamber theory (Sunstein, 2002, 2018) to investigate polarisation. I hope that my study can provide more understanding around the

positions in the online climate change debate, which is important in order to develop effective responses to the problem (Aasen, 2017, p. 213).

In addition, I ask the following question: is it possible that there are more climate sceptics in existence than what the surveys present, and that respondents reply according to the dominant opinion of the country, as the spiral of silence theory predicts (Noelle-Neumann, 1993)? According to the director of The Centre for International Climate and Environmental Research (CICERO), Kristin Halvorsen, we can just forget the climate sceptics, as a survey conducted by CICERO shows that only 4% of the population deny human made climate changes (Forskningsrådet, 2019). But I intend to discuss whether there on the basis of the large amount of sceptics online, and the spiral of silence theory (Noelle-Neumann, 1993), is reason to believe that the amount is bigger than this, in which case their potential political power could be more significant than what is currently assumed.

And because of this possibility, I will evaluate how the climate sceptics can affect the society. Even though findings from research on online communities cannot be directly transferred to the general population (Kozinets, 2010, p. 47), Sunstein (2018, p. 59) argues the existence of so-called echo chambers, where algorithms present Internet users with similar information to what they have already shown interest in, and brings likeminded people together. In a worst case scenario, this can contribute to a fragmented society and breed extremism, hatred and violence (Sunstein, 2018, p. 57). I will use the echo chamber theory to evaluate whether the minority opinion holders on the comment fields that I observe seem to be aggregated further into their original positions, and whether this group thus can hinder the implementation of environmental policies (Sunstein, 2002, 2018).

Finally, I discuss if the type of comment sections observed in this study can be vehicles for deliberation, or if their socio-material features rather seem to push the debate in a destructive direction. Absolute freedom of speech is often seen as the ultimate political and democratic value (Tsesis, 2001, p. 818), and cyberspace can provide tools and arenas for free expression and debate (Campbell & Carayannis, 2018; Tsagarousianou et al., 1998; Tsesis, 2001); but if the debate is characterised by personal attacks and threats rather than a factual discussion (NTB, 2019), and if certain groups refrain from partaking in the debate to avoid this harassment (Veledar & Burkal, 2018, p. 70), can we still argue that the comment fields benefit the democracy? Or does the harassment and following exclusion of vulnerable societal groups lead to more segregation and increasing gaps in society? Throughout my study I attempt to discuss these questions through my observation of the online climate change

debate, by using the previously mentioned theories to analyse the presence of deliberation or polarisation, and ultimately assess how this affects the democracy.

1.2 Studying Comment Fields

To answer the questions posed in the previous section, I have conducted an online ethnography. Being an sub-branch of ethnography, it can be defined as using computer-mediated communications (CMC) to arrive at the ethnographic understanding and representation of a cultural or communal phenomenon (Kozinets, 2010, p. 60). While there are some weaknesses to the method, like the inability of the findings to be transferred to the general population (Kozinets, 2010, p. 47) and the difficulties in designing studies in cyberspace as a relatively new and fast changing field (Hewson & Laurent, 2008, p. 59), there are also numerous advantages. Online ethnographers can for instance explore the ability of online communities to change social ties in the real world (Haythornthwaite, 2005, p. 141); they can assess the participation of the public in governmental work and cyberdemocracy (Bingham, Nabatchi, & O'Leary, 2005; Campbell & Carayannis, 2018; Tsagarousianou et al., 1998); they can stimulate a broader discussion of the nuances of presence and engagement in a debate (Hine, 2008, p. 267), and they can evaluate the structure of a community's communications, the patterns of social relations, and the flow of communication between different online communities (Kozinets, 2010, p. 49).

Thus, by employing this method, I hope to gain an understanding of the online climate change debate in Norway, and analyse the communication patterns and the structure of the participants argumentation. Whilst the online climate change debate has frequently been studied globally, it has of yet not been thoroughly investigated in Norway. I therefore use studies from other countries as inspiration for my research: one that investigates comments made on climate change articles on the Guardian (Collins & Nerlich, 2015), and a comparative study on climate change comments executed in the US, the UK, India, Germany and Switzerland (Walter, Brüggemann, & Engesser, 2018). I use these studies as a basis for my own investigation, and apply similar methods when conducting my analysis.

1.3 Structure of the Thesis

In the following chapter I will explore the theory used to conduct the analysis. I will present a more in-depth description of the existing research used as inspiration, before unfolding the theories of technological determinism, public sphere, deliberative democracy,

cyberdemocracy, spiral of silence and echo chambers. Then, I will explain my method of research, shortly examining the online ethnography method before moving on to how I have executed the data collection and analysis, including what ethical implications I have considered, before finally assessing the quality of the study. The following three chapters present the analysis, starting with the comments concerning conspiracies and science, before moving on to fatigue and responsibility, and finally the comments expressing ridicule. In the last chapter I discuss and summarise my findings, concluding upon whether I found a prevalence of deliberation or polarisation, discussing what this can mean for the society and the democracy, before presenting my suggestions to future research.

2 Theoretical Framework

The purpose of this study is to discuss whether there is evidence of democratic deliberation in online debates on climate change, or whether there is a prevalence of polarisation and echo chambers. Early research into the field of computer mediated communication (CMC) would often argue that these technologies and all the methods of communication they entail, like discussion forums, comment fields etc., could lead to changes in the social structure, the establishment of new public spheres, and improve a democratic society (Campbell & Carayannis, 2018; Collins & Nerlich, 2015; McLuhan, 1964; Tsagarousianou et al., 1998). However, it has also been argued that the Internet – specifically the algorithms that provide users with content similar to what the user has already shown an interest in – can lead us into so called echo chambers, and thus increase polarisation rather than contributing to a deliberative democracy (Barberá, Jost, Nagler, Tucker, & Bonneau, 2015; Sunstein, 2002, 2018; Walter et al., 2018).

In this chapter I will explain these theories, as well as some other relevant concepts, in order to create a theoretical framework around my study. However, I will first present previous research similar to this thesis, these being executed in the US, the UK, India, Germany and Switzerland, as I have been inspired by these studies when conducting my own research. Then, I will shortly introduce several theoretical terms that will be used in the analysis: technological determinism, public sphere, deliberative democracy, cyberdemocracy, spiral of silence, and echo chambers. The theories will be used to ascertain whether the debates that I have studied indicate a new form of public spheres with an inclusive, deliberative discussion, or whether the users seem to be placed in echo chambers which could lead to an increase in polarisation.

2.1 Existing Research

The study that perhaps bears the closest resemblance to this research analysed the online climate change debate in the UK, using comments made on news articles on The Guardian (Collins & Nerlich, 2015). Through corpus analysis using mainly a quantitative approach, it investigated over 1500 comments, structured around reciprocity, topicality and incivility (Collins & Nerlich, 2015, pp. 194-196). Their goal was to ascertain whether the debate was deliberative, and thus whether it could contribute to democratic processes, terms that are further explored later in this chapter. Their research had limitations because of its quantitative nature, but it was able to show on a descriptive level “how certain contributors dominate the

discussion and the degree of user interaction” (Collins & Nerlich, 2015, p. 203). They ultimately concluded that there was indeed proof of deliberation in these debates, as the contributors engaged with other users in the comment field and preferred well-reasoned argumentation over incivility (Collins & Nerlich, 2015, p. 205).

Another similar study analysed 800 comments made on news articles from the US, the UK, India, Germany and Switzerland, using the spiral of silence theory as a framework for the analysis (Walter et al., 2018). The study presented a percentage of supportive, neutral and challenging comments, taking into account what country the news story was published in, whether the publication was tabloid or conservative, and whether the story was written by a columnist and/or deviated from the Intergovernmental Panel on Climate Change (IPCC) consensus (Walter et al., 2018, p. 210). The scholars found that the user comments seemed to adapt to the dominant opinion of the media outlet, in line with the spiral of silence theory as well as previous research. They did not, however, adapt to the dominant opinion of the country (Walter et al., 2018, p. 213). The authors also found that the public sphere has disintegrated into different spheres that represent different communities. Building on arguments by Sunstein (2002) they claimed that because of selective exposure facilitated by search engines and social networks, these communities can evolve into networks of echo chambers.

I have also perused studies that have investigated the climate change debate in general, not just online. Aasen (2017) investigated polarisation in the Norwegian climate change debate and found a political tendency suggesting that those with individualistic values became less concerned with climate change, whilst those with more egalitarian values reported increasing concern (Aasen, 2017, p. 224). This is reflected in my data material, and will be further explored in *Fatigue vs Responsibility*. Others have found that the climate change debate has generally been of low quality, and that there has been a tendency of certain groups or individuals to draw out a few not well established facts, a tendency which weakens the effectiveness of environmental discussion (Laslett, 2003, p. 212). Several quantitative surveys have been conducted on the topic and I have used the results from some of these in my thesis, such as the European Social Survey (European Social Survey, 2018) and a survey conducted by The Centre for International Climate and Environmental Research (Forskningsrådet, 2019).

The authors of the first two studies I mentioned saw the limitations of a quantitative approach to this research, and called for a more qualitative investigation into online climate change debates (Collins & Nerlich, 2015, p. 203; Walter et al., 2018, p. 215). Building on

their approaches but adapting it to a qualitative method, I will manually read and analyse comments, looking for proof of deliberation or polarisation using the theories explained in this chapter. Although this means that my sample will be smaller, it can provide a more thorough and in-depth analysis of the discussion that quantitative research is unable to accomplish.

2.2 Theory

2.2.1 Technological Determinism

As aforementioned, in the analysis chapters I will attempt to ascertain whether CMC has created new public spheres or a more deliberative democracy, thus using a technologically deterministic viewpoint. This viewpoint is sometimes applied within technology research (Skjølsvold, 2015, p. 21), and it is often attributed to the works of Karl Marx in the late 1800s (Bimber, 1990, p. 334). The theory argues that fast changing technologies all-pervasively alter human lives, and that humans have little or no control of these alterations (Smith & Marx, 1994). While the theory was originally concerned with technologies such as railways and machinery, the development of TV and radio sparked a debate more centred around the media, often called media determinism (Hirst, 2012). One of the most acknowledged authors in this field is Marshall McLuhan, most famously known for stating that “the medium is the message” (McLuhan, 1964, p. 7). By this he claimed that the content of the medium is unimportant, it is the medium itself that structures and scales social interaction. He also argued that media, and technology itself, are independent driving forces that lead to radical changes of how humans and the society operates (McLuhan, 1964).

One of McLuhan’s biggest critics, and opponent in the media theory arena, is Raymond Williams. In *Television: Technology and Cultural form*, he claimed (Williams, 1975, p. 130):

Determination is a real social process, but never (as in some theological and some Marxist versions) a wholly controlling, wholly predicting set of causes. On the contrary, the reality of determination is the setting of limits and the exertion of pressures, within which variable social practices are profoundly affected but never necessarily controlled.

In other words, he found technological determinism too rigid and criticised it for giving technology too much power of control. He claimed there are social practices that also affect our society, and this point is the main criticism against technological determinism in general.

2.2.2 Public Sphere

The technological determinists also believed that CMC, and social media in particular, would create new public spheres (Shirky, 2011, p. 30). But the creator of the term public sphere himself, Jürgen Habermas, usually distanced himself from technological determinism. He allocated the power to the public, and claimed that *they* were the creators of these spheres, not the technology or the media (Habermas, 1962/1989, p. 27):

The bourgeois public sphere may be conceived above all as the sphere of private people come together as a public; they soon claimed the public sphere regulated from above against the public authorities themselves, to engage them in a debate over the general rules governing relations in the basically privatized but publicly relevant sphere of commodity exchange and social labor.

These private people partaking in a public debate thus gained the opportunity to oppose the power of the public authorities through publicity, and challenge the principle on which existing rule was based. Drawing this back to modern day media determinism, the same arguments could be seen for example during the Arab spring, as it was argued that social media played a central role in “shaping political debates” and spreading democratic ideas (Howard et al., 2011, pp. 1-2); characteristics that are also important in a public sphere.

Although Habermas most of the time distanced himself from technological determinism, some of his views can arguably be placed at least close to determinism. For instance, he said that the transition from a state-governed public sphere to a sphere appropriated by the public of private people was aided by the world of letters and forums for discussion. With the help of these forums, he claims that “audience-oriented privacy made its way also into the political realm’s public sphere” (Habermas, 1962/1989, p. 51), thus implying that the media was the cause of this change. A simplified way of putting this is that through the use of pamphlets and letters to newspapers, the public was able to express their opinion which could affect political decision-making and thus decentralised the democracy.

And in the analysis chapters I will look for indications of decentralised democratic processes in my own data material, in order to evaluate whether there is an existence of an online public sphere that serves as an arena for deliberative discussion.

Criticisms of this theory are usually aimed at Habermas' institutional criteria for the public sphere, these being disregard of status, domain of common concern and inclusivity (Fraser, 1990, p. 77). In complete opposition to the claim that public spheres disregarded status, Fraser among others argued that the spheres were "anything but accessible to everyone", and that women and other historically marginalized groups were not included. Thus, the public sphere was a power base for bourgeois men preparing themselves to govern, not an arena for the general public to discuss and express their opinions (Fraser, 1990, p. 60). She also argued that the attempt to set aside characteristics as differences in birth and fortune, attributes that are frequently also allocated to the Internet, usually works in the favour of the dominant class and to the disadvantage of the subordinate (Fraser, 1990, p. 63). Finally, she problematised the definition of common as opposed to private concerns, as matters that at one point in time are deemed private can, and sometimes should, be publicly debated (Fraser, 1990, p. 71).

2.2.3 Deliberative Democracy

So far in this chapter I have explored how technologically deterministic arguments imply that online debates lead to new public spheres that are characterised by deliberation (Habermas, 1962/1989; McLuhan, 1964). I have shortly presented how technological determinism and public spheres have been theorised and criticised, and will now do the same with deliberative democracy and cyberdemocracy (Tsagarousianou et al., 1998; Young, 2000). Following these sections, I will explore the spiral of silence and echo chamber theories (Noelle-Neumann, 1993; Sunstein, 2002, 2018), as critical correctives that can provide a more nuanced image of what these debates can lead to in reality today.

In the centre of modern political theory there are two models of democracy, both based on traditional democracy, which can be defined as the inclusion of a rule of law, promotion of civil and political liberties and free and fair election of lawmakers (Young, 2000, p. 5). The first, the aggregative model, has as a goal to "decide what leaders, rules and policies will best correspond to the most widely and strongly held preferences" (Young, 2000, p. 19). The other, the deliberative democracy, bears some similarities to the public sphere (Habermas, 1962/1989). According to Young, it has a strong meaning of inclusion and political equality

which increases the likelihood that democratic decision-making will promote justice (Young, 2000, p. 6):

Inclusive democratic practice is likely to promote the most just results because people aim to persuade one another of the justice and wisdom of their claims, and are open to having their own opinions and understandings of their interests change in the process.

In other words, the deliberative democracy model is more concerned with the inclusion of all members of society into a discussion of opinion, and bringing these discussions into the process of political decision-making. The conviction of Young is that this process can widen and deepen democracy “beyond the superficial trappings that many societies endorse” (Young, 2000, p. 5). Furthermore, she argues that a deliberative democracy is a means of collective problem-solving, which depends on the “expression and criticism of the diverse opinions of all the members of the society” (Young, 2000, p. 6).

Critics of the deliberative democracy model can be found among the social choice theorists, who are suspicious of the arbitrariness and instability in any form of democracy, and claim that the “unconstrained communication favoured by deliberative democrats will only make matters worse” (Dryzek, 2000, p. 4). While these critics fear that deliberation is too unstructured and chaotic, others have criticised from a completely opposite point of view, believing that deliberation is “exclusive and constraining in the kinds of voices and kinds of people that it can hear”, and that many oppressed individuals and groups would find it hard to communicate effectively (Dryzek, 2000, p. 4). As could be seen in the previous section, this kind of criticism was also voiced against the public sphere theory.

2.2.4 Cyberdemocracy

With the development of media and technology in the end of the last millennium, many hoped that new media, and particularly CMC, would undo the damage done to politics by the old media. While for instance broadcast media has been blamed for the shallowness of American political debate by not allowing the spokespeople enough time on air, it was hoped that new media would allow for new public spheres to open up and that technologies would permit social actors to “find or forge common political interests” (Tsagarousianou et al., 1998, p. 5).

It was also believed that new media would increase efficiency and ease of access to information, measure citizens' preferences in representative democracies, transform the conditions for collective political action, allow the audience to contest and respond to information, remove "distorting" mediators from the process of political communication and decision-making, tailor public services to citizen needs, and resolve some of the key problems and dilemmas of representative democracy in practice (Tsagarousianou et al., 1998, pp. 6-8). In short, it was argued that the new media and cyberdemocracy would be able to improve the responsiveness and accountability of political institutions and enhance citizen participation (Tsagarousianou et al., 1998, p. 167). Similar ramifications were established by Campbell and Carayannis (2018, pp. 323-324):

(1) the networking opportunities and capabilities of interaction and communication increase; (2) the volume of codified knowledge cumulates, and the possibilities to access (publicly access) this knowledge also improve; (3) digitalized (electronic) information and knowledge, and the World Wide Web, created a network-style fundament and infrastructure of knowledge, allowing a knowledge conversion of the local into the global (gloCal) and vice versa, resulting in a gloCal platform for communication and knowledge interaction and knowledge enhancement.

While these attributes of new media and cyberdemocracy look promising in theory, there are several potential issues that could distort these functions. One of these is the social and economic inequalities among the citizenry, leading to varying access to the information technology and thus the exclusion of some groups and individuals. Access to the technology is often socially conditioned, and class, gender, age and ethnicity-related (Tsagarousianou et al., 1998, p. 170). Another issue emerges in the conflict between the right to free speech and the need to avert abuse of access to public networks, and facilitating the use of this access to enhance rather than inhibit democratic communication. CMC can allow users to neglect civility, and give specific political groups the opportunity to exploit public networks to their own benefit (Tsagarousianou et al., 1998, p. 172).

Finally, the authors of Cyberdemocracy underline the importance of citizen participation in electronic democracy, making it clear that the technology itself has little impact on democracy if the public is not committed (Tsagarousianou et al., 1998, p. 176):

Electronic democracy in its plebiscitary or deliberative permutations expressed in the different city projects examined in *Cyberdemocracy* cannot by itself democratise the communities which it serves. The creation of public spaces, the articulation of views and demands, the formation of citizens, requires much more energy and commitment and grassroots involvement in public debate.

In other words, despite the allocation of several beneficial effects to technology throughout their book, the authors believe that without the commitment of humans, the technology has very little power.

2.2.5 Spiral of Silence

Up until this point I have presented theories suggesting that CMC and online debates could benefit a democratic discussion (Campbell & Carayannis, 2018; Collins & Nerlich, 2015; Tsagarousianou et al., 1998). Now, I am going to explore the spiral of silence theory, and its potential effect on a deliberative online climate change debate. The core assumption of the theory is that people risk social isolation when openly expressing views that deviate from public opinion, and therefore will refrain from doing so (Noelle-Neumann, 1993, p. 6). Drawing this into online debates in 2019, the potential issues occur due to the publicly visible nature of online forums and comment fields, and are perhaps not as relevant in anonymous forums (Walter et al., 2018, p. 205). The comment fields I observe in this study are on Facebook, thus the users' full names and pictures are visible for everyone, and according to the spiral of silence theory people would hesitate to express their personal views if these deviate from the dominant view of the population, for fear of isolation (Noelle-Neumann, 1993, p. 6). As the possibility to utter and discuss one's opinions is an important factor in a deliberative democracy (Young, 2000, p. 6), a fear of isolation and thus refraining from posting a minority opinion would arguably counteract deliberative democratic discussions.

Most criticisms of the spiral of silence theory suggest that it needs to be updated to fit the online environment that exists today (McDevitt, Kioussis, & Wahl-Jorgensen, 2003; Walter et al., 2018). As aforementioned, Walter et al. (2018) found that users adapted their opinion to the dominant view of the media outlet, in line with the spiral of silence theory, but that more climate-sceptical comments were posted in climate-believing countries, and the other way

around. They suggest that this occurred because climate change contrarians are marginalised in the broader public debate, “and therefore withdraw to comment sections to voice their scepticism”. And my data suggests the same thing: the dominant opinion in Norway acknowledges climate changes (Karlstrøm & Ryghaug, 2014), but the majority of comments collected for this study were sceptical towards climate changes, thus expressing the minority view. Another criticism was argued by McDevitt et al. (2003, p. 463), as they found evidence of moderation from the dominant *and* the minority side of the argument, not just the minority, and that these moderations were “not driven primarily by fear of sanctions”, as the spiral of silence theory suggests.

2.2.6 Echo Chambers

Similar to the theory of the spiral of silence, the theory of echo chambers is a potential hindrance of a deliberative democracy (Sunstein, 2002, 2018; Walter et al., 2018), and when analysing my data I will attempt to evaluate the existence of such chambers among the commentators. Echo chambers are created through algorithms on social media that feed you similar content to what they have registered you are interested in, for example from visiting certain websites or liking certain pages (Sunstein, 2018, p. 4). Many are happy with the existence of these algorithms, satisfied that they are not shown content they have no interest in. The algorithms can also bring several like-minded people together in large online communities (Sunstein, 2018, p. 59). But scholars are questioning how these polarised communities can affect individual liberty, democratic deliberation, and the capacity of citizens to govern themselves (Sunstein, 2018, p. 5). This fragmentation, or the creation of diverse speech communities where members mostly speak and listen to one another, can as a worst case scenario have severe consequences (Sunstein, 2018, p. 57):

A likely consequence is considerable difficulty in mutual understanding. When society is fragmented, diverse groups will tend to polarize in a way that can breed extremism, and even hatred and violence.

Another potential issue occurring from echo chambers is the effect on diffusion of information, a factor that is essential for a well-functioning democracy. Sunstein claims information is a “public good”, and that when one person gains knowledge of for instance crime in a neighbourhood or climate change, they are likely to tell others so that they can

benefit from this knowledge as well. But these systems where each individual can customise their “communications universe” create a risk that the individuals will receive too little of such information (Sunstein, 2018, pp. 57-58).

Sunstein’s work on echo chambers and polarisation is, according to himself, a “dark book” (Sunstein, 2018, p. 263). While there is little criticism towards the theory of echo chambers itself, this particularly dark outlook and the chambers’ negative effects have been challenged, and by some deemed “overestimated” (Barberá et al., 2015, p. 1531). While researching online communication on Twitter, Barberá et al. (2015, p. 1537) found some evidence of polarisation in political discussions between liberals and conservatives, but not in other matters:

We found that ideological homophily in the propagation of content related to nonpolitical events is low; in this sense, discussions of current events do not strictly conform to the image of an echo chamber.

Furthermore, they found that in non-political matters, “liberals and conservatives interacted with each other to a considerable degree” (Barberá et al., 2015, p. 1537). Based on these findings they claim that previous studies “may have overestimated the degree of mass political polarization”, that information about current events was not “necessarily constrained by the walls of an echo chamber” (Barberá et al., 2015, p. 1539), and that citizens did in fact “come into contact with information from diverse ideological perspectives” (Barberá et al., 2015, p. 1540).

However, it could be argued that in terms of democratic processes, the political discussions are the ones with the greatest democratic and political importance. Thus, their findings suggesting that information about these events was exchanged “primarily among individuals with highly similar ideological preferences”, and that individuals were clearly more likely to pass on information that they had received from ideologically similar sources rather than dissimilar sources (Barberá et al., 2015, p. 1540), would ultimately suggest that there is a prevalence of echo chambers, and that these can inhibit deliberative democratic discussions.

2.3 Summary

I have now presented the theories and views that I will use in the analysis chapters. With technological determinism as a backdrop I will look for signs of a cyberdemocracy, these being an online public sphere with a deliberative democracy, open discussions and freely expressed opinions (Habermas, 1962/1989; McLuhan, 1964; Tsagarousianou et al., 1998; Young, 2000), but I will also attempt to ascertain whether the users are refraining from posting a minority opinion in line with the spiral of silence theory (Noelle-Neumann, 1993). Finally, I will evaluate whether the discussions take place between those with opposing or similar ideologies, and whether the two sides of the debate seem to have been exposed to different information, in line with the echo chamber theory (Sunstein, 2002, 2018). But before embarking upon that mission I will go through my methodology, and the choices I have made throughout the conduction of this thesis. I will start with an introduction to online ethnography, before more specifically explaining the data collection, ethical consideration and analysis, and finally evaluate the quality of the study.

3 Method

The aim of this study is to investigate the online discussion on climate change in Norway, and in this chapter I will explain the choices I have made throughout the entire research process. In the previous chapter I presented two studies executed in other countries, both of them mainly using a quantitative approach (Collins & Nerlich, 2015; Walter et al., 2018). These studies called for a more qualitative research of the topic, where the nuance and the meaning of the content could be analysed, not just the number of certain words or phrases. And this is what I have attempted to do in the course of this study, through an online ethnography method and qualitative content analysis. In this chapter I will briefly outline the online ethnography method, then explain the data collection, ethical considerations and analysis, before presenting what factors ensure and endanger the quality of the study.

3.1 Online Ethnography

In order to understand the limitations and advantages of an online ethnography, I deem it useful with a short introduction to traditional ethnography. This is a qualitative research method in which the researcher immerses herself in the area of study, and thus closely observes and participates in the environment that is being researched. Paul Atkinson is one of the most established writers on ethnography, and claims the method can provide a distinctive way of understanding social activity (Atkinson, 2015, p. 15). When executed correctly, he says that ethnographic research can capture and call into question the tensions between the self and the other, the near and the distant, and the familiar and the strange, while preserving the social complexity of the world and the lives that are being investigated (Atkinson, 2015, p. 13).

Being a sub-branch of ethnography, the online ethnography method I have applied in this study, also called netnography (Kozinets, 2010), bears a lot of similarities to the traditional ethnography; I have immersed myself in an environment and attempted to understand the social activity, but instead of observing a location based phenomenon I have performed the study online, using the Internet as a tool, and a topic of study. And this is the biggest distinction between traditional and online ethnography; one is performed in a physical location, and the other in cyberspace. According to one of the earliest authors on online ethnography, Christine Hine, online ethnography can allow us to study how the Internet affects the organisation of social relationships, and what the implications of the Internet for authenticity and authority are (Hine, 2000, p. 8). In a later publication, Hine notes that online

ethnographers can stimulate a broader discussion of the nuances of effective presence and the various forms of engagement (Hine, 2008, p. 267). Furthermore, Kozinets defines online ethnography as the use of computer-mediated communications (CMC) as a source of data to arrive at the ethnographic understanding and representation of a cultural or communal phenomenon (Kozinets, 2010, p. 60). Drawing on these definitions, I can clarify that throughout this study I have used online tools and technology, this being observation of online comment fields, in order to carry out research on a cultural and social phenomenon: the climate change debate.

3.2 Data Collection and Ethics

3.2.1 Data Collection

Having established what kind of research I was doing, and how, I set out to find appropriate data. Relying on naturally occurring data like comment fields can be useful as it eliminates artificial situations like interviews and focus groups (Silverman, 2005, p. 132). So I knew what I wanted to find, but not being the kind of person who partakes in online debates myself, I had little to no idea where these discussions usually take place. As I had read several studies focusing on Twitter, I tried searching for terms like “climate change” on Twitter in Norwegian, but I was not satisfied with the amount of activity I found. This is presumably because only 26% of the Norwegian population have a Twitter account (Ipsos, 2019). I then thought I would look at comments on news articles, but hit another dead end when I discovered that most newspapers have closed their comment sections, due to a lack of resources to monitor the debates and remove too offensive comments (Zakariassen & Torsvik, 2015). Ultimately, I found an abundance of activity on the Facebook links to the newspaper articles, posted by the newspapers’ official Facebook pages. The amount of Norwegian Facebook users, 83% of the population, is more than three times as high as the 26% who use Twitter (Ipsos, 2019), which can account for this difference in amount of activity.

For the data to be as representative of the online climate commentators as possible I decided to include three different types of publications: forskning.no, a serious publication focusing on research and science news, Aftenposten, a national newspaper, and Dagbladet, a national tabloid newspaper. To be able to compare the various comment fields I wanted the articles to be written on a similar subject and published within a short timeline. Finally, I found three articles by these publications written on ice melting due to global warming, published in December, January and February this past year.

Having no existing knowledge of whether Facebook comment fields are moderated, I sent an informal message to the three publications asking this question, and received replies from forskning.no and Dagbladet. I was told that the newspapers are indeed responsible for the moderation of the Facebook comment fields, and that comments that do not adhere to the rules of debate are removed. However, during my data collection I only once experienced that a comment was deleted, and several comments characterised by personal attacks were not removed. The person I got in touch with at forskning.no, Eivind Lauritsen, was very helpful and gave his permission to use his name and our conversation in my thesis. He explained that the editor-in-chief oversees the moderation, in addition to all his other tasks and responsibilities. While Lauritsen feels like they have a decent control of the comment sections, he admits that some comments can slip by occasionally. For the purpose of my thesis, this indicates that the comment fields are lightly moderated, making the communication in a large degree free and unconstrained.

On forskning.no and Aftenposten I collected all the comments, as the amount was manageable for me to get through on my own (29 and 127 comments respectively). But as the article on Dagbladet had over 700 comments, including them all was impossible in the amount of time I had to work on this thesis. I therefore used every fourth comment posted the first two weeks after publication, resulting in 231 comments, making the total data material 387 comments, or approximately 15000 words. In order to keep track of the various commentators, I allocated names according to the publication, the gender of the commentator, and the chronological number value of the comment. So for example, the first male commentator of forskning.no I called FM1, the second FM2, and so on.

Through this coding I could also keep track of how many men and women commented on the various fields. Across publications there were 212 male commentators and 48 female, resulting in a total of 260. I quickly noticed that significantly less females took part in the debate than men, and discovered that this is not uncommon in online debates. Studies have shown that women prefer debating with people they know rather than with strangers in public online fora, a tendency that has also been reflected in political socialisation (Grønli, 2014). While I do not explore this gender segregation further throughout the analysis, I mention it again in the conclusive chapter, related to democratic debates.

3.2.2 Ethical Considerations

Discussions on ethics when conducting research in cyberspace is usually focused on three issues: the distinction between public and private spaces, obtaining consent from participants, and the participants' anonymity (Knobel, 2003, p. 190). In general, it is common practice that consent from participants is needed when research is conducted in a private sphere, but not if it is conducted in a public sphere (Grønning, 2015, p. 20). But the nature of cyberspace makes this distinction between private and public, and thus the necessity to obtain consent from participants and assure anonymity, very difficult to discern (Grønning, 2015, p. 20). My impression is that online arenas for debate such as the one I have studied used to be regarded as public, because the participants were aware of it being a public forum, and could have no expectation of privacy (Mann, 2003, p. 37). Thus, one could observe and use this data more freely than, say, in closed forums, where users expected privacy.

However, when reporting my project to the Norwegian Centre for Research Data, I was informed that since the General Data Protection Regulation (EU GDPR, 2019), this is no longer the case. Even public comment fields such as the one I have studied requires consent from the participants, if it is possible to identify the comment author by for example a direct quote. Thus, I would either have to ask each comment author for consent, or not use direct quotes at all. Because of the amount of comments I needed to collect for my research, and the amount of time and difficulties I assumed this would entail, I decided to translate the comments to English and in that way making them unrecognisable and anonymous. I also never copied or saved any personal data, but simply wrote the translated comments directly into a Word document.

By translating the comments I assured the anonymity of the comment authors, but I also potentially put myself in danger of not adhering to my ethical responsibility as a researcher to obtain data of the highest possible quality (Grønning, 2015, p. 20). For instance, if the translated comments were changed too much from the original, or if I somehow incepted my own opinions into the translations, this could damage the integrity of my study. I therefore did my utmost to maintain the tone and meaning of the comments, and only corrected spelling and grammar errors.

3.3 Analysis of Data

Whilst quantitative research can analyse written material in a way that produces numerical evidence about a large sample, qualitative research can have a very different purpose; the aim

is usually to understand the participants categories and how they tell stories, and the process through which the texts depict reality rather than with whether they “contain true or false statements” (Silverman, 2006, p. 160). For instance, while Collins and Nerlich (2015) examined reciprocity by counting how often a comment was replied to, my qualitative approach enables me to analyse the content of the replies, and ascertain how open and deliberate the discussions are. I will here account for how I approached my analysis, first describing how I arrived at the various categories and themes used in this study, and finally presenting what factors I looked for when evaluating the presence of deliberation or polarisation.

3.3.1 Sceptics and Believers

I very quickly found two main categories in the data material: the two strongly opposing sides in the debate. One side firmly believed that climate changes are human made and that we can and should take action to affect the changes, whilst the other side was more sceptical towards anthropogenic climate change and did not worry or feel responsible. This segregation is not a new phenomenon, and has been researched both abroad and in Norway, for instance by McCright and Dunlap (2011), and Aasen (2017). The Norwegian study found evidence of rising polarisation in climate change concern especially since 2007, and their findings show that those with individualistic values became less concerned, whilst those with more egalitarian values reported increasing concern (Aasen, 2017, p. 224). Throughout this study I will attempt to understand how these two groups argue their case on the Facebook comment fields that I have observed, using the terms climate believers and climate sceptics.

3.3.2 Developing Themes

Throughout the analysis I have attempted to work as closely to the empirical data as possible, by putting methodological literature aside and simply observing what I found in the comment fields. Thus, after completing the data collection, I wrote a short sentence representing the meaning behind each of the comments. I did this simply by using the comment function on the Word document with all my data material. For example, for this comment:

The ice isn't melting 😊

There's extreme cold in Norway now hahaha 😊

... I wrote a note saying “Ridicule, current cold spell proof of ice not melting”.

Having written these notes on all the comments, I was more easily able to create themes, which was the next step in the process. Manually looking through all my notes for the different types of argumentation used, I first ended up with 62 codes, when looking at each publication separately. As an example I present the categories from Aftenposten in Table 1: codes.

Table 1: codes

Category	Code
Sceptics	<ul style="list-style-type: none"> • Ridicule: fiord drown Parliament, swim to work, just build taller houses, sailing to the opera • Natural changes • Fake news, media lights fires • Doomsday prophecies: Ozone layer, previous prophecies didn't come true • Everything about money: politicians need something to tax • Cannot provide source when asked for it • No trust in scientists: climate scientists are environmental campaigners, political agenda, NRK information handpicked, scientists with opposite views not allowed to speak • Al Gore: prophecies were wrong • Measures won't help
Believers	<ul style="list-style-type: none"> • Too many climate sceptics among the planners • Ridicule: placing signature buildings by waterfront • Criticise government for not taking problem seriously enough • Norway needs to set example • Asks for sources • Quotes science and sources: science is crystal clear • Need to look at the big picture • Trust majority: can't afford to gamble on them being wrong

Next, I marked the lines of argumentation from each publication in a different colour, and attempted to cluster the similar argumentations. Having done this I was able to see some

themes emerge, and I ended up with three themes on the sceptics’ argumentations and six believers themes. However, I saw that some of the believers’ themes could be merged, and a second round led me to three main themes for each side, presented in Table 2: themes. Finally, I saw that I could place these lines of argumentation opposing each other, and thus emerged the three analysis chapters. The first codes that I discovered were used to structure the analysis chapters, and these chapters I will further explain in the following section.

Table 2: themes

Category	Themes
Sceptics	Conspiracy theories Fatigue Ridicule
Believers	Facts and science Responsibility and leadership Ridicule

3.3.3 Content Analysis

As previously mentioned, I have used a qualitative content analysis in this study. This means that instead of using a quantitative approach with frequency counts for words and sentences, I have drawn out “extracts which illustrate particular categories” (Silverman, 2006, p. 161). My approach is also sometimes called “thematic analysis” or “discourse analysis” (Silverman, 2006, p. 163). Thus, working with the codes mentioned in the previous section, I presented my data in the way that I found most straightforward and transparent, having the codes as a base and using quotes to illustrate each category.

The analysis chapters were written in two rounds: the first time I was simply evaluating the argumentation the commentators used to put their case forward, but the second time I also looked for reciprocity and yielding as demonstrations of deliberation (Collins & Nerlich, 2015; Young, 2000), and knowledge isolation and echo chambers as signs of polarisation (Sunstein, 2002, 2018; Walter et al., 2018). By yielding, I mean that the commentators seemed open to having their opinions altered and reaching a compromise, as well as an inclusion of all members of the society, factors that are essential in a deliberative discussion (Young, 2000, p. 6). By knowledge isolation I mean if the commentator cited

sources or gave information that the other side had no knowledge of, or if they seemed unwilling to interact with people of opposing opinions (Sunstein, 2018, p. 59).

3.4 Quality of the Study

There are numerous factors that could potentially damage the quality of this study. Here, I will evaluate these factors, going through not only the traditional quality checks of qualitative research such as validity and reliability (Silverman, 2005, 2006; Tjora, 2017) but also potential issues occurring from my own partiality on the topic of climate change, and specific implications when conducting online ethnographies and qualitative content analyses. A third factor often used to ensure quality is generalisability, but as it has been argued that research on online communities cannot be transferred to the general population (Kozinets, 2010, p. 47), I do not include generalisability in this evaluation.

Generally addressing qualitative research, Tjora (2017, p. 231) explains validity as to what degree the research answers to the research question. Whether my research answers to my original research question is a difficult factor to assess, as I did not set out with a clear research question to start with. My initial motivation derived from an interest in climate change, and a curiosity to investigate what arguments the climate sceptics and believers used to further their case. I wanted to explore just how polarised this debate actually is, and if possible, why the two sides are so strongly opposed. Only after writing the first drafts of the analysis chapters, and reading some existing studies, was I able to see that I wished to explore the potential effect of this polarisation on a deliberative democracy. And this type of interpretative approach can complicate the evaluation of validity (Tjora, 2017, p. 232). However, as I throughout this chapter have openly explained my process and the choices I made when conducting my research, I hope to ensure some validity by leaving it up to the reader to evaluate the study's relevance and precision (Tjora, 2017, p. 234).

Whilst validity evaluates the relationship between the research and the research question, reliability addresses how the researcher relates herself to the generation and analysis of data (Tjora, 2017, p. 231). And the first thing that I want to mention here is that I am personally a strong believer in anthropogenic climate changes, and that we should act to attempt to reduce these changes. This kind of strong affiliation to one side of the case could potentially bias my analysis and conclusion, and affect the results (Tjora, 2017, p. 235). However, I have been aware of this affiliation from the beginning of the research, and I have thus made it a priority to remain as neutral as possible. For instance, when collecting data I

have either included all comments or a completely random sample, not just those that I agreed with. Throughout the analysis I have presented direct quotes as often as possible, instead of paraphrasing, as that could leave room for me to inject my own opinion. And when I have presented my interpretations I have attempted to make it clear that they were, in fact, my own observations. Thus, I argue that my study can still be deemed reliable, despite my affiliation to one side of the debate.

As previously mentioned, online ethnographies are limited by the argued inability of the results to be transferred to the general population (Kozinets, 2010, p. 47). This argument is echoed by Hine (2008, p. 257), who found that online ethnographies do not reflect the full spectrum of social interactions, nor do they correctly present an image of the community being observed. This means that the findings I present throughout the following chapters should not be seen as the opinions of the general population of Norway, but merely the opinions of those inhabitants who choose to be present in online comment fields.

Others found that the untraditional nature of online ethnographies, as well as the emerging opportunities introduced by the fast changing technology, presented challenges in terms of methodology and led researchers to sometimes implement poorly designed studies (Hewson & Laurent, 2008, p. 59). Keeping in mind that online ethnography is a relatively new research method, and entirely new for me, I have used my knowledge and experience of other qualitative research methods, such as interviews and document studies, when conducting my data collection and content analysis. While it has been argued that an unclear theoretical basis of qualitative content analysis is one of its biggest weaknesses, as it can make the conclusions seem trite (Silverman, 2006, p. 163), I believe that my explorative approach has allowed me to discover some surprising findings. And this ability to disclose uncategorised activities, for instance the many ridiculing comments in my data material, is one of the qualitative analysis' strengths (Silverman, 2006, p. 163).

All in all, I believe that while the online ethnography method has some weaknesses, such as the inability of the findings to be transferred to the general population (Kozinets, 2010, p. 47) and the difficulties in designing studies in a relatively new and fast changing field (Hewson & Laurent, 2008, p. 59), I believe that I have made discoveries in this study that no other method could have allowed me to make. Online ethnographers have the opportunity to stimulate a broader discussion of the nuances of presence and engagement in a debate (Hine, 2008, p. 267); they can evaluate the structure of a community's communications, the patterns of social relations, and the flow of communication between different online communities (Kozinets, 2010, p. 49); they can explore the ability of online

communities to change social ties in the real world (Haythornthwaite, 2005, p. 141) as well as the participation of the public in governmental work and democracy, often called cyberdemocracy or E-democracy (Bingham et al., 2005; Campbell & Carayannis, 2018; Tsagarousianou et al., 1998). Through my qualitative study I have arrived at conclusions that differ from several quantitative studies (Collins & Nerlich, 2015; European Social Survey, 2018), and I attribute this to the ability to observe behaviour and analyse content, as opposed to quantitative research where respondents are asked directly about their positions and could feel tempted to modify their answer to the dominant opinion of the country (Noelle-Neumann, 1993).

In the next three chapters, I use the methods that I have explored here to evaluate and analyse my data. In the first chapter, I present the debates that were centred around conspiracy theories and science, where the sceptics used money, fear, doomsday prophecies and natural fluctuations as reasons behind the conspiracies, and the believers attempted to argue these claims with the scientific consensus. I then move on to exploring fatigue and responsibility, where the sceptics' argument that effort is pointless is countered with arguments of moral responsibility, and disappointment in leadership. The final analysis chapter presents the ridiculing and mocking comments I discovered, starting with general mocking comments, moving on to those focusing on the fact that Greenland used to be green, then to the comments that mockingly wishes for higher sea levels, and finally those that criticise the Norwegian Parliament.

4 Conspiracy vs Science

This chapter is the first of three analysis chapters, and I commence with what is possibly the biggest distinction between the climate sceptics and the climate believers: their view on the scientific consensus, and what sources they choose to put their faith in. Whilst the believers are wholly convinced by the 97% of scientists who have found that climate changes are affected by humans (Maibach, Myers, & Leiserowitz, 2014), the sceptics chalk the consensus up to various forms of conspiracy theories, most of which concern money. They claim that politicians have invented human made climate changes to make money on environmental taxes, that scientists working on the IPCC report are paid by the climate panel and therefore cannot be trusted, and that the media exaggerates and uses “clickbait” headlines in order to attract more traffic to their articles and thus make more money. The sceptics are less prone to cite sources than the believers, but if they do they typically provide links to YouTube-videos or websites created by groups of fellow climate sceptics.

To analyse this contrast between the believers’ and the sceptics’ relation to the scientific consensus I will first present the various conspiracy theories, centred around money, control, doomsday prophecies, and natural fluctuations, before explaining the attempt of the opposite side to disprove the theories with references to science. After this presentation I will analyse the comments and discussions using relevant theory, looking for deliberation in the form of open discussions and free exchange of opinion, as well as civility (Collins & Nerlich, 2015; Young, 2000). To ascertain whether the users can be said to be affected by echo chambers I will evaluate to which degree they choose to interact with those of the opposite views compared to those with the same views, and whether they seem to accept new information (Sunstein, 2002, 2018). I will also attempt to discern if the spiral of silence theory is applicable, by evaluating if the minority opinion of the population is present (Noelle-Neumann, 1993).

4.1 Money

Throughout the three comment fields researched in this study the climate sceptics were typically the ones who would provide the first comments. And quite early on in each field someone would post something similar to this comment on forskning.no:

There is so much nonsense around these models. But people are swallowing this propaganda uncritically. The climate hysteria is fiction and a money machine for the rich.

This commentator looks at human made climate changes as propaganda, hysteria and fiction, also claiming the whole thing is a money machine for the rich. His comment sparked a debate with three other commentators, all of them being climate believers. The first reply asked for an overview of who actually gets rich from these “schemes”, and he also asks the original commentator to substantiate his claims. The original commentator cannot cite any concrete sources, but replies saying people like Al Gore and others who make money off of it are the ones promoting fear mongering like ice melting. The following comments used the same line of argument, mentioning research, the scientific consensus and accusing the original commentator of just posting his own personal opinion based on YouTube-videos.

This type of debate is very typical across the three publications. This is an example of a similar comment on Aftenposten:

Now they're saying could be. Al Gore was more determined. According to him there wouldn't be any ice left in certain places and the ocean should have been a lot higher than what it is today. More people need to realise now that this is only about ideology and money.

This commentator also uses Al Gore's “failed predictions” as proof of climate change being exaggerated because of money. His comment received a reply in the same style as the one on forskning.no; a believer asks him to explain further why all the different science and research in the world would be manipulated because of ideology and money, accuses him of fact resistance, and points out that Al Gore based his claims on peer reviewed research. To this the original commentator responds that science today is just nonsense, and that there is no scientific evidence to back up their claims. Further on he complains that the IPCC reports forces politicians to enter into worldwide agreements that he has to pay for, circling back to money being an issue. Another comment puts the issue more pointedly: “Al Gore has probably spent all his money and needs a new tour ..”.

The commentators on Dagbladet used money as a line of argument mainly as a reason not to trust scientists and journalists, as they are paid for by someone with an agenda and cannot be neutral. One of these discussions were sparked by this comment:

Well, what to say... A lot of people are easily fooled... Ten thousand years ago the ocean level was 30 metres higher than today ... was this human made??? The earth in itself constitutes a very large part of the CO2 emissions ... The future's restrictions of human made CO2 emissions will have microscopic impact on the temperature... Scientists are bought and paid for ...

This commentator touches upon the theme of climate changes being natural fluctuations and not human made, which will be thoroughly explored later in this chapter. The focus here is on how he uses the previous fluctuations in sea levels as proof that scientists are “bought and paid for” to illustrate someone being corrupted by money, thus not presenting their own opinions or actual facts but following the wishes of the ones paying them. Again, a believer countered with a wish for the sceptic to clarify and substantiate his claims, a feat the sceptic says he is incapable of, but argues that “corruption is happening all over the world”, and that politics and research is no exception. To this the believer replies:

... when you claim that scientists are bought and paid for you should be able to prove your claim. If not it's just meaningless rhetoric. I view NASA as one of the biggest knowledge conveyors/possessors concerning climate change. Recommend you read a little on their pages on the subject.

Again, the debate has been characterised by a sceptic posting an unsubstantiated claim, a believer asking for scientific sources, and the sceptic being unable to provide this but still sticking with his original opinion.

Furthermore, there were several comments on Dagbladet concerning money that did not start a longer debate, such as this one: “This is just nonsense 😏. Bought and paid journalist”, which did not receive a single reply, but several “likes”. Another comment was a reply to a claim that climate changes are natural, saying “hush you're ruining the trade for the big boys when you say stuff like that 😏😏👍”. Across publications several sceptics expressed scepticism towards environmental taxes and fees, saying things like “We'll have to increase the plane seat fee then! 👍”, “When research in addition can be used to justify large increases in fees, I'm extra sceptical”, and:

It's the cycle of the planet that we can't affect unfortunately 👍🌍 but good thing we're paying climate fees so that the state gets more money.

Another climate sceptic on Dagbladet expressed that scientists with climate sceptic views are not able to express their opinions, as they are dependent on money from the state, something he implies would be withdrawn should they speak up:

Only scientists from one side are allowed to comment. The others depend on subsidies from the state and can in other words not speak up. There have been comments from scientists in CO2 circuits that the earth is only in natural fluctuations and that there are no human made climate changes.

All in all, it is clear that there is a widespread opinion among the climate sceptics that politicians, scientists and journalists alike cannot be trusted, because they are corrupted by either their own intentions of making money, or someone corrupting them with their moneymaking agendas. Money was also seen as a cause for some scientists choosing to remain silent and not express their climate sceptic views. In terms of deliberation, some of the comments concerning economic conspiracies were replied to, but not all. But even if a comment was replied to and a discussion started, and this reciprocity could be indicative towards deliberation (Collins & Nerlich, 2015, p. 194), there was never any sign of either side yielding. The believers were perhaps more inclined to have an open discussion than the sceptics, by asking the sceptics questions, for instance concerning their sources. Then again, they were not open to yielding themselves, but rather accused the sceptics of fact resistance and wished for them to read up on the sources the believers recommended. Thus, despite there being a high level of reciprocity present, unlike Collins and Nerlich (2015, p. 205) I do not necessarily interpret this as democratic deliberation, as it seems like neither part have any intention of reaching a common ideology, which is an important aspect of a deliberative discussion (Young, 2000, p. 6).

Furthermore, the fact that several sceptics mentioned the same conspiracy theories, for example journalists and scientists being paid by politicians, could mean that they have been placed in an echo chamber with likeminded individuals, and maybe not been exposed to all available information (Sunstein, 2002, 2018). And this creation of a customised

“communications universe” create a risk that individuals receiving too little of the kind of information that is important for a well-functioning democracy (Sunstein, 2018, pp. 57-58)

4.2 Fear and Control

An equally popular theory among the climate sceptics is claiming that human made climate changes are merely invented by “the power” to be able to control the masses. Climate changes are often compared with religion, like this comment on forskning.no:

The majority has stopped believing in god and the devil and that’s why the power needs to invent a new threat. It’s all about fear mongering and terrorisation of the world’s population.

This commentator says that religion was previously the way “the power” controlled the people, but as people gradually stopped believing in religion, they needed a new threat to terrorise the population with. Here, the goal is not making money, but to have some means of controlling the masses. A believer replies to this comment pointing out that animals dying from heat exhaustion and plastic pollution in the oceans leads to less food, which in combination with the increasing population is a big problem that affects humans. This believer does not follow the same pattern as most believers did when counterarguing money, this being asking the sceptic to substantiate his claims with scientific sources. Instead he simply points out facts and the big picture to the original commentator, using these facts as proof that climate change is happening.

Variations of the comparison with religion was reflected across the publications. Another comment from forskning.no stated that climate change is “the biggest global manipulation since religion”, and one on Dagbladet said “These scientists must be an incarnation of priests from the middle ages”. Also from Dagbladet:

This is a sect on par with Jehova’s witnesses, they’ve also always brought new dates for the end of the world, just like the high priests of the climate religion are doing 😏

On Aftenposten the word religion was only mentioned once. In the middle of a debate, after a believer wrote that it's unlikely that anything but human influence has caused climate change, a sceptic replies "you're allowed to believe that brother. I'm fine without religion".

The same person who made the comment about Jehova's witnesses on Dagbladet also posted this comment:

Climate religion should be banned, we're in between 2 ice ages, don't think there's anything strange about the ice melting, but they're going to scare the shit out of someone with this stuff :)

This comment also suggests that human made climate changes are invented so "they" can scare people. It received several replies characterised by personal attacks on the original commentator, one of them claiming he was a "fool" who did not understand the entirety, but still thought he had the answers. The original commentator remained more civilised and did not retaliate the personal attacks. He asked the believer to provide a solution seeing as he apparently understood the entirety, to which the believer provided no response. This debate seems to be dominated by the sceptic, as he does not retaliate the personal attacks and expresses a wish to continue a serious discussion.

Interestingly, the believers would sometimes also use religion as an accusation to the sceptics, like this comment on Dagbladet shows:

It's almost just religious believers who still keep this "discussion" alive because we can do whatever we want with the planet, in fact nothing can destroy god's creation. Besides it doesn't matter anyway, because jesus will come and get us all! Very soon! Most definitely! Everyone else knows that human made climate changes are a fact and there's no point fighting it any longer.

This believer claims that most sceptics are "religious believers", who think that humans cannot damage God's creation. The fact that both sides accuse each other of religious fanaticism can be interpreted as a very wide segregation between the two groups, with very little understanding between them, which could indicate the existence of echo chambers (Sunstein, 2002, 2018).

A surprising finding in another discussion on Dagbladet is a believer agreeing with the sceptics that people are using “the fear”. His statement is in retaliation of a sceptic who says he does not believe in climate change, and links to a YouTube-video he thinks “a lot of people should see”. To this the believer replies:

Between 90-100% of the world’s scientists agree that we have problems with the climate because of human made changes. Choose to believe them, and not a conspiracy video from YouTube. Oh yes. People are using the fear. That’s something humans always have done. Politicians too. That doesn’t mean the problem isn’t real.

This shows that a believer also recognises the fact that political leaders are using fear in order to promote action, but he still thinks the problem is real. This is arguably a deeper form of reflection than what the sceptic demonstrates, and it can be argued that the believer able to see both sides of the debate.

In fact, the sceptics generally tended to hold their own personal opinion in very higher esteem, and placed more importance to personal reflection than scientific evidence. This type of discourse was repeated frequently on all three comment fields, similarly to this discussion, beginning with a comment from a believer to a sceptic on forskning.no.

You’re arguing like the fool that you are! You are concluding across the world’s areas of science without anything to turn the table with but a personal opinion? I bet your biggest “evidence” is a link to some stuff on YouTube

To this the original commentator replied:

You’re the fool here! Who’s unable to read other people’s opinions without calling them fools!

This discourse makes it clear that the believer puts no value in personal opinion, criticising the sceptic for trying to “turn the tables” with this, whilst the sceptic criticises the believer for not respecting other people’s opinions.

Not only did the sceptics tend to hold personal opinion in high esteem; they would also frequently criticise the believers for letting everyone else think for them, acting like “fanatical sheep”, “rolling in other people’s thoughts and research” and presenting it as their own, not trusting themselves enough to have faith in their own observations, being unable to make their own evaluations, and not having enough backbone to go against “the elite”. One sceptic even compared what is happening now with Hitler’s mass suggestion, criticising humans for walking in herds and acting like sheep. This comment makes it very clear how critical the sceptics could be towards the believers:

Some people always need to refer “to someone”. Those of us who were active on the left political side in the 70s learned to absorb knowledge and think for ourselves! Critical attitude to the power elite was in the backbone. I don’t know what’s turned the “left side” into submissive and servile moralists and niceists.

This sceptic seems to take pride in having his own opinions, and being critical towards the power elite, complaining that the “left side” has become too nice today compared to the 70s. Similar arguments were often repeated, for example by claiming that the “lie elite” have been using the same lie about oceans rising for 30 years without it having risen a single millimetre, and that most people will believe a lie if it is told long enough, but “not those of us who stick to the truth”. Other sceptics also seemed to value their ability to choose what and who to believe. One expressed that he didn’t always trust politicians, that the climate panel was “absolutely political”, and he asked the believer “why choose to be a fanatical sheep when you can choose to be sceptical”. Another said that it is “totally up to individuals to believe what you want to believe”, adding that he himself does not believe in human made global warming.

This sense of pride in being “strong enough” to go against the majority was often repeated and the ability to resist “brainwash” was frequently praised:

The Dagbladet employees are a bunch of brainwashed idiots, none of them are able to think for themselves. They’re trying their best to brainwash the rest of the population, they can probably do it with 80% but I hope there are 20% who are able to think themselves.

Similarly to the accusation of being religious believers, the accusation of being brainwashed also went both ways. A believer here criticises a sceptic of being brainwashed by the oil industry:

So many idiotic comments. The oil industry has money enough to have done a good job brainwashing people.

This points towards a huge gap between the two sides, where they are both so certain of their own truths that they see the other side as brainwashed.

While the sceptics criticised the believers for not being able to think for themselves, the believers criticised the sceptics for lacking knowledge and being “self proclaimed experts” or “sofa experts” who think they can go against the majority of the world’s scientists. This comment is a reply to a sceptic who accuses climate scientists for providing doomsday prophecies, on Aftenposten:

Why is there so much fucking resistance against climate research? What’s the deal? I don’t understand how simple net trolls can feel so confident that they think they know better than scientists who have worked for years with this. Introspection?

In reply to this, the original commentator wrote that scientists have been wrong for years and that science is no absolute truth, as well as there being little statistical material to analyse within climate research. This illustrates a general scepticism towards science and research based on previous conclusions having been proved wrong, a line of argumentation very popular among the sceptics. The believer tries to argue that even though scientists can be wrong, the majority is here in consensus, and he claims we cannot gamble on them being wrong. Here, he uses a “better safe than sorry”-approach. Other approaches include criticising the sceptics for misinterpreting what they are reading, and for not being able to substantiate their claims with academic sources. One believer expressed severe frustration of the comment field, saying “those who know the least shout the loudest”.

Similar to the accusations of brainwash, individuals from both sides would express fear of the ignorance of the opposing side. This comment is from a believer:

It's frightening to see how many who choose not to believe in science today. Not liking the consequences of what you're reading doesn't mean it's not true. You can basically feel the conspiracy thinking in the comment fields, and at the same time the evidence for serious climate changes are constantly increasing. But no, it's just a conspiracy to suck money from people's wallets of course. Sofa experts apparently easily trump the scientific environment.

This believer criticises the sceptics' tendency to choose not to believe in science, and accuses them of conspiracy thinking and not seeing the evidence in the scientific environment. Then again, a sceptic expressed he got "really frightened" when seeing what the "climate religious" were writing, and continued saying:

That they wholly believe the political truth, no warning bells ringing. I feel sorry for you. You're going to be so darn pissed when you realised you've been fooled.

Analysing these comments and discussions has shown that a lot of climate sceptics think human made climate changes are an invention by leadership to scare and terrorise people and thus gain control. The believers were perhaps not as good at counterarguing these claims as when counterarguing economic conspiracies, and would more frequently resort to personal attacks and unserious comments, a tendency that CMC is often criticised for (Tsagarousianou et al., 1998, p. 172). It seems that for the believers, these claims are so ridiculous that they found it difficult to stay serious and partake in an open discussion. For these reasons, I argue that these debates have been lacking in deliberation. They have been more prone to uncivility, with commentators attacking each other with terms like "fool", "believer" and "sheep". And civility, according to Collins and Nerlich (2015, p. 195), is an important part of open discussions and a deliberative democracy. We can also see a repetition of the tendency of the discussions to end without any common ground having been reached, undermining the democratic process (Young, 2000, p. 6). Again, I get the impression that echo chambers (Sunstein, 2002, 2018) may have caused this division of opinion, as it seems like the opposing sides have been presented to very different sources of information.

4.3 Doomsday Prophecies

The term “doomsday prophecy” was mentioned frequently across publications. The comments would typically refer to previous “prophecies” not happening, and the commentators would use this to discredit human made climate changes. This is quite a typical example, from Aftenposten:

The climate propaganda is intensified in line with earlier doomsday prophecies not happening.

What the commentator suggests is that as prophecies fail to come true, something new needs to be invented. The first believer replying to this comment used the same line of argumentation established when arguing against economic conspiracies, by asking the original commentator to name prophecies that didn’t happen and to include sources. To this the sceptic replies:

The polar bear that should have been close to extinct. The ice in the north should have melted during the summer. The ocean should have risen considerably. Etc. Do some Googling. Especially on the chief liar Al Gore then you’ll find loads.

Again, the sceptic sticks to his story without being able to or willing to provide a source to back up his claim. Instead, he mentions “prophecies” that didn’t happen, and Al Gore’s name, which is very frequently used by the sceptics as a proof that human made climate changes are simply prophecies. Specifically, it was mentioned 16 times in the data material collected for the purpose of this paper. One commentator uses Gore’s personal actions to discredit him:

It can be put as simply as this: Al Gore, who started this whole wave, bought a luxury house by the beach. Why? He told us that the ocean was going to rise like hell.

The sceptics would also frequently mention the Ozone layer, presenting it as one of these prophecies that never happened, and using it as a foundation on which to base their arguments that what we are hearing now are also just prophecies:

30 years ago it was the ozone layer suddenly disappearing. I guess the next will be the end of the earth as a reality considering the sun will become so large that the earth will burn.

Another sceptic said he hadn't heard about the Ozone layer for a long time, and mockingly asked if it was still there, if it has grown or decreased, or if it was just nonsense.

Whilst most of the believers would counterargue these claims asking for sources to substantiate the claims, there were also some who would use a "better safe than sorry" approach, such as this:

You should take some precautions against some prophecies. If the prophecies they're talking about are right we have a real fucking problem.

This believer, though not a very strong believer as such, is open to the fact that some prophecies might not be realistic, but he still argues that they should be taken seriously just in case they actually come true, using the "better safe than sorry"-approach mentioned earlier. Thus, in summation, while the doomsday prophecy comments were also often countered with science, a new line of argumentation emerged, this being "it's better to take precautions than risk the effects should the prophecies be right". In terms of deliberation and discussion, this argumentation, similar to the one mentioned in the previous section where a believer agrees that "the fear" is being exploited, is perhaps the most democratic so far. These believers are able to see both sides of the story, and encourage the sceptic to do the same thing, indicating an openness to other people's opinion and a willingness to reach a compromise (Young, 2000, p. 6). However, as this comment was not replied to, it is impossible to say anything about whether the opinion of the sceptic was in any way affected, and if the opposing parts came any closer to a compromise.

4.4 Natural Fluctuations

Climate changes merely being natural fluctuations was such a popular line of argumentation among the climate sceptics that it is included here despite it not really qualifying as a conspiracy theory. Compared to the other lines of arguments used by the sceptics, this is perhaps the one where they were most prone to use science and cite their sources. However,

the sources they used were never the same as the ones used by the believers, and were often websites or Facebook sites created by climate sceptic groups or individuals such as klimarealistene.no (The climate realists), and Bestefars klimasannhet (Granddad's climate truth).

Some examples of the rhetoric they used are “These are natural variations that we will never be able to avoid.”, “6000 years ago there was a forest on the Finnmark plateau. It was certainly hot back then.”, and “Earlier when there was no ice on Greenland, how high were the ocean levels then?”. The last argument, in the style of “Greenland was green before, hence the name”, was very popular on the Dagbladet article, as the article was focused on the ice on Greenland melting. Greenland was in fact mentioned 25 times in the material collected for this paper. Similar comments were “The Vikings grew corn on Greenland 500-1000 years ago.”, “Hurray, soon they can grow potatoes on Greenland again”, “yes they grew corn on Greenland in their time” and:

The Vikings who settled on Greenland over 1000 years ago prove that Greenland was a much warmer place than today.

The sceptics would also often express that humans are such a small part of the universe that they found it very unlikely that we can possibly affect it:

We are just small creatures in the great universe, it's affected by the sun and many other things that we simply don't have the knowledge about.

This view was echoed by several sceptics, one of which said that a lot of what is happening concerning CO₂ emissions and global warming “is not human made, but controlled by the universe and the planet itself”.

The counterarguments from the believers were also here reliant on science, and the individual commentators would often attempt to explain to the sceptics that the changes we see today are happening on a much faster scale than before. For instance:

It has been warmer before and colder before, no one is doubting that. It's the tempo that the changes are happening in that is disturbing and that excludes the idea that this is natural. <https://xkcd.com/1732/> here you can

see the difference between natural fluctuations of temp and what we see now.

In contrast to the sources usually used by the believers, this source is arguably not very serious. It is not academic or peer reviewed, it is merely a blog post. Other commentators chose not to cite sources at all, like this one:

There was a regional warm period in the area of northern Europe and the northern Atlantic around that time, most likely because of changed ocean currents. There weren't fast global changes like in our time.

This commentator seems to have scientific knowledge, but does not reveal where this knowledge has come from. On the opposite side of the scale again, a believer replied to a sceptic claiming they are natural fluctuations simply by posting a link to NASA:

<https://www.nasa.gov/feature/jpl/new-greenland-maps-show-more-glaciers-at-risk>

In other words, while the counterarguments to this rhetoric were centred around explaining today's science, and asking sceptics to substantiate their claims, the believers would not always substantiate their own claims. Whether this had any impact on the quality of the deliberation or not is difficult to say. It could be assumed that the sceptics would appreciate less citing of sources, as I previously argued that they seem to value personal opinion higher than the scientific consensus. But I do not get the impression that these discussions are any more deliberative than the ones previously analysed; both sides seem just as unwilling to deviate from their original ideologies.

4.5 Summary

In this chapter I have presented the various conspiracy theories put forward by the climate sceptics, and analysed the following discussions with the climate believers, where they would most commonly counter citing the scientific consensus. My impression is that while reciprocity was often present, these discussions were not necessarily the open and including debates necessary in a deliberative democracy and a public sphere (Collins & Nerlich, 2015; Habermas, 1962/1989; Young, 2000). I found neither side willing to deviate from their conviction, as well as a frequent absence of civility. And incivility can damage the democratic potential of online debates both because of the alienation of users wishing to avoid the

attacks, and because the incivility can make the scientific content of the article seem less credible, factors that deliberative democracies and cyberdemocracy theories are often criticised for (Collins & Nerlich, 2015, p. 195; Dryzek, 2000; Tsagarousianou et al., 1998).

In agreement with Walter et al. (2018), I did not find that the spiral of silence theory is applicable. According to the European Social Survey (2018), 38% of respondents thought climate changes were mainly or entirely caused by human activity, whilst 12% thought they were caused mainly or entirely by natural processes. But on the comment fields I have observed here, the amount of sceptics and believers seems to be equal, or if anything there is a majority of sceptics. As Walter et al. (2018) pointed out, it is possible that contrarians of the majority opinion feel marginalised in the public debates, and that they for that reason withdraw to comment sections to express their criticism (Walter et al., 2018, p. 213).

It should be noted that if this is the case, it could be argued that CMC and cyberdemocracy has created a new, online public sphere that contributes to a deliberative democracy (Habermas, 1962/1989; Tsagarousianou et al., 1998; Young, 2000). This presence of reciprocity and debate contradicts some aspects of the echo chamber theory, as it claims that users with similar ideologies will prefer to interact with each other rather than with users of opposing views (Sunstein, 2018, p. 59). Then again, I also found a significant difference in the information and sources cited by the two ideologies, which could indicate the existence of echo chambers (Sunstein, 2002, 2018). In the next chapter I will present the debate between fatigue and responsibility, and evaluate whether there is a similar lack of deliberation and existence of polarisation as has been seen in this chapter.

5 Fatigue vs Responsibility

In this chapter I attempt to evaluate the existence of deliberation in the discussion between climate sceptics and believers, where the two sides express fatigue and responsibility respectively. Not unexpectedly, there is also here a significant gap between the two sides. The sceptics expressed that they were fed up with hearing about climate change at all and that trying to fight the changes is pointless, either because they believed the fluctuations are natural and not human made, or because they thought they as individuals, or Norway as country, could not make any difference on a global scale. The believers would counter this with arguments of ethics, morality and responsibility. But the final section shows that in one area, the two sides seemed to be in agreement: they both thought the country's leadership has not acted in accordance with the scientific consensus when making certain political decisions, such as building close to the waterfront when the ocean levels are supposed to rise.

Similarly to the previous chapter, I will first present the various arguments and debates, before looking for reciprocity and a civil and open discussion as indicators of a deliberative democracy (Collins & Nerlich, 2015; Young, 2000), but also for signs of echo chambers as an indication of polarisation (Walter et al., 2018).

5.1 Effort is Pointless

Here, I will present the comments and debates centred around fatigue, and the pointlessness of trying to affect climate changes. It was not uncommon to observe commentators being fed up with the whole climate change discussion, publishing comments such as “Here we go again ☹️”, “New wave of refugees. Heere we go” and “Fucking tired of all these doomsday prophecies!”. The theory that money was behind it all, a theory that was thoroughly investigated in the previous chapter, was also mentioned in this context, as exemplified by this comment from Dagbladet:

Little ice one day and a lot of ice the next and our lives keep turning. But there's a lot of money in it

This comment suggests that the whole climate change discussion is instigated by money, because the commentator experiences that the opinion changes from day to day, whilst nothing actually changes in real life. He was not the only person using money as a reason not to act, like this comment from Aftenposten suggests:

Been paid to share this and to milk people for money 😏. Don't the electric cars in Oslo help etc 😏. Can't little Norway save the whole world 😏. What we do in Norway is like peeing in the ocean and it doesn't help at all. Everything is just about money. The air doesn't get better by paying more road tolls even if MDG [Norwegian Green Party] thinks so.

This commentator mentions two economic aspects: journalists being paid to share these views to “milk people for money”, and road tolls not helping because the effort we do in Norway is like “peeing in the ocean”. In other words, an action that will have absolutely no impact. In reply to this comment, a believer points out that Norway setting a good example doesn't go unnoticed internationally, and that electric cars provide less exhaust which improves air quality in big cities. To this the original commentator replies that the rest of the world laughs at Norway, that they think Norway is a city in Sweden, and suggests that if the believer is bothered by the air quality he should move out of Oslo. Again, the focus is on how small and unknown Norway is in international comparison.

There were several other mentions of the Green Party, often in the same style as the previous comment, ridiculing the green measures the party wishes to implement.

The article's saying “This is what it CAN look like if the ocean rises along the Norwegian coast”. MDG's interpretation: The ocean is rising along the Norwegian coast tomorrow, we're absolutely sure. MDG's measures: Now everyone have to ride bikes, are not allowed to park in Oslo, and have to pay expensive road tolls if you're going through the city.

It seems like this commentator from the Aftenposten comment field thinks the Green Party has exaggerated their interpretation of the facts, and thus that their suggested measures are too extreme. His criticism of The Green Party, a centre-left orientated and egalitarian party (Jupskås, 2011), could mean that this commentator holds more individualist values, which would be in agreement with previous climate change research placing more climate sceptics among those who value individualism (Aasen, 2017, p. 225). There were further comments expressing discontent with politicians and political decisions, and I have explored these in the last section of this chapter.

Circling back to the question of the usefulness of environmental effort in Norway, there was general agreement among the sceptics that there is very little Norway can do about climate change, and also that the responsibility shouldn't even fall to us. The sceptics would question the logic of having to buy electric cars because their neighbours were polluting too much, and complain about the number of "stupid explanations on a phenomenon where tiny Norway is supposed to save the world". This comment from Dagbladet exemplifies how the sceptics would place the burden of responsibility elsewhere:

There's not much we in Norway can do about this anyway because there are loads of countries down in Asia who's never heard of environmental protection and don't give a shit, no point putting fees on people in Norway

This comment suggests that seeing as the rest of the world, Asia in particular, are not on board with environmental protection, trying to implement measures and fees in Norway is pointless.

A believer replied to this comment saying that it is natural for these Asian countries not to care as much as they are more reliant on fossil fuels to develop their countries, and that stopping the use of fossil fuels would be the same as "condemning millions of people to eternal poverty and death". Although he does not make this clear, it seems like he suggests Norway should still try to protect the environment, as we have the economy and possibility to do so, compared to a lot of other countries. This type of counter argument is further explored in the next section.

The allocation of the responsibility on other countries also occurred in discussions that deviated from the climate change theme. These debates would often occur as the commentators seemed to think there are other, more pressing climate problems than ice melting and increasing temperatures, which was the topic of the news article:

The biggest climate/pollution problem we have is OVER POPULATION!
What are we doing to stop that?

To this it was replied that, again, the responsibility to reduce numbers could not be put to Norway as our birth rate is already below 2, but that the restriction should happen in Africa, India and The Middle East.

What I gather from this discourse is that one side thinks Norway is doing too much, whilst the other thinks we are not doing enough, again indicating that sceptics and believers

view the issue of climate change wildly differently, possibly because of echo chambers (Sunstein, 2002, 2018). As mentioned before, one or both sides of the discussion could have been fed information that algorithms already knew they would be interested in, and thus isolating them from information that challenges their opinions (Sunstein, 2018, p. 59). In terms of the spiral of silence (Noelle-Neumann, 1993), I again found that it is not applicable. The European Social Survey (2018) shows that 67% of Norwegian respondents felt some degree of personal responsibility to reduce climate change, whilst only 18% said they do not feel responsible. According to the theory this should have been reflected in the comment field, but on the contrary, there seem to be more comments voicing the minority opinion than the majority. Concerning reciprocity, there were perhaps more unanswered comments here, which could be because fatigue can be more difficult to argue against than conspiracy theories. However, some believers attempted to counter fatigue with moral responsibility, and I will further explore this argumentation in the next section.

5.2 Moral Responsibility

Having presented some comments where climate sceptics expressed fatigue over the whole climate change topic, and argued that effort in battling climate changes is pointless, I will now explore the way the climate believers countered these arguments. Most frequently, the counterarguments to the line of “this is not our responsibility” and “there’s no point anyway because Norway is such a small country” were usually centred around morals and ethics. One comment found the rhetoric of stating “Tiny me won’t make a difference – the others are bigger and need to act first” to simply be wrong. This statement received a reply where the original commentator asked why he had to “bleed for something someone else are doing”, to which it was replied “Because we’re all a small part of a bigger unit”. This view was reflected by several other comments, often focusing on how several individuals, or small countries together can make a difference, like this comment from Dagbladet suggests:

That kind of thinking is the reason we’re not seeing progress.. Imagine people having the same way of thinking as you in Denmark, Sweden, Finland, and many other “smaller” countries, but how much impact do you think these countries have together on a global scale?

This commentator blames the lack of progress on just the type of thinking that I explored in the previous section: that “we” are too small to make a difference. Another commentator from Dagbladet agreed, calling this way of thinking “egocentric”:

If Norway... makes NO difference ...

What if all countries thought like that, doesn't matter what WE do, why do WE need to implement fees... If WE, as in the world's population, don't get our heads out of our asses, it'll have catastrophic consequences for the whole world's population!

Egocentric way of thinking!!

These comments illustrate a tendency from what we can assume are climate believers to criticise the egocentricity of the sceptics. From this tendency it is possible to draw a conclusion that they are more socialistic in their views, that they find it important to work together and to care about the global community, not just themselves and their own interests, in agreement with existing climate change debate research (Aasen, 2017).

The argument that Norway sets an example for other countries was also brought up in this context:

Someone says we're too small a country to be able to contribute? That's wrong, look at what Oslo municipality has done and how the world looks up to the job they're doing in Oslo. The climate meeting in Poland is praising Oslo.

To which it was replied “do you seriously think Norway has an impact on the world's CO2 emissions?”, again using the argumentation that the country is too small to have an impact. One believer countered this argumentation using Norway's wealth, and thus opportunities to implement environmentally friendly measures, asking “Norway is one of the richest countries in the world, if we can't do it then who can?”.

Furthermore, the issue of ethics was frequently discussed, and used as a reason to act with compassion to remote populations. For instance:

It's unethical to let people in Africa starve to death while we eat ourselves to death. The climate problems can increase migration, unless we find other

mechanisms for distribution and realise that the west must put up with negative growth, preferably quite quickly.

This comment was part of a debate on over population, and suggests that the west should put up with negative birth rates and find other mechanisms for food distribution, in order to improve the balance of resources. This also gives a socialist impression, as the commentator urges the wealthy nations to collaborate more with the poor nations. The responding commentator claimed that having more children than you can feed is unethical, and that it is not unethical of him not to support this. He also said “We can eat enough, because we’re not having children!”. As opposed to the socialist views of the previous comments, this commentator seems to feel like the nations struggling with over population and poverty has brought this on themselves, and that therefore it is not his problem. This line of argumentation was repeated by a different commentator:

People are thinking a bit strangely... if we’re neighbours, and I don’t work much, and have 10 kids, Skoda and an angry wife. The kids are poorly clothed, the house looks like shit, and we’re poor! You work a lot, 1,3 kids eat out 3 times a week, full TV channel package and Mercedes in the garage. How am I then your problem? Are YOU to be punished because I chose 10 kids and little work? Is it your duty to support me and my family?

This commentator finds the socialist way of thinking strange, and goes on to say that he does not think it is the duty of the wealthy to support the poor, because the poor have chosen “10 kids and little work”.

His comment received a reply again focusing on socialism, saying that while it is not a duty to help, it is a nice thing to offer:

Not a duty, but it would be nice of him to offer to help out with stuff. And common decency after what I was taught growing up 😊. It’s not a duty to share, but it’s part of what defines what kind of person you are 😊

This “common decency” angle is a new line of argumentation, expressing that people should strive to be good because that defines what kind of person you are. Although the commentator

does not make this clear, this is presumably because she believes it is important to behave ethically towards other human beings, which again touches upon socialism. The first commentator seemed to get the same impression, as he replied:

In today's society it has become compulsory! It's real socialism 👍 if you decide not to have a lot of children, simply to have better economy, more time and to live "better", you shouldn't be punished for other people's stupidity!

Here, he complains that in today's socialist society it has become compulsory to care for the poor, something he disagrees with. He sticks with his argument that you "shouldn't be punished for other people's stupidity", this being having more children than you can afford. An important aspect of this discussion that goes amiss for most of the commentators, is the issue of certain religions prohibiting birth control, as well as lack of education, which can be attributing factors to over population (Shrivastava, 1992, p. 2036). Most of the commentators did not mention this, and seemed to think that overpopulated areas have this issue simply because the inhabitants choose to have more children than they can support, out of stupidity. In fact, only one comment mentioned that "The best thing against human growth is school and education". Thus, I would argue that in complaining about other people's ignorance, these commentators have proven that they themselves are quite ignorant, in the matters of other populations' cultures and ways of living.

The quality of the deliberation here has been somewhat difficult to evaluate. The commentators are not really discussing their different opinions on climate change, but it has rather become a more political debate where they are discussing how humans should live together, and whether it is right or necessary to care for others than yourself and your own family. And similar to previous studies, I have found that climate sceptics seem to hold more individualistic values, whilst the believers seem to value egalitarianism (Aasen, 2017, p. 224). In terms of a deliberative democracy and a public sphere (Habermas, 1962/1989; Young, 2000), it does seem like people are not hindered from uttering their honest opinions, as several of these comments are not exactly "politically correct". One commentator even claimed she "said what most people are thinking and believing, but don't dare saying out loud", after saying she was against immigration from Africa. This is arguably an indicator of a well functioning cyberdemocracy as predicted by technological determinists (McLuhan, 1964; Tsagarousianou et al., 1998), as it can be argued that this online platform allows people to

utter opinions that they could be afraid to express in a real life situation, possible because of the spiral of silence theory (Noelle-Neumann, 1993). Then again, I am still unable to find any sign of either side being willing to yield from their original opinions, which diminishes the deliberative debate (Young, 2000, p. 6).

5.3 Disappointment in Leadership

A very popular theme among both sceptics and believers was expressing criticism and confusion over the decision made by the government in terms of climate change and the environment, and in particular for choosing to build by the waterfront when the sea levels are predicted to rise. This seemingly ironic comment from Aftenposten is very representative of the opinions that were uttered on this topic:

Good thing that we're forward thinking and take the threat seriously by placing the National museum and the Munch museum on the ocean surface.

This point was frequently reflected. One comment said that he registered with wonder that these buildings are being built down by the shoreline, claiming “the billions are pouring in from the outskirts of Norway and falling out in the Oslo fiord”. Also mentioning these buildings, a comment said that there must have been “some departments in the municipalities who haven't paid attention”. Another comment asked if Dagbladet could explain these decisions from the politicians, asking when these buildings would be flooded. Similarly, the government was criticised for “building according to the ebb and flow, not according to potential sea levels rising”.

The building of the National museum and the Opera by the waterfront in Oslo were the most frequently mentioned cases in the comment fields, but commentators were also puzzled by the phenomenon in other parts of the country. One person commented on a new hospital in Drammen being built by the waterfront, asking what those in charge thought about this. This comment received a reply saying that they must not believe that the sea levels are rising, whilst another retorted “Where have you heard that they're even thinking?”. The original commentator replied that this was a good point, and added “I guess they have nothing to think with, so they can't actually think”, implying that the government representatives don't actually have brains.

In response to these comments about signature buildings being constructed by the waterfront, one commentator from Aftenposten specified that he doesn't think the museums and the works of art are the biggest worry, but the lack of risk assessment done by the government:

Water rising as a consequence of the warming has been known long before all these signature buildings and the decisions about them were made. Ergo the risk of a small flooding, or a big one, should have been included in the risk assessment of the decision to place the buildings there.

Because the buildings are owned and built and financed by public authority, read: our money, and public authority has a responsibility to delegate the common funds as well as possible, you have to ask how this risk assessment has been done?

The likelihood of higher sea levels – constantly increasing.

The consequence of higher sea levels – catastrophic.

Available mitigating measures – there are not enough water pumps in the world if the oceans rise.

The conclusion has in other words been – let us build the signature buildings for billions of kroner on the waterfront, put irreplaceable national cultural treasures etc in them, and let whatever happens happen...

The thinking process must have been that we don't give a shit, in the long run we're all dead, or the water isn't rising, because the climate people are wrong or the world will be saved five minutes to twelve

First maintaining that the government did not take existing knowledge into account when planning these constructions, he concludes that they either must not care because “in the long run we're all dead”, or they must have thought that climate change scientists are wrong, or that someone will come in and save the world at the last minute.

This comment is not the only one claiming that politicians have overlooked existing knowledge and agreements. One woman said the politicians shouldn't have been shocked by these things happening, and that it may be too late to act now, having signed the climate agreement about the exact same things years ago. She added that “They've done too little and too slow”, and that the destructions are working faster. Another commentator asked “Shouldn't we start taking this seriously?” and added:

Parts of the Norwegian government don't believe that the climate is changing and that we can't achieve the goals from the Paris agreement. We need to change course or we won't have a planet to leave our grandchildren.

An interesting aspect of the climate change discussion in Norway is our oil business, and the contrast between this and our extensive amount of green initiatives. Despite the increasing focus on environmentally friendly living, there is reluctance among politicians and the public alike to decrease the oil business (Eide, Elgesem, Gloppen, & Rakner, 2014). However, this conflict was only mentioned once in the data material collected for this paper:

Erna Solberg and Jonas Gahr Støre, our two biggest politicians have not expressed that they intend to stop oil business. Norway is still looking for more oil. The climate politics we're doing in this country is a shame! And my prophecy is that we'll have to pay for this in a couple of years. We're pumping up oil and contributing to global warming. Even though we actually know that it'll cause big problems in a few years!

The reply this comment received pointed out the aspects that could be the reasons for this discussion's lack of popularity. The commentator claimed that Norway has about 1% of the world's oil production, that 40% of the world's energy needs are covered by coal power, and that if Norway stops selling oil then countries will buy energy from the coal power producing countries, which "sure gives a poor CO2 calculation". This argument is stating that other energy productions give worse CO2 emissions than oil, which again indicates that the responsibility to fight climate change lies elsewhere.

Again, the main topic of the discussion here has not been climate change itself, but rather climate politics, and a feeling of dissonance between climate change and Norwegian climate politics that seems to be shared by both believers and sceptics. I get the impression that the sceptics take the lack of commitment from leadership as a sign that climate change is not that serious, whilst believers seem disappointed in the politicians and urge them to more action. The ability to elect and criticise leadership is an important part of a deliberative democracy (Young, 2000, p. 5), and it is possible that this comment field has created a cyberdemocratic public sphere (Tsagarousianou et al., 1998) where inhabitants safely and easily can do just this. Then again, I highly doubt that these comments are ever perused by

government officials, thus the criticism does not reach the politicians and the comments will probably not have any ultimate effect on the democracy.

5.4 Summary

In this chapter I have explored how arguments of fatigue were countered with arguments of moral responsibility. Those who felt like there was no point in acting because Norway is too small of a country, or because it is too late, were counterargued by those who feel that several individuals together can make a global difference, and that those who have the opportunity to act should do so for ethical reasons, and in order to set an example. This disagreement I again interpret as an indicator towards the existence of echo chambers, where information is filtered to suit the previously expressed interests of the users, and where they can interact with likeminded individuals which could enhance the segregation between the opposing viewpoints (Sunstein, 2002, 2018; Walter et al., 2018).

However, both groups seemed to agree that the government does not act in accordance with research and international climate agreements. This criticism of the government, as well as the expression of “unpopular” opinion that has been explored in this chapter, can with a technologically deterministic view be interpreted as a cyberdemocratic public sphere with the potential to enhance a deliberative democracy (Habermas, 1962/1989; McLuhan, 1964; Tsagarousianou et al., 1998; Young, 2000). But I also argue that that even though the comment field provides an arena for debate, it is unlikely that the expressed opinions will reach the recipients of the criticism, and the inclusion of these debates into political decision-making is essential in order to affect the deliberative democracy (Young, 2000, p. 5). So, ultimately, I argue that there is very little beneficial effect from this debate on the deliberative democracy. In the next chapter I will present more comments that mock and ridicule the government, and attempt to evaluate the presence of deliberation or polarisation in that debate.

6 Ridicule

Perhaps the most surprising theme that emerged through the data collection is ridicule and humour. I discovered numerous comments joking about climate change in general, or the specifics of the articles where the comments were posted. For instance, they would joke about there not possibly being any ice melting because there is extreme cold in Norway, that they'd be able to swim or sail to the opera, or that they'd soon have a beach property as the sea levels rose to their houses. In this chapter I will explore these comments, first going through those presenting a general mockery, then those joking about natural changes, followed by the comments suggesting satisfaction over rising sea levels, and finally those using humour to ridicule the decisions from leadership. I will also attempt to evaluate how the use of humour in these debates can affect a deliberative democracy. It could be argued that seeing as both sides of the discussion used humour, it could somehow draw them together and perhaps enable them to reach a common ground, which would be beneficial for a deliberative debate (Young, 2000, p. 6). But on the other hand, humour is often uncivil, and could therefore create animosity and polarisation rather than agreement (Collins & Nerlich, 2015; Dryzek, 2000; Tsagarousianou et al., 1998). Due to the similar nature of all the ridiculing comments, I leave this evaluation to the summary, analysing all comments used in the chapter simultaneously.

6.1 General Mockery

Some of these comments just expressed a general mockery and were not suited in any of the other categories, but are still included in order to illustrate the various ways in which ridicule was used. One comment on Dagbladet simply said “Ha ha” – most likely illustrating that the commentator thought the entire article was laughable, probably placing him within the climate sceptics. Another made a joke referring to the choice of words used to describe the glacier soon to melt. The glacier was described as a sleeping giant, which made the commentator write “I too am a sleeping giant”. This could be just a meaningless joke, but it could also have been said to illustrate how ridiculous the commentator finds this notion that there is an imminent danger in the glacier melting.

Ridicule was not only used to make fun of the articles or the climate changes – it was also used to mock the fellow commentators. One said “I'm proud to be Norwegian. No other country has as many climate experts as we do 😊😊”. While it is difficult to say which side this commentator is on and which side he is mocking, it can safely be assumed that he finds it

ridiculous how people are expressing very strong opinions on something they do not have adequate knowledge of. Another comment from Dagbladet was clearly from a believer, mockingly asking the sceptics to explain their arguments:

Strange how many scientists there are here 😏 a lot people who apparently “know” how this “bluff” is made. Does anyone care to explain? Is it the case that most scientists on the planet just want to trick money from people? Or do they want to keep regular people in the dark and do other scary stuff 😏 Or are there other reasons we’re just “fooled” and that climate changes are just a big conspiracy theory, please enlighten me in the comment field below 🖱

If it wasn’t for the use of emojis, this comment could have been seen as honestly inquiring after enlightenment. But the emojis, as well as the quotation marks around the words “know” and “bluff” make it clear that he is being sarcastic, and that he finds the conspiracy theories he mentions ridiculous. His comment received two replies, one with a link to an article claiming that the ice is getting thicker in Antarctica, and another where the commentator claimed that only scientists from one side are allowed to express their opinion. It did not instigate the longer debates that I have seen during the exploration of previous themes in the first two analysis chapters, perhaps because of an unwillingness to participate in debates with a hostile tone, a tendency also found in previous research (Veledar & Burkal, 2018, p. 70).

6.2 Make Greenland Green Again

Here as well as in Conspiracy vs Science, there was a lot of focus on climate changes being natural fluctuations and not human made. The notion of human made changes was mocked by comments like “Is this going to happen before or after the next ice age?”, and “The ice isn’t melting 😏 There’s extreme cold in Norway now hahaha 😏”. Another comment from Aftenposten mockingly asked when these changes are actually going to happen:

Does anyone know how quickly this is going to happen? Will we be able to run away? The weird thing is that Al Gore predicted that the ocean should have risen a lot already. The last time they measured it it hadn’t risen at all? What’s happening?

Criticism was also aimed at other politicians than the Norwegian government. One comment made a reference to Trump's slogan "Make America great again", in reply to a comment rejoicing over the fact that they can soon grow potatoes on Greenland again: "New suggestion to another Trump slogan: Make Greenland green again! 😊". The position of these commentators is quite unclear, although the tone of their ridicule could imply that they do not see climate changes as a serious issue, placing them among the sceptics.

As well as in previous chapters the topic of prophecies and fortune telling came up in a humorous context:

We have to be nice to the fortune tellers, they want to make money like everyone else, let them wail as much as they want 😊.

This commentator obviously thinks that those predicting dangerous climate changes are merely making prophecies for economic reasons, and suggests that we should be nice to them because they just want to make money like everyone else. His comment received a reply saying "What fortune tellers earn money making fortunes. Do you live in the 1500s?", a rather uncivil comment to which the original commentator provided no response.

6.3 Higher Sea Levels Please

Seeing as all the comment fields observed in this study are from articles regarding ice melting and oceans rising, it may not be surprising that the effects of higher sea levels was a popular topic among the commentators. However, it is somewhat surprising how many comments expressed a humorous outlook on this future. For instance, the commentators would say "Ahh... I'll have a beach plot soon 😊👉👈👉", "I guess citizens will get boat parking then?", "It's going to be great to drive the boat straight in to the opera" and "Hold on ... does this mean I can swim to work? 🏊". One commentator on Dagbladet even asked for higher sea levels than those predicted:

Seven metre rise in ocean levels is too little. I need 15-20 metres to have the waterfront on my property.

This comment sparked a humorous conversation with several other commentators. The first one said he needed 47 metres to get the waterfront on his property, and the second pointed out that “The problem then becomes that you have to row to the shops 🚣 🚣”. To this the original commentator replied “Hopefully I’ll get permission to build my own boathouse and dock.”, to which the respondent suggests a bridge instead, as it would be easier to get approved than a boathouse. This whole conversation seems thoroughly indifferent to the potential dangers of sea levels rising, and whether or not they actually believe the sea levels will in fact rise, they do not seem to regard this as problematic.

Other commentators seemed to hope for the Parliament to be flooded due to rising sea levels. They would for instance say “If only it would rise a bit more, it hasn’t reached the Parliament yet.”, “Where on the map is the Parliament? 🤔 🤔 🤔 🤔 🤔”, as well as “Looks like both the town hall and the Parliament will end up under water...”, a comment that was reacted to with laughing emojis and hearts. Another comment said:

So then our elected officials can have a boat dock right by the Parliament
🤔! Well deserved 👍!

This prompted a reply asking “But how is it going to go with the garage? 🤔”. Other comments also mentioned the garage with post reception currently being built:

Ah. Now that we just got such a nice Parliament garage with mail reception
to the joy of the entire Norwegian population, and it gets flooded?

To which it was replied “Message in a bottle is fun though”. If seen in a literal sense, all these comments collectively laugh at and hope for more flooding, considering the potential consequences humorous. But trying to gauge what they are saying behind the irony, it seems like they may not believe that the levels will actually rise, and that they may also feel like they have heard this type of predictions so often that they just find them ridiculous now, making them further victims of fatigue and sceptics of human made climate changes.

Furthermore, several comments trivialised the potential consequences of higher sea levels. One comment said that the biggest problem would be that “we need longer ropes in the crab traps”, whilst another said everyone should relax, because we’d probably be “on the boat

to Denmark when the flood comes 😊”. A third commentator hoped an entire area in Oslo would be flooded:

Well, isn't it just positive that the area around Oslo S, Brugata and Waterland goes underwater? The whole area is a rubbish dump. Frogner will be fine 😊

While this commentator says that he does not care if some areas get flooded, the extremity of the comment implies that he is being ironic, and that he thinks more should be done in order to prevent the area from flooding. However, this is an assumption, and I cannot be sure of what he actually means.

6.4 Great Job 👍 👍

In this section I present the comments ridiculing the government and politicians in some way or other. These comments were numerous and would most often sarcastically praise the government for choosing to build near the waterfront. They would for instance say “Good thing they're building tall houses 😊”, and a reply to a comment wondering why a hospital in Drammen is being built by the waterfront said “They were probably thinking they'd save money on a pool for patients.”. The issue of the museums being built close to the water was also raised here, as well as in *Fatigue vs Responsibility*, and one commentator trivialised the whole issue by voicing that the possibility of *The Scream* being lost was the only problem brought forth by rising sea levels:

But what if we build it like a skyscraper, and have Munch's *The Scream* on the top floor 😊 Problem solved, we can all go back to our daily lives again 😊

This comment both expresses criticism towards the decision to place the museum so close to the water, and suggests that if *The Scream* can be saved, the problem is solved.

Others focused on the measures of environmental taxes, implying that these fees have no impact on the potential consequences. One comment simply said “We'll have to increase the plane seat fee then! 👍” whilst another comment from *Aftenposten* said:

All we need to do is pay the environmental taxes, then the politicians and scientists can adjust the temperature easily! And they can probably fine tune the sea levels as well

In a literal sense this says that paying the taxes will help politicians to adjust the temperature and sea levels, but the actual opinion is probably in the lines of these taxes being useless, and that the government has not done their job right. Finally, a comment said:

Yes. Why stress about new roads etc and parks in Oslo. When everything disappears under the ocean. Mmmm 🤔🤔🤔🤔🤔🤔🤔🤔🤔🤔🤔

As I remarked previously, only the use of emojis implies that this comment is ironic. Literally, the comment suggests that there's no point building parks or roads because it is all going to be flooded soon anyway. But the emojis make it seem like the commentator does not, in fact, think this is a good strategy, which implies a criticism towards the government.

6.5 Summary

Due to the use of irony and sarcasm, I have found it quite difficult to get a grasp of the meaning behind these comments, as well as what side of the debate the commentators are on. The actual meaning of the comments can be entirely different from what they literally say, and there is no way of being certain that my interpretation is correct. However, with this in mind, it can be quite safely assumed that both sides of the discussion have used humour in order to ridicule climate changes in general and the Norwegian government in particular, as well as other participants in the debate. In this sense, it can be said that humour is one of very few lines of argumentation that both sides have in common. And, like I mentioned in the introduction, this could enable believers and sceptics to find a common ground, which could ultimately benefit a deliberative democracy (Young, 2000, p. 6).

However, because of the low level of reciprocity here – a factor that in itself is important for a deliberative debate (Collins & Nerlich, 2015) – and the difficulties in discerning what side commentators were on, I am unable to evaluate whether any common ground or agreement was actually reached, which are essential factors in deliberative discussions (Young, 2000, p. 6). My material has also shown the ridicule to frequently be

uncivil, and incivility can counteract a deliberative discussion by alienating users and lowering the credibility of the scientific content of the articles (Collins & Nerlich, 2015; Young, 2000). The tendency of uncivil discussions in cyberspace is one that has often been criticised, as the unconstrained nature of CMC can create instability and inhibit rather than enhance democratic debates (Dryzek, 2000; Tsagarousianou et al., 1998)

Ultimately, I find myself quite unable to draw any conclusions from the material in this chapter, for four reasons: difficulties in discerning the meaning of the comments, a lack of reciprocity and thus no debate to analyse, difficulties in discerning whether the commentators were sceptics and believers, and because of a lack of existing research on exactly this field of study. The one thing I can say for certain is that humour and ridicule constitutes a significant part of the online climate change debate, and that it could be useful to explore this further. For instance, this use of humour could mean that the Norwegian population does not take climate change seriously, which would make the implication of environmentally friendly political measures more difficult. I will explore this further in the following chapter, where I will summarise and discuss my findings, and present my suggestions for further research.

7 Conclusion

This study assesses the prevalence of deliberation or polarisation in the Norwegian online climate change debate, using theories on deliberative democracy, the spiral of silence and echo chambers (Noelle-Neumann, 1993; Sunstein, 2002, 2018; Young, 2000). Through an online ethnography and a qualitative content analysis I have attempted to discern whether there is a prevalence of deliberation in these debates that could further democratic processes (Young, 2000), or whether there rather seems like the debate increases polarisation, in accordance with the theory of the spiral of silence (Noelle-Neumann, 1993) and echo chambers (Walter et al., 2018). The online ethnography method has enabled me to observe and analyse the structures and patterns of relationships between the actors in a social network, and evaluate the structure of the communication and social relations (Kozinets, 2010, pp. 49, 54). In this final chapter I will draw my findings together, summarising whether deliberation or polarisation dominated the debate, discussing what this can mean in a broader societal context, and finally presenting my suggestions for further research.

7.1 Summary: Deliberation or Polarisation?

My general impression after having analysed the Norwegian online climate change debate is that the prevalence of polarisation is higher than that of deliberation. It is not unexpected that online debates are characterised by two strong opposing sides, but I was surprised to see just how strongly the two sides would stick to their beliefs. Previous quantitative studies of the same subject have found a high prevalence of reciprocity by counting the times one user directly addressed another by using “@”, and interpreted this as deliberation (Collins & Nerlich, 2015). Although I also found evidence of reciprocity in my data material, through my qualitative analysis I was able to study the content and meaning of the messages, and not even once in my data material did I find any sign of either side yielding from their original opinion. If anything, they became firmer in their beliefs when discussing with the opposing side. And this factor can have negative effects on a deliberative democracy, as it is characterised by inhabitants being open to having their opinions change during discursive processes (Young, 2000, p. 6).

I also found a significant number of mocking and ridiculing comments, both directed towards the topic of the articles and towards users of the opposing side of the debate. This incivility can hinder the deliberative debate as well, by creating animosity and silencing those who would refrain from commenting out of fear of a personal attack (Collins & Nerlich,

2015; Young, 2000). And the inclusion of all the various voices and opinions of a society is a crucial part of a deliberative democracy (Young, 2000).

The fact that such a small part of the comment authors were women (only 18%), thus also arguably weakens the deliberative debate, as women as a group are strongly underrepresented in the discussion. A report from the Norwegian Gender Equality and Anti-Discrimination Ombud shows women are significantly more exposed to hateful speech online than men, 28% and 4% respectively (Veledar & Burkal, 2018, p. 72), and that females are more prone to withstand from online debates than men because of the rough tone of the argumentation (61% and 44%) (Veledar & Burkal, 2018, p. 70). The clear majority of hateful comments found in their report, 53%, were made on the basis of political views (Veledar & Burkal, 2018, p. 51), and my data shows a similar tendency. As the oppression of vulnerable groups is an argument that has been used against both the deliberative democracy (Dryzek, 2000, p. 4) and the public sphere (Fraser, 1990, p. 60), I interpret my findings as further indicatives that there is very little democratic deliberation in the online climate change debate.

As mentioned in *Conspiracy vs Science*, the two sides never cited the same sources, a fact that I interpret as an indication of echo chambers (Sunstein, 2002, 2018). It is possible that algorithms have presented the users with sites similar to those they had already visited, making them more convinced of their original belief, and possibly blind to the existence of contradictory information. Thus, as opposed to those believing that technology and CMC can enhance a deliberative democracy through creating a new platform for discussion (Campbell & Carayannis, 2018; Collins & Nerlich, 2015; Tsagarousianou et al., 1998), I argue that the technology has, in this case at least, increased the gap between these opposing sides. And this tendency to extrapolate a few not established facts has been found to weaken the effectiveness of environmental discussion (Laslett, 2003, p. 212).

In accordance with Walter et al. (2018), I found that the spiral of silence was not applicable. The theory suggests that those who carry an opinion that is not the majority belief of the general population will be afraid to speak their mind in a public forum (Noelle-Neumann, 1993), but my findings suggest the exact opposite. Whilst significantly more Norwegians said in the European Social Survey (2018) that they think climate changes are human made than natural (38% and 12% respectively), my data shows the majority chalking climate changes up to natural fluctuations, or various forms of conspiracy. The survey also shows 67% of respondents feeling a personal responsibility towards climate change and 18% answering a negative to this question, but again, my data tells a completely different story.

The way I see it, this suggests two things. One, that CMC arguably has acted the way technological determinists and cyberdemocracy theorists suggest, by creating a platform, or a sort of online public sphere, where minority opinion holders feel more comfortable speaking their minds (McLuhan, 1964; Tsagarousianou et al., 1998). And second, that Norwegian policy makers should be aware of and make particular efforts to address this part of the population, because if the climate sceptics continue to be as unconvinced of climate changes being a threat, they could hinder the implementation of environmental policies. It is also possible that the amount of climate sceptics is a lot higher than what surveys reveal. I will address this statement further in the following section.

7.2 Discussion

7.2.1 Survey Results vs Reality

On a conference on 21 May this year, director of The Centre for International Climate and Environmental Research (CICERO), Kristin Halvorsen, said that we should forget the climate sceptics, as they only make up 4% of the population and thus do not pose a threat to the transition to renewable energy (Forskningsrådet, 2019). And looking at the general media image today, one could easily believe that she is right. Repeating my introductory remarks, the last couple of months has seen for instance the Fridays for Future movement created by Greta Thunberg where high school students worldwide went on strike to demonstrate their discontent with current climate politics (Fjeld & Lote, 2019), and the campaign launched by the World Saving Hustle urging Norwegian municipalities to declare a climate crisis (Fjeld, 2019). These events show the public increasingly interested and engaged in reversing climate change, and the articles and activists often refer to the many scientific reports on sea levels rising and temperatures increasing (Lepperød, 2019; United Nations, 2019). Surveys also present a low number of climate sceptics; 12% in the European Social Survey (European Social Survey, 2018), and only 4% in the survey conducted by CICERO (Forskningsrådet, 2019).

But then who are these people who frequently enter comment fields wholly convinced that human made climate changes are a conspiracy? My data material consists of 260 comment authors, and over half of these did not believe in human made climate changes. Now, I am not trying to transfer my findings to the general population, as I have already mentioned that this is inadvisable (Kozinets, 2010, p. 47). However, my findings as well as existing research suggests that these climate sceptics who utter their opinion online could

potentially evolve into something more threatening. If they continue to feel marginalised in the general public debate, and algorithms continuously place them in echo chambers by feeding them the same information and presenting them to likeminded individuals, it could ultimately become a powerful countermovement to the climate change progress. Because, as I already mentioned in Theoretical Framework, Sunstein (2018, p. 57) presents a worst case scenario of echo chambers where they can breed extremism, hatred and violence. In this particular case, they could greatly hinder the implementation of green measures through demonstrations and protests. Thus, I urge politicians not to heed the words of Halvorsen and forget the climate sceptics, but rather to take them seriously, by attempting to understand the potential political power they represent and somehow include them in the public debate.

I also want to argue that there may exist more climate sceptics than what the surveys discover. Further on in her talk, Halvorsen presented numbers showing a large amount of respondents positive towards renewable energy, but when asked if they were willing to pay more for fossil fuels, or have wind turbine parks close to where they lived, this motivation greatly diminished (Forskningsrådet, 2019). In fact, environmentally friendly measures such as hydro power and road toll stations have both been demonstrated against in the past year (Raa, Heggheim, & Stokkeland, 2018; Rørvik, Skodje, & Aasvall, 2019), and politicians advocating road tolls have even experienced severe harassment (Svendsen & Øystese, 2019). The unwillingness to sacrifice personal comforts, like driving cars, was also an argument used by the many climate sceptics in my data material, as I explored in *Fatigue vs Responsibility*.

These findings of mine, as well as the demonstrations against green initiatives, makes me wonder: is it possible that the amount of climate sceptics is a lot larger than what the surveys present? Could it be that when asked directly about their position in the debate the respondents reply according to the dominant opinion of the country, and do not express their honest opinion, as the spiral of silence theory predicts (Noelle-Neumann, 1993)? I argue that my discovery of a large amount of climate sceptics online, combined with the dissonance between survey results and actual action in the public climate debate, suggests that this is a very real possibility. And if so, I think this should be a matter of great concern, and for more research to be made, the specifics of which I will present in the following section.

I also suggest that my discovery of mocking comments is an indication towards the same conclusion. In my data material consisting of 387 comments, around 30 of these ridiculed or mocked either the notion of human made climate change, or the efforts made by politicians or the public to address the changes. Whilst there were both sceptics and believers among these comments, the majority consisted of sceptics also here. In any case, the fact that

part of the population thinks climate change is a laughing matter, in a time when it may be about to be declared a crisis nationwide (Fjeld, 2019) and policy makers are attempting to implement more environmentally friendly measures, should definitely be reason for concern.

7.2.2 Freedom of Speech vs Safety

Another potential consequence of the mocking and uncivil comments is the effect on the deliberative debate, as I mentioned in *Ridicule* as well as previously in this chapter. It has been argued that the unconstrained communication made possible through CMC can create instability and allow users to neglect civility, thus inhibiting rather than enhancing democratic deliberation (Dryzek, 2000; Tsagarousianou et al., 1998). In fact, just this week a campaign against online hate speech was held for the first time, with appeals being held by Norwegian Prime Minister Erna Solberg, amongst others. She said the Internet has become rotten, and instead of “contributing to democracy, freedom of speech and increased understanding”, the sometimes severe mockery seen on the Internet can silence voices needed in the public debate (NTB, 2019). Whilst the campaign means that the issue is already taken into consideration, I urge policy makers to be wary of the implications of this incivility on the environmental debate in particular. To meet the various goals set by the IPCC (IPCC, 2018) an enormous amount of adaptability among the Norwegian population is necessary, according to Halvorsen (Forskningsrådet, 2019), and feeling included in the preceding debate makes these transitions significantly easier for the public (Young, 2000).

The potential negative impact on the deliberative democracy leads me to raise another question: can Facebook comment sections be vehicles for deliberation, or do their socio-material features seem to push the debate in a destructive direction? Critics of closed comment sections draw forward the importance of the arena for the public debate, and urge the responsible media to place more resources into debate moderation instead of closing the sections (Zakariassen & Torsvik, 2015). In the method chapter I mentioned that I started an informal chat with *Dagbladet* and *forskning.no* on Facebook, and was told that they moderate the comment fields under the links to the articles as per eight rules of debate, concerning harassment, racism and personal attacks, amongst other issues. Comments that are in violation of these rules are removed. However, I would certainly characterise some of the comments that I observed as harassment, for example one commentator saying to another “You’re arguing like the fool that you are!”. When I confronted *forskning.no* with this, the person with whom I was chatting, Eivind Lauritsen, agreed that this was harassment and removed the

comment. Thus, it seems like they may not have enough resources to moderate the debate according to their own rules, and throughout this study I only ever saw one deleted comment. In the current economic climate, I doubt that any of the media outlets actually have the resources to maintain a factual and non-harmful comment field. However, more research is needed in this area, and I will elaborate on this in the next section.

Ultimately, this boils down to a freedom of expression versus personal safety debate. While unencumbered free speech is often considered the ultimate political value (Tsesis, 2001, p. 818), and cyberspace inarguably provides tools and arenas for free expression (Campbell & Carayannis, 2018; Tsagarousianou et al., 1998; Tsesis, 2001), it is also argued that the safety of vulnerable people and groups should not be sacrificed for an absolutist free speech doctrine (Tsesis, 2001, p. 873). This is a complex, political question, that is very difficult to answer and arguably outside the scope of this study and my expertise. However, I will argue that concerning the climate change debate in particular, my findings could be seen as an indication that the comment fields were not beneficial, as they seemed to encourage more polarisation than deliberation. More thorough moderation could possibly have improved the matter by removing the uncivil and harassing comments. But if more moderation is impossible for economic reasons, I argue that it could actually be more beneficial for the democracy to close the comment fields, as I allocate more importance to safety and an equal debate than absolute freedom of speech, in agreement with Tsesis (2001, p. 874).

7.3 Future Research

This study has uncovered that a majority of those debating climate change online are climate sceptics, meaning that they do not believe climate changes are human made and thus do not think we should, or even can, do anything to affect them. I suggest that a similar study be done on the general population, and not just online, to uncover whether this is applicable outside the virtual world. Because if it is, this part of the population could potentially cause difficulties in the implementation of environmental policies, should they not be directly addressed and included in the public debate. The nature of my research being on comment fields, I have no demographic information on these opinion holders, and knowing who they are could prove useful for policy makers wishing to address them.

Whilst quantitative surveys are useful to ascertain demographic characteristics and tendencies of opinion, I suggest initiating a qualitative study as well, as this can provide different and possibly more realistic results. For example, one of the studies mentioned in

Existing Research measured reciprocity by automatically counting the amount of “@”s in a comment field – a sign indicating that one user “tags” another user to address them directly – and interpreted the prevalence of this as an indication of a deliberative democracy (Collins & Nerlich, 2015, p. 194). However, throughout my qualitative content analysis I found that even though the prevalence of reciprocity was high also in my data material, there was very little evidence of deliberative discussions being held, as these are characterised by openness, civility and yielding (Collins & Nerlich, 2015; Young, 2000).

Not only did I find the debate lacking in deliberation – I also discerned an increasing segregation of the two opposing groups. My impression is that instead of being open to having their opinions and understandings changed and reaching a compromise – important aspects of a deliberative democratic process (Young, 2000, p. 6) – the commentators entered these debates simply to argue their conviction and state their opinions. If a debate was initiated by someone with an opposing view, I found that both parts became increasingly firm in their original standpoints, and the debates would often end with hostility and incivility. And I deem it appropriate to allocate at least some of the responsibility for this segregation to the existence of echo chambers, feeding Internet users with information that they have already shown an engagement in and connecting them with likeminded individuals (Sunstein, 2002, 2018). Therefore, I suggest further research into the existence of echo chambers in Norway on other subjects than climate change, and how this could potentially affect information diffusion and deliberative democratic processes.

I also suggest further research be made into the benefits and disadvantages of the online comment fields. The study should attempt to evaluate what cyberspace means for the deliberative democracy in terms of providing communication tools and an arena for debate (Campbell & Carayannis, 2018; Tsagarousianou et al., 1998), and evaluate these benefits opposed to the disadvantages, for instance the possibility of the Internet to be a breeding ground for hate groups (Sunstein, 2002, 2018; Tsesis, 2001, p. 873). While the focus of my study has been on climate change, a relatively impersonal issue for most people, I propose that studies into the potential dangers of comment fields be made on more sensitive matters of debate where hateful comments more frequently occur, like immigration, war or discrimination (Veledar & Burkal, 2018, p. 44). A study such as this should be able to make suggestions to the media as to whether to keep their comment fields open, or whether it might just be better to close them, if they do not have the resources they need in order to maintain a factual and safe debate.

Ultimately, I hope that my suggestions for future research can answer these questions: who are these climate sceptics who are so active on online comment fields? Are there in reality more sceptics than what is presented by quantitative surveys? How can policy makers reach them and convince them of environmental policies? Does cyberspace and comment fields aid the deliberative democracy, or is it more harmful than beneficial? And, finally, it would be prudent to know whether it would be better to simply close the comment fields, if they cannot be moderated sufficiently.

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