Communicating uncertainty in the midst of a pandemic

A comparative study between the Scandinavian countries in the initial phase of Covid-19

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Abstract

The Covid-19 pandemic brought with it serious questions concerning the communication strategies, that tended to differ between countries, as well as how they opted to share or show their uncertainty of the virus. Norway, has in later time, been praised for their uncertainty communication of Covid-19, whilst Sweden has been criticised for omitting uncertainty form their communication. This thesis further explores these two claims by researching what role uncertainty played in the Scandinavian countries' communication. In addition, the thesis will see to what extent the communication strategies concerning uncertainty differs between Norway, Denmark and Sweden. The methods used for the analysis are the three unobstructive methods of quantitative and qualitative content analysis, as well as a comparative and historical research method that will be central throughout all elements of the analysis and discussion. These methods have been chosen as I believe they together provide elements and insights into the uncertainty communication of the Scandinavian countries. This thesis argues that the three Scandinavian countries have mainly used indirect ways of communicating their uncertainty, with a few additions of direct uncertainty as well as explicit use of the concept. Furthermore, it argues that the praise given to Norway for their communication was well rooted. As for Sweden and their communication, the thesis argues that they had not fully omitted uncertainty from their communication strategy, and thereby contest the claim of earlier research. When it comes to Denmark, they did not excel in their uncertainty communication, but they communicated it more than Sweden, and is thereby placed somewhere in-between the two other countries.

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1.0 INTRODUCTION

Towards the end of 2019 and in the beginning of January 2020, rumours concerning a new and highly contagious virus started to spread. Information on this virus, cases of which had been confirmed in China, was quickly shared in national media across the world. At the time, for Scandinavian countries, the spread of the pathogen remained an event happening in the rest of the world, but this changed rather quickly towards the end of January 2020.

On December 31, 2019, the district of Wuhan in China reported several cases of 'viral pneumonia of unknown causes', which later would be identified as a novel coronavirus (World Health Organisation, 2021). Barely a week later, Chinese media reported that a person had succumbed to the symptoms of the virus, and that it had taken its first human life (World Health Organisation, 2021). On January 24, France reported three cases of the virus, which marked the first cases confirmed in Europe. By March 7, the number of confirmed cases of the virus that by now, had been named Covid-19, had passed 100 000 on a global scale. Countries within Europe quickly enforced travel restrictions, quarantines, and social lockdowns, but not quickly enough. The virus had already spread across borders within the region, and more countries were reporting cases of the virus week by week. By mid-March, the World Health Organisation (WHO) announced that Europe had become the epicentre of the global pandemic, with more confirmed cases than any other region in the world – except for the Republic of China (World Health Organisation, 2021).

On January 31, 2020, a month after the first case was reported by the republic of China, the virus reached Scandinavia, when Sweden confirmed their first case of Covid-19 (Krisinforation.se, 2020). Close to a month later, on February 26, Denmark reported their first confirmed case of Covid-19 (Statista, 2021), and Norway confirmed their first case only a day later, on February 27 (Government.no, 2022). The situations surrounding the virus quickly worsened worldwide, and within a matter of weeks the three Scandinavian countries had taken drastic measures to try to contain the spread of the virus.

Over the course of the first few months, the pandemic changed the way in which people were able to live their lives. People's social freedoms were curtailed, the way in which people conducted their work was fundamentally altered, and medical care was restricted for non-Covid-related cases – all of which affected the overall well-being of individuals in society, whether one tested positive for Covid-19, or not. (Orgelet, 2021). The Norwegian prime minister at the time, Erna Solberg, even highlighted that these were the strictest

restrictions the country had seen since World War Two (Solberg, 2020), and the Danish Prime Minister said that they were standing on untouched land (Frederiksen, 2020).

The pandemic also brought an amplified sense of uncertainty, the harm the virus could do and its long-term effects; uncertainty surrounding how to manage the pandemic situation, the associated economic challenges, and the prospect of a vaccine; as well as uncertainty regarding how to communicate this same uncertainty to the public.

Toward the end of April 2020, the Norwegian government introduced what they called the Norwegian Covid-19 Commission. The purpose of this commission was to make an assessment and conduct a thorough review of how the Norwegian authorities had managed the pandemic. In their report, which was published almost a year later on April 14th, 2021, uncertainty was an important topic. The report acknowledged the uncertainty of the situation itself, and also highlighted how important it was for the Norwegian authorities to be open about this uncertainty in their communication to the Norwegian people (NOU, 2021:6; NOU, 2022:5). Thus, an overall impression from the report is that the commission praised the way the Norwegian authorities handled their communication of uncertainty. So, when Norway did so well in their communication during this time, it is interesting to look at how Denmark and Sweden did in comparison, as they are quite similar countries with a shared background.

In recent times, there have been other studies where the topic of the pandemic and the Covid-19 virus has been central (Ihlen, Johansson & Ørsten, In press; Ihlen et al., In press; Rasmussen, Ihlen & Kjeldsen, 2022). However there has not been that many recent studies that have focused on the communication of uncertainty, with the exception of Kjeldsen, Mølster and Ihlen's research into expert uncertainty (2022). This study centres around "arguments bolstering the ethos of expertise in situations of uncertainty" (p.85), by looking at health authorities' argumentative strategies in interview programs and debates (Kjeldsen, Mølster & Ihlen, 2022). In contrast, this thesis focuses on how uncertainty, explicitly concerning Covid-19 was communicated through press conferences in the Scandinavian countries. As such, there is a clear difference between the two studies, although they both have uncertainty as a central theme.

It must be acknowledged that there is a knowledge gap within the fields of risk- and crisis communication when it comes to theories that explicitly focus on uncertainty or uncertainty communication (Liu, Bartz and Duke, 2016). Researchers have considered that the reason for the limited research into uncertainty communication may be due to the shortage of a crisis communication theory that explicitly focuses on the topic of uncertainty (Liu, Bartz & Duke,

2016). However, of the few theories that exist on uncertainty, one example is the reduction theory. This theory argues that every new beginning carries with it uncertainty, and that people work hard to limit or reduce this uncertainty (Bradac, 2001). Another example is Brashers (2001) definition of uncertainty that encompasses six different dimensions, which I will come back to later on.

Moreover, it has been argued that communicating uncertainty can pose a risk to the perception the public has of, for example, the government (Driedger, Maier & Jardine, 2018). This is especially so if the information turns out to be wrong or ill-advised. Such errors risk those receiving the information ending up questioning the credibility of the information sharers (Paek & Hove, 2020). To avoid such consequences, there are certain practices that one can follow. Seeger's 'best practices' for crisis communication holds relevant information on uncertainty and uncertainty communication. His idea of 'best 'practices' can briefly be explained as a full set of instructions regarding crisis communication that professionals, as well as organisations, can use within a field of practice (Seeger, 2006). A concept that is closely tied to uncertainty when it comes to research literature is transparency (Ihlen et al., In press). However, transparency is not always portrayed positively (Driedger, Maier, and Jardine, 2018). Nonetheless, myths regarding the public spiralling into confusion after receiving information have been debunked (Seeger, 2006), although transparency from the authorities is still a contested subject (Tierney, 2003). Furthermore, aspects of trust, source credibility, and fear, are also highly relevant aspects of uncertainty as they all contribute to the understanding of uncertainty, which will be further explained in chapter 2.0.

On the other hand, some researchers have also argued that certain aspects of uncertainty should be concealed from the public, due to the collective unknowingness within the population (Folker & Sandoe, 2008). In other words, some scholars believe that a large part of the public lacks sufficient knowledge to understand the complexity of uncertainty and how it is communicated. There are therefore different views on the merits of being open about uncertainty within the field of risk- and crisis communication, which I will return to later in the thesis. Whilst none of the presented theories offer up a relevant way for me to analyse the empirical material, they still offer up some interesting concepts and aspects that are worth looking further into. The Norwegian Covid-19 commission and their discussion into the use of communicating uncertainty do just that, as they have presented the opportunity to further investigate the topic of uncertainty communication by governments.

The fact remains that there is still no clear theory on uncertainty communication that can be applied to this thesis and that would fit the research question and methodology. Therefore, I have drawn on various aspects of relevant theories, the reduction theory (Bradac, 2001), studies and literature; Brashers definitions (2001), to formulate a working theory and structure to follow in the analysis and discussion.

1.1 RESEARCH QUESTIONS AND DELIMITATIONS

The three countries have a relatively high level of trust in their health authorities (Ihlen et al., In press), and the countries have managed to communicate, inform and keep the public calm through a particularly challenging period. Exploring the differences and similarities in communication strategies between the three countries may shine a light upon key communication strategy decisions that will prove useful in future moments of crisis. As such, the research question of this thesis is:

What role did uncertainty play in the communication concerning Covid-19, and to what extent did the communication strategies differ between the Scandinavian countries?

The first part of this question acknowledges the significance of openness about uncertainty in the given context, firstly due to how prominent the concept is in the Norwegian Covid-19 Commission's report, and secondly due to the fact that these three countries are considered as high-trust societies (Ihlen et al., In press). Uncertainty is linked to a society's status as high trust, through the fact that these public's might be more acceptable to the authorities' admission to being uncertain, or lacking knowledge, of a situation (Liu et al. 2016). The second part of the question indicates that I will compare how the three countries communicated with their respective publics throughout this initial period.

1.2 STRUCTURE

In the following chapter on theory, chapter two, a thorough literature review about uncertainty and uncertainty communication will be presented. The chapter will first discuss whether the subject of uncertainty communication belongs to crisis communication or risk communication. Secondly, the forms of uncertainty will be discussed, before uncertainty and its different dimensions and sources will be introduced. Lastly, the chapter will introduce the

theoretical aspects of communicating uncertainty that will be used later in the analysis of source material, before I briefly summarise the chapter.

In chapter three, the methodology of this thesis will be explained and justified. This chapter will also explain in more detail the different methods of analysis that will be applied to the empirical material. After that, the reasoning behind the sampling choices will be explained, followed by a presentation of the literature behind the coding of the material, an explanation of the applications to Sikt and a discussion about the usefulness of Nvivo. The chapter then discusses the ethical aspects of the thesis and challenges that might appear, before rounding off with a discussion into the reliability and validity of the thesis.

In chapter four, the analysis of the empirical evidence will commence. This chapter explores the empirical material by using unobstructive methods such as content analysis, as well as by drawing on aspects of theoretical frameworks discussed in chapter two. The analysis is divided into three broad sections. The first section focuses on introducing the empirical material. The second section consists of the main qualitative analysis, but begins with a short quantitative analysis of the empirical material. Finally, the last section reviews the results of the analysis and puts forward an answer to the research question presented earlier in the thesis.

In chapter five, I draw conclusions regarding the central findings of the analysis process and propose possible avenues for future research to further expand the field of uncertainty communication, before recommending future research that I did not have the time or space to conduct in this thesis.

2.0 THEORY

This chapter will provide information on the theoretical foundation of this thesis, and will also introduce the conceptual apparatus that is necessary to further grasp the themes and the direction of where this contribution to the research is heading.

In chapter one, I provided a brief review of existing research literature on uncertainty and uncertainty communication. This chapter will begin by looking at what place risk- and crisis communication has in this analysis into what role uncertainty plays when communicating information concerning Covid-19. Thereafter the chapter will move on to further elaborate on the theories surrounding the types of uncertainty that were mentioned in the introduction, namely the reduction theory, best practices and other aspects of uncertainty. Subsequently, different dimensions of what the concept of uncertainty entails, as well as different sources of uncertainty will be presented. This will be followed by a discussion of various studies and literature which serve as the backbone of this thesis by providing definitions of uncertainty and other closely related concepts. The chapter will round off by summarising the discussions within the chapter.

2.1 UNCERTAINTY AND RISK- AND CRISIS COMMUNICATION

As Liu et al., put it, there are "several crisis communication theories [that] touch on and/or relate to uncertainty, but do not clarify how communicators can/should integrate uncertainty into their work" (2016, p. 483). The wider concept of uncertainty is rarely defined, if defined at all, but there are sub-categories to the concept that is explained far more often, such as source credibility and trust transparency etc.,. Different types of uncertainty emerge from the literature and are also thoroughly defined when mentioned or introduced in different research articles (Liu et al., 2016).

Up to this point, risk communication and crisis communication has been mentioned quite frequently in relation to uncertainty. This is because the uncertainty that has followed the pandemic through all its phases has forced questions as to whether or not it is a crisis, and whether or not it entails risk. Before addressing these questions, it is important to define the fields of risk- and crisis communication.

Risk- and crisis communication can be, and often are, combined into a single field. However, a more nuanced analysis shows that in fact they are two distinct fields that can be applied to different situations and events. They have distinct traditions and different systems of names and terms, in addition to different rules for creating terms in a specific field (Seeger, 2006).

Firstly, risk communication has normally been linked to health communication through its attempt to warn the public about certain risks that are connected to particular behaviours. Persuasion is one the principles in which risk communication draws upon and has often been identified as an issue when it comes to getting the public to focus on a specific and identifiable risk, such as driving under the influence or smoking (Seeger, 2006). Markon, Crowe and Lemyre (2013) argue that health risks have become an increasingly prominent public concern, since, in these last two decades the world has faced several epidemics, such as the swine flu, SARS, Ebola and now the Covid-19 pandemic. In addition to pandemics, other complex global health risks they mention include terrorism and climate change (Markon, Crowe & Lemyre 2013). Furthermore, the researchers have argued that for "members of the public to truly be partners in risk communication and management, transparency about risk information seems essential. A two-way dialogue approach implies including uncertainties, such as the lack of knowledge about certain aspects of risk or conflicting data in risk communication." (Markon et al. 2013, p. 315).

Crisis communication on the other hand, has typically been linked to public relation practices, and the need for organisations to repair a damaged image in the aftermath of a crisis. According to Seeger, a crisis can appear in many forms (2006). According to the research literature the three most cited forms of crisis are: natural disasters - which includes earthquakes, etc.; industrial accidents - which can be product defects, explosions etc.; and intentional events - such as terrorism attacks (Reynolds & Seeger, 2005).

The Covid-19 pandemic blurs with the distinction described above regarding risk- and crisis communication. Although public messaging regarding health-related concerns traditionally has been categorised as a part of risk communication, the WHO (World Health Organisation) Director-General declared the SARS-CoV-2 pandemic as a global crisis in his opening remarks at the media briefing on Covid-19 in March 2020: "…this is not just a public health crisis, it is also a crisis that will touch every sector – so every sector and every individual must be involved in the fight" (World Health Organisation, 2020). He thereby defined the pandemic as a crisis rather than a risk, in contrast to typical health communication.

Researchers have argued that on some level, risks and crises are always associated or connected to uncertainty. This is because fundamentally, crises are high-uncertainty events, where one does not immediately have all the information (Seeger, 2006). Furthermore, Liu and her colleagues argue that definitions and descriptions of crises often list uncertainty as a key characteristic (2016). It is also argued that there are certain forms of crises that contain a higher level of uncertainty than others. Some of these include terrorist attacks and pandemics, due to the uncertainty surrounding questions such as, "who/what caused the crisis; the number of human lives lost and the amount of infrastructure damaged; what individuals can do to protect themselves; and when the crisis will be over" (Liu et al. 2016, p. 479).

In Seeger's study on crisis information and best practices used to handle a crisis event, he presented different methods of communicating crisis effectively (2006). The term 'best practices' refers to the tools and methods that are used to advance both professional and organisational work (Seeger, 2006). Best practices may in addition "provide models for other organisations with similar functions, contingencies and missions. In addition, panels of experts in a given field may be asked to generate normative standards and principal characteristics of effectiveness and efficiency" (Seeger, 2006, p. 232). As a result of this process, best practices commonly assume a pattern of a set of general standards, norms, and guidelines in addition to reference points and benchmarks. Benchmarks refers to the "process of identifying industry standards through a focus on industry leaders and recognized experts within a given field*"* (Seeger, 2006, p. 232). Best practices can therefore be understood as a large set of instructions for professional and organisational learning within a specific field or practice.

Considering the public as an authentic, equal, and legal partner in crisis situations emerges from the literature as an important best practice. According to researchers, this is because "the public has the right to know what risks it faces, and ongoing efforts should be made to inform and educate the public using science-based risk assessments" (Seeger, 2006, p. 238). As such, according to Seeger, the government should always practice open, transparent and clear information when communicating, and they should also communicate their uncertainty to the public.

Based upon the perspective discussed in the literature as well as that of the WHO, which categorised the Covid-19 pandemic as a crisis, I would argue that communication regarding the pandemic should be viewed as both risk- and crisis communication. I fully agree with the statement made by the WHO describing the pandemic as a crisis, as the pandemic has caused

economic and social issues. In addition, the pandemic has also been a high-uncertainty event, which is a key defining aspect of a crisis (Seeger, 2006). On the other hand, the pandemic has also entailed risks, for example a risk of death and of uncontrollable contagion. As mentioned earlier, health events and situations are often categorised as events that require risk communication. Therefore, uncertainty communication surrounding the initial phase of the Covid-19 pandemic belongs to both crisis communication and risk communication, which will both work as umbrella fields for uncertainty communication.

2.2 THE DIFFERENT FORMS OF UNCERTAINTY

In earlier research, uncertainty was divided into three different groups: Ontological, epistemic and ambiguity. The first of which is the ontological uncertainty and refers to the ramifications of an issue, or the ramifications between the different elements or relationships within a system (van Asselt & Rotmans, 2002). Then there is epistemic uncertainty, which refers to the lack of knowledge or the absence of information surrounding an issue (Walker et al. 2003). The third type of uncertainty entails ambiguity, which is present when there are multiple ways of interpreting a situation. Ambiguity in this sense can also be the clear distinction between the opinions or perspectives surrounding the meaning of an issue (Brugnach et al. 2008).Together, these three types of uncertainty make up a common concept used within the field of risk- and crisis communication and are referred to as 'sources of uncertainty'.

In more recent research, the epistemic type of uncertainty has been further refined. It can now be sub-categorized as epistemic uncertainty about the past and present, and epistemic uncertainty about the future. The researchers argue that epistemic uncertainty about the past and the present stems from what we do not know but that we, in theory, could know if we had the means or access to do so. The epistemic uncertainty about the future is different in the sense that it originates in the fact that we cannot know what will happen, or how the future will play out (van der Bles et al., 2020).

In one literature review that focused on uncertainty and risk- and crisis communication, the researcher found only one earlier study that focused on this topic. The study in question was conducted within the field of psychology, but the description of uncertainty provided there is nonetheless relevant to this thesis. Those researchers argued that "uncertainty is an inherently uncomfortable state, and information seeking is a common

cognitive strategy when uncertainty is directly related to a perceived threat" (Lachlan, Spence, & Nelson, 2016, p. 39).

Admittedly, this conceptualization of uncertainty is more an explanation of what causes uncertainty and how one might seek a way of lessening or diminishing uncertainty, rather than a definition of the concept of uncertainty itself. Nonetheless, it follows that uncertainty can be considered as an uncomfortable state of mind where one does not have access to sufficient information to lessen the discomfort. One thereby actively seeks information centring on why the uncertainty is there to begin with, in an effort to diminish it. The idea that uncertainty is uncomfortable is closely linked to the reduction theory presented above, as it shares some similar ideas surrounding uncertainty – such as the need to reduce the uncertainty (Bradac, 2001). On the other hand, the argument that people tend to seek out ways of reducing uncertainty links to threat-related uncertainty, as defined by Lewis, Govender and Holland (2021). These researchers argued that when people sense a threat, in terms of uncertainty surrounding a source of harm, they tend to seek information in an attempt to lessen the threat. One can argue that this is exactly the type of uncertainty that has been present during the Covid-19 pandemic, as it has been the root of grief and harm for millions of people worldwide.

As seen, multiple types of uncertainty exist. However, what stands out in this brief overview is epistemic uncertainty, particularly about the future. One can argue that epistemic uncertainty about the future is the most relevant type of uncertainty for this thesis. Firstly, in its initial stages the pandemic showed itself to have an unpredictable nature, and secondly, there was little information known of the virus.

2.3 DIMENSIONS OF EPISTEMIC UNCERTAINTY

As explained earlier, definitions of uncertainty as a complete concept are few and far between within the present field of research. Uncertainty is constructed from various dimensions all of which contribute to uncertainty and should not be confused with types of uncertainty, which have been disclosed above. These dimensions of uncertainty can be seen as distinct contributing factors of what creates uncertainty in different situations. In this case, we are referring to dimensions of epistemic uncertainty. Some dimensions of uncertainty can, at times, also simultaneously be a source of uncertainty. This idea will be further developed later in the chapter.

It has been argued that uncertainty is "a cognitive state resulting from an individual's assessment of the number of alternative predictions available" (Bradac, 2001, p. 464). A cognitive state in this context refers to "the mental action or process of acquiring knowledge and understanding through thought, experience and the senses" (Cambridge Cognition, 2015). Brashers has argued that "uncertainty exists when details of situations are ambiguous, complex, unpredictable, or probabilistic; when information is unavailable or inconsistent; and when people feel insecure about their own state of knowledge or the knowledge in general" (Brashers, 2001, p. 478). This definition, provided by Brashers (2001), builds upon the theory of uncertainty reduction, which was introduced earlier in the thesis (Kramer, 1999). To further elaborate on the theory, it argues that in every new set of circumstances - be it personal, professional, or private - there is a high level of uncertainty, as there are many possible future outcomes. This aligns with the theory of epistemic uncertainty about the future (van der Bles et al., 2020). As mentioned above, this theory holds that when there are unlimited ways in which the future might play out, this can create a strong feeling of uncertainty - which in turn can lead to a strong need to reduce the uncertainty (Bradac, 2001), for example by gathering information. For Brashers, uncertainty can be reduced in different ways. Firstly, It can be diminished by verbal conversation between the two parties. Secondly, by nonverbal affiliative expressiveness whereby both parties mutually seek and offer warmth and approval, and lastly by perceived similarities whereby one considers oneself to be like the other party (Brashers, 2001).

The theory concerning reducing uncertainty focuses on the way in which one senses or perceives uncertainty (Kramer, 1999). If we consider its relevance to the initial stage of the Covid-19 pandemic, it is clear that as a novel set of circumstances, the beginning of the pandemic entailed a high level of uncertainty. However, the government officials who communicated information concerning how the pandemic was progressing were consistently the same individuals. Using the same spokespeople to communicate with the public through press conferences, may have helped to reduce the levels of uncertainty related to the role of those individuals in charge of handling the pandemic.

By adopting aspects from Brashers (2001) definitions and earlier research, I have developed six different dimensions of uncertainty that are all arguably rooted in epistemic uncertainty about the future (van der Bles et al., 2020), since they all on some level centre on future

possible outcomes of a situation. I will now go through each of these dimensions, point by point.

- Complexity

The complexity of a situation can contribute to a heightened sense of uncertainty, due to the level of knowledge that may be needed, yet is lacking (Brashers, 2001). The Covid-19 pandemic has most likely been plagued by a high level of complexity, as individuals within the health sector, and probably other sectors as well, encounters different forms of complexity - in addition to ambiguity - when deciding upon a plan of action (Brashers, 2011).

- Insecurity concerning the knowledge

The idea that complexity can cause heightened uncertainty again supports Brashers' argument that uncertainty exists when there is insecurity about one's own knowledge or the knowledge available (2001). This is because "it is primarily a self-perception about one's own cognitions or ability to derive meaning" (Brashers, 2001, p. 478). Meaning that, if an individual believes themself to be uncertain, they are in fact already uncertain.

- Unavailable or inconsistent knowledge

Knowledge in general, is an important aspect when communicating, but it is arguably more so when communicating uncertainty (Kjeldsen, Mølster & Ihlen, 2022). Therefore, the availability of knowledge plays an important role here, and if there is inconsistency in the knowledge, this too can lead to increased uncertainty (Brashers, 2001).

- Ambiguity

Brashers has argued that even though people often feel the need to reduce aspects of uncertainty, such as complexity or unpredictability, there are times when uncertainty in the form of ambiguity allows for people to hold on to positive elements and maintain hope (Brashers, 2001). In contrast, ambiguity in the form of vagueness or doubt can also be a contributor to increased levels of uncertainty. However, ambiguity os also considered to be its own and separate form of uncertainty (Brughnach et al., 2008), as disclosed in the previous subchapter. Therefore, Brughnach and colleagues' form of uncertainty will be

incorporated into this dimension of ambiguity. This will be further elaborated on in the analysis.

- Unpredictability

The reduction theory (Kramer, 1999), builds upon the dimension of unpredictability, as "reducing uncertainty is only one of an infinite number of responses to events or behaviours that are unpredictable" (Brahsers, 2001, p.478). Furthermore, communication between two parties, say the authorities and the public, may be unpredictable as there is an absence of knowledge when it comes to how the other party will react (Brashers, 2001). For example, news about a foreign virus. Moreover, unpredictability has a number of ways of interpreting a situation, which again can lead to uncertainty (Folker & Sandoe, 2008)

- Future outcomes and available predictions

The probability or possibility of something happening is arguably another aspect of uncertainty. In other words, knowing that something will happen, but not knowing when, can also contribute to uncertainty (Brashers, 2001). Linking this dimension to the Covid-19 pandemic, governments have always relayed the message that it will get better, although nobody knew when exactly that would happen. And this represents epistemic uncertainty about the future (van der Bles et al., 2020)

By thoroughly discussing each dimension, I have unfolded the meaning behind each one of them, and uncovered the ways in which they might be applicable to the empirical material. Therefore, I would argue that all these dimensions of uncertainty are of sufficient relevance to play an important role in the analysis of the empirical material.

2.4 SOURCES OF UNCERTAINTY

Within other fields, namely interpersonal communication and health communication, researchers have found definitions of uncertainty that are useful when applied to risk- and crisis communication and uncertainty communication. They have concluded that "uncertainty reflects an individual's inability to predict outcomes on a typically important issue" (Lewis, Govender & Holland, 2021, p. 326). In other words, uncertainty stems from one's ability or

lack thereof to see the result of a crisis. In turn, this means that when a safe outcome to a crisis cannot be predicted or indeed imagined, uncertainty increases, which again is related to epistemic uncertainty about the future (van der Bles et al., 2020). This mechanism is very similar to how unpredictability and probability, both dimensions of uncertainty, contribute to epistemic uncertainty about the future. Indeed, I would argue that sources of uncertainty and dimensions of uncertainty at times can become one and the same. The reason for this is that, for example, unpredictability can be the root of uncertainty, but it can also exacerbate an already-uncertain situation. The same goes for probability. Therefore, in this case, these concepts can be considered as both a source and a dimension of uncertainty.

As mentioned earlier, epistemic uncertainty refers to the lack of knowledge of an issue or situation, which also makes the absence of this knowledge or information a source of uncertainty (Markon et al., 2013). Originally, uncertainty was understood in a more generalised manner, as something that developed in times when information was lacking. Researchers believed that the way to mend this uncertainty was to search for and obtain information about the contested subject (Lewis, Govender and Holland, 2021). Although this belief has evolved, there is still some truth to the fact that uncertainty stems from lack of information, or in the case of the Covid-19 pandemic, the lack of knowledge in general. Therefore, communicating uncertainty encompasses both lack of knowledge of the issue, and/or the absence of knowledge of the present situation.

The idea of knowledge has arisen repeatedly in the discussion of uncertainty. "Uncertainty exists when… information is unavailable or inconsistent, and when people feel insecure about their own state of knowledge or the knowledge in general" (Brashers, 2001, p. 478). Therefore, knowledge or the lack thereof is a highly relevant factor when it comes to uncertainty. In addition, it can be considered a significant source of uncertainty due to the unknowingness it necessarily entails.

The question of whether concerns surrounding uncertainty should be shared with the public is debated amongst scholars. What is implied here, is that when communicating uncertainty, there is a fine balance as to decide what to share with the public, and what not to share. According to the available literature, the discussion is still ongoing. Some argue that the public might not have the necessary ability to comprehend the concept of uncertainty communication (Markon et al., 2013). Other researchers have argued that certain aspects of uncertainty should be held back from the public (Folker & Sandoe, 2008). One such aspect is

contradicting opinions from experts within the same field (Folker & Sandoe, 2008). The basis of this arguably, somewhat excessive, recommendation stems from the liability that a collective unknowingness from the public poses. The worry has been that further exposure to elevated levels of uncertainty, such as contradicting opinions from experts, would create more doubt and confusion amongst the public. Those who recommended withholding information believed that the public would reject the recommendations provided by, for example, the government, and as a result find the information or guidelines unacceptable (Frewer et al., 2003).

Furthermore, scholars (Bakker et al., 2019), have argued that providing wrong or ill-conducted information can affect the public's perception of credibility. If the public perceives credibility to be low, they will question the information provided by, for example, the health authorities or the government. In other words, these scholars claim that when the authorities or a government clearly communicate their uncertainty, it can lead to decreased trust on the part of the public (Bakker, van Bommel, Kersholt and Giebels, 2019). Furthermore, in a Canadian study into communication regarding the H1N1 virus (Driedger et al., 2018), the researchers also found that instead of the health authorities gaining credibility and trust by transparently admitting to being uncertain about the situation, their credibility in the public eye was actually damaged rather than bolstered (Driedger et al., 2018). It is even argued (Markon et al., 2013) that both communicating and withholding uncertainty may jeopardise the credibility of the spokesperson or the organisation. There are, however, other studies which assert that communicating uncertainty does not negatively affect the public's trust and perception of the credibility of the spokesperson or whom they represent (Gustafson & Rice, 2020).

In contrast to dimensions of epistemic uncertainty, which were explained in section 2.2, this section has discussed and explained sources of uncertainty. Although the two might appear similar, this section has focused more on real situations that can act as sources of uncertainty while section 2.2 focused on the theoretical framework behind how cognitive states can determine one's perception of a situation and how this could lead to increased levels of uncertainty. Factors such as contradicting expert opinions, or information that is wrong or ill-conducted, have been significant throughout the literature. This is because these factors can lead to or evolve into other forms of uncertainty, such as doubt and ultimately rejection . Therefore, I would argue that it is important to recognize situations in which uncertainty might appear, according to the evidence discussed in the literature provided. By recognizing

and assessing these situations appropriately, important insights can later on be found in the analysis of the Scandinavian press conferences from the initial period of Covid-19.

2.5 COMMUNICATING UNCERTAINTY

In addition to types and dimensions of uncertainty, there are ideas that are closely tied to uncertainty without being a backbone of the concept. However, these ideas are important when explaining the reasoning behind given communication practices, as well as behind practices of communicating uncertainty. There are four factors which frequently appear in the research on uncertainty communication, and which researchers have argued need to be addressed when discussing the subject. These factors are trust, source credibility, fear and transparency (Liu et al., 2016). Research to date suggests that these factors can significantly impact the degree of uncertainty amongst the public (Liu et al., 2016). In this section, definitions of these factors will be provided as well as arguments for why these factors are important in the field of uncertainty communication.

TRUST

Most definitions of trust conceptualise it as an interaction between two parties – usually between a trusting party, and a trusted party – where both parties play a different role concerning the development of trust. Here, the trusting party believes that the trusted party will do their job well, and also conduct the work in the best interest of the trusting party (Liu et al. 2016). Trust is connected to uncertainty in two ways. Firstly, the extent to which the public trusts the communication official to accept and acknowledge the public's uncertainty; and, secondly, the impact of the communication official's admission of uncertainty, and how such an admission affects the public's trust in the communicating official. When looking at "the impact of trust on acceptance of uncertainty" (Liu et al. 2016, p. 481) researchers have found that the higher the level of trust the public has in their government or the person communicating the situation the better equipped the public are to handle fear in situations of uncertainty (Liu et al. 2016).

It is also argued that the person communicating the uncertainty needs to be seen as a reliable and integrous spokesperson. This is because when one seeks to establish trust, it is important to acknowledge that the way the public prefers to receive their crisis information may vary (Liu et al., 2016). Having a trustworthy person to disseminate information can

create a sense of trust, and thereby increase the confidence the public has in this person and, by association, in the government. Some argue that "it is critical to have a reputable spokesperson to communicate uncertainty when establishing trust, recognizing that the public's preferred source of risk information varies widely" (Liu et al. 2016, p. 481).

This argument is further backed by a study conducted by Quinn and her fellow researchers, who found evidence of how open and clear communication from government officials is a necessity for trust (2009). In addition, open and clear communication increases the likelihood that the public will comply with future crisis communication messages or instructions from government officials (Liu et al., 2016).

Moreover, researchers have concluded that it is better for government officials to admit their uncertainty surrounding a situation, instead of providing assurances or information that will most likely prove to be wrong later (Rogers et al. 2007). Doing so can result in a decreased level of trust in the government or government official, which again can lead to the public ignoring or not taking the advice from the government or spokesperson seriously (Taha et al, 2013). Researchers have argued that "without trust, communicating uncertainty to the public in a crisis becomes more or less impossible" (Liu et al. 2016, p. 481).

The results of one survey (Quinn et al. 2009), conducted on the subject indicated that openness when it came to the government sharing information, was akin to a higher level of trust in the government, in the spokesperson, and in the effect of possible governmental actions. The survey results demonstrated the importance of openness in uncertainty communication when it comes to establishing trust so as to obtain a public who is willing to cooperate with future messages from the government in times of crisis (Quinn et al. 2009). It has also been argued that since the public tends to be susceptible to worry, vulnerability and conspiracy suspicions, it can be difficult to accurately measure the public's true level of trust in the government or in government officials (Gillies et al., 2011). In summary, it is clear that trust is key when the government needs the public to believe in their messaging, as well as follow governmental recommendations and directions (Liu et al. 2016).

SOURCE CREDIBILITY

According to Liu et al., "the information sources publics use to obtain risk information have an impact on their response to uncertainty" (2016, p. 482). Now more than ever, people are turning to non-traditional media – such as mobile and digital media – instead of traditional

media such as television and newspapers, as their means of consuming news and gathering health risk information (Pew Research Centre, 2015, as seen in Liu et al., 2016).

With the development of the internet and non-traditional media, anyone can present themselves as a credible source of information on for example social media, yet still not provide true or correct information (Dunwoody, 2020). Consequently, certain sectors of the public are either not exposed to or take a much longer time to obtain reliable crisis information from the government or other important sources, which can have serious consequences (Liu et al. 2016). As was the case in the beginning of the pandemic, where a great deal of false and misleading information concerning the virus was spread through social media sites. As so little was known of the virus at this point, the public was uncertain as to what to believe (Lundberg, 2021). Scholars have argued that, particularly in a public health crisis such as a pandemic, there is an important need to take care when identifying and using knowledgeable information and credible sources of information (Clarke & McComas, 2012).

Other researchers have argued that there are two main categories when it comes to source credibility. The first of these categories focuses on how uncertainty can have an impact on the relationship between the public and the information source, an idea that is closely connected to transparency and also to trust (Liu et al., 2016). In this case, the source of the message must be known or well recognized if the public is to trust the information contained within the message (Gray & Ropeik, 2002; Wray & Jupka 2004). Researchers have furthermore brought attention to how a source may handle the topic of uncertainty, and how this may impact how the public regards risks and crises. An information source that admits or acknowledges uncertainty in a situation, can help reduce the public's perception of risk. (Markon et al., 2013). An information source that shares uncertainty with the public can also be considered as transparent in its communication. I will return to the topic of transparency in one of the following sub-chapters.

The second category of source credibility and communication of uncertainty concerns its potential impact in the information source. Organisations and experts for example, are often unqualified or incapable of handling serious situations of uncertainty. As a result, they are usually dependent on having adequate information of the situation (Liu et al., 2016). It is argued that without this information, organisations and experts are forced into situations they are not equipped to handle (Innes, 2006). In occurrences like these, organisations and experts must abide by their communication strategy to prevent the level of uncertainty from increasing, which can happen because of conflicting and confusing information (Seeger, 2006).

Furthermore, authoritative organisations (i.e., the government), must address situations in a timely manner in order to secure the distribution of correct information. In situations of uncertainty, an information vacuum can occur. In such cases, organisations and experts who wait too long to address the situation run the risk of having to direct their communication efforts towards handling rumours concerning the situation at hand (Freedman, 2005; Robinson & Newstetter, 2003). Again, there is a link between this category of source credibility and transparency, as addressing, sharing, and handling situations of uncertainty requires the information source to be transparent in their communication - for example, in terms of when or how they share knowledge, in order to achieve the necessary trust to guide the public.

Source credibility has also proven to be an important factor in communicating uncertainty. The two categories presented here - the impact on the relationship between the public and the source, and how uncertainty may impact the information source- are interesting to look at through analysing the press conferences, as they may provide insight into the spokespeople's uncertainty through their communication.

FEAR

Fear can in different instances impact the public's ability to react to a crisis or risk situation. A good example presented in the literature is terrorism. Terrorist attacks are events that despite the low probability of one transpiring, inspire a high level of fear amongst the public due to the possible mass casualties that may happen as a result (Gigerenzer, 2004; Göritz & Weiss, 2014). By following the same logic, pandemics can also be considered as high-fear events, as they do not occur often and usually claim hundreds of thousands of lives.

Researchers argue that the stronger the sense of uncertainty, the more noticeable fear becomes (Gray & Ropeik, 2002; Sheppard, Rubin, Wardman & Wessely, 2006). Furthermore, research has confirmed that elevated levels of fear are a reason for worry as they influence human behaviour (Liu et al., 2016). Furthermore, new or unfamiliar information can lead to uncertainty (Goodall et al., 2012), which in turn can lead to increased fear. Again, this can affect human behaviour and the way the public may choose to act in light of the risk- and crisis information communicated by the county's authorities or others who offer up advice on the subject.

Uncertainty is an aspect of both risk- and crisis communication and of life that cannot be eliminated. There are, however, measures that can be taken to mitigate many of the effects

of uncertainty, including the aspect of fear (Liu et al., 2016). In the context of the Covid-19 pandemic, fear is a highly relevant notion. At the time the empirical material analysed in this thesis was published, very little was known about the virus and the number of deaths only kept increasing. Therefore, it is likely that governments might have sought to appeal to or comfort the public in order to subdue their levels of fear. Therefore, the reduction of fear is something to look for in the analysis of the empirical material.

TRANSPARENCY

Another aspect of communicating uncertainty that may impact the public's perception is transparency. Transparency is another concept that frequently crops up in tandem with the topic of uncertainty. The conceptualizations of transparency are many, but it has been widely accepted to mean honesty and openness by the public (Löfstedt and Way, 2014).

When Ihlen and his fellow researchers focused on how the three Scandinavian countries handled the subject of transparency throughout the Covid-19 pandemic, they made a significant finding. Namely, there was a general acceptance and appreciation from the public for how authorities had admitted to being uncertain in certain situations (Ihlen et al., In press). In contrast to this finding, some scholars have claimed that being transparent can actually have damning effects. Other scholars have also questioned sharing raw and unprocessed data with the public for the same reason – the possibility of causing more harm than good (Dixon et al., 2016; Löfstedt & Way, 2014; Löfstedt et al., 2016). This hypothesis was confirmed in a Canadian study, where the researchers looked at the communication regarding the H1N1 influenza pandemic – the swine flu – and how the government's transparency led to confusion among members of the public when it came to how they should respond and act regarding the virus (Driedger, Maier and Jardine, 2018). Although, it has also been noted that transparency in communicating with the public, without providing background on the information or making sure the information is presented in the correct context, can create worry amongst the public (Löfstedt and Way, 2014).

When a crisis such as a pandemic emerges, the public – understandably – tends to have concerns about the situation. These concerns should, according to Seeger, be acknowledged as legitimate in the eyes of the governmental branch (Seeger, 2006). Therefore, the public has the right to access information surrounding a crisis when one emerges, and the government has an obligation to the public to make such information available (Seeger, 2006). However, these rights and responsibilities regarding access to and

sharing of information do not always guarantee positive or reassuring results. This was seen in the study concerning sharing information on the H1N1 virus, as previously described, where sharing information resulted in confusing the public more than it helped them (Driedger et al., 2018).

On the other hand, Seeger argued that it is no more than a crisis communication myth that the public will panic if they have access to the full extent of the information surrounding a crisis (Seeger, 2006). Other researchers also argue that this idea is unfounded, as it is not sustained by the available research within the field, with the exception of the H1N1 study in 2018 (Driedger et al., 2018). It seems that there is reason to believe that not sharing available information with the public can reduce the likelihood of the public responding appropriately to the crisis. (Tierney, 2003).

Scholars have argued that large-scale events which require risk- and crisis communication - a pandemic, for instance - may play out in different ways, but all to some extent entail a level of uncertainty (Koffman et al., 2020; Driedger et al., 2018). This raises the question of how transparent governments should be about what they do not know – i.e., how uncertain they are about the situation (Koffman et al., 2020; Driedger et al., 2018). Furthermore, understanding uncertainty is often mentioned in literature surrounding transparency and information sharing, and also in literature on best practices where the importance of recognizing uncertainty in the field of crisis communication is repeatedly highlighted (Liu et al., 2016).

Therefore, the definition of transparency can offer a useful lens for the analytical section of this thesis. It can help analyse the extent to which government officials are open, honest, provide the correct background, or present the information in the right context. This in turn allows us to determine the extent to which officials are transparent about their uncertainty about the situation. Researchers have, as mentioned above, found a general appreciation on the part of the public for governments admitting their uncertainty. While this finding has been highly contested, in the literature, it is certainly relevant to the present analysis as the research that concluded the public appreciated honesty on the part of the government. Which can also be tied to the fact that the Scandinavian countries are high-trust societies when it comes to the relationship between the authorities and the public (Ihlen et al., In press). So Scandinavian societies are perhaps more likely to appreciate transparency than other societies which expect less of their government.

2.6 TO SUMMARISE

The most useful concept for the remainder of this thesis is the idea of epistemic uncertainty about the future. This is because this idea encompasses many ways of communicating uncertainty, as well as referring to the fact that we cannot know how the future will play out. In addition, understanding how uncertainty is understood by the public can further contribute to understanding why the government has opted for the strategies that they did.

The six different dimensions of uncertainty – complexity, insecurity concerning the knowledge, unavailable or inconsistent knowledge, ambiguity, unpredictability, and future outcomes and available predictions – presented by Brashers (2001), will also prove to be useful when analysing the empirical material. Because these can affect one's interpretation of a situation, in addition to impacting how much uncertainty is perceived. Furthermore, these dimensions that have been thoroughly discussed here, will function as a structure for analysing parts of the empirical material. Furthermore, lack of knowledge and all that it implies will also be an element to consider in the analysis, since the pandemic has been deemed a high-uncertainty event (Seeger, 2006) in which lack of knowledge has been a key factor. When it comes to the communication of uncertainty, I suggest that the four aspects presented in this chapter - trust, source credibility, fear, and transparency – will be contributions to the analysis for a number of reasons: Firstly, trust is key when the authorities need the public to follow their directions. Secondly, source credibility is necessary in order to achieve the essential trust to guide the public. Thirdly, new or unfamiliar information can lead to increased uncertainty (Goodall et al., 2016), which again can lead to elevated levels of fear (Gray & Ropeik, 2002; Sheppard et al., 2006). Lastly, transparency has proven to be appreciated by the public, when it comes to the authorities sharing their insecurities (Ihlen et al., In press).

3.0 METHODOLOGY

As explained earlier, this thesis will analyse and compare how the three Scandinavian countries – Norway, Denmark, and Sweden – handled their communication of uncertainty with their respective publics, during the initial period of Covid-19. By the initial period, or initial phase, of the pandemic, I am referring to the period between the beginning of March 2020, unil the middle of May 2020, with the first iteration of pandemic-related restrictions being imposed during this time. The reason for delimiting this time period is, firstly, because it represents a crisis situation that was completely novel to most. Secondly, by restricting the time period, the quantity of empirical material available to analyse remains manageable.

3.1 CHOICE OF METHODS

In order to answer the research question presented in chapter one, I have decided to focus on unobstructive research methods, as they are described as "methods of studying social behaviour without affecting it. This includes content analysis, analysis of existing statistics and comparative and historical research" (Babbie, 2014, p. 340). I intend to analyse the empirical material through using both quantitative and qualitative content analysis, in addition to comparing the countries through the method of comparative and historical research (Babbie, 2014).

The decision to use unobstructive methods to analyse the material became clear when the theme for the thesis was determined, and I had identified the area that I wanted to research. Communication between a government and the people of a country typically takes place via press conferences and media publications. I have opted to focus on the press conferences that took place between March 11th 2020 and May 13th 2020. The choice to use press conferences as the source of empirical material might seem out-dated, as communication today overwhelmingly takes place on social media and through the use of algorithms online (Kjeldsen, 2022). Yet, the Covid-19 pandemic has shown that there is still a need for press conferences in high-uncertainty events, reflecting the importance of governments being able to communicate directly to the people and to the media (Kjeldsen, 2022). In addition, press conferences are the "authorities' rhetoric response to an urgent situation in need of communication" (Kjeldsen, 2022, p. 2). In other words, press conferences reveal to the public

how authorities are responding to a crisis. They can also demonstrate how authorities interpret a crisi, and the extent to which authorities try to persuade the public in certain areas.

By applying these unobstructive methods which are explained in more detail below – in tandem with the theoretical framework presented in chapter two, the empirical material can be analysed from a number of different perspectives. Allowing for a more detailed comparison of how the countries communicated uncertainty.

The analysis will begin with a quantitative analysis, as a means of contextualising the empirical material, particularly in terms of location, dates of publication and main actors. This will be followed by a more theory-based qualitative analysis, the focus here will be to investigate how uncertainty is expressed through the communication from governments and their spokespeople. The chapter will conclude by reviewing the preceding discussing and drawing some final comparisons between the countries involved.

3.1.1 QUANTITATIVE CONTENT ANALYSIS

The principal advantage of using quantitative content analysis is that it allows the researcher to analyse a large set of material in a structured and effective way (Østbye et al., 2013). While there are many ways of defining a quantitative content analysis, Østbye and his fellow researchers presented a definition that is arguably one of the most up-to-date. They argued that by quantitative content analysis we mean data registration and analysis techniques that lean towards a systematic, objective and quantitative description of the content in a text" (Østbye et al., 2013, p. 208).

The terms used in this definition needs to be clarified before it can be accepted as the most appropriate approach to conducting parts of the analysis. By *systematic* the authors refer to the formulation and creation of general rules for how one should treat the empirical material (Østbye et al., 2013). This reflects the delimitation of the type of empirical material chosen (press conferences), as well as the time period the empirical material comes from (March 2020 until May 2020). The term *objective* means that the researcher's opinions on the matter should not affect how the research nor the analysis is conducted, and should never have an impact on the findings. Finally, *quantitative* refers to the aim of the research being a numerical description of the material (Østbye et al., 2013).

The purpose of using a quantitative content analysis is not to analyse the empirical material in depth. Rather, it is intended to establish a context for the remainder of the analysis. The thesis will continue to follow throughout the analysis. Nonetheless, how one conducts a quantitative content analysis is still important to consider.

To process the content presented in the press conferences on a quantitative level, the data needs to be defined into entities and variables (Østbye et al., 2013). Researchers have admitted that in the context of content analysis, it can be difficult to find a suitable definition of the entity. However the term entails that an entity is the object in which information is gathered, in this case, that means the topic of uncertainty in Scandinavian press conferences.

According to Østbye et al. (2013) defining variables is not an easy task. These researchers have argued that the variables that one should work with, are those made clear in the research questions (Østbye et al., 2013). There has, however, been conducted working definitions of a variable by other researchers. Neuendorf argued that "a variable is a definable and measurable concept that varies; that is, it holds different values for different individual cases or units" (2002, p. 95). Meaning that in this thesis a variable can be the number of times the variations of the concept of uncertainty was used.

Furthermore, the use of a codebook will be equally as important here as -in the qualitative content analysis. However, for the quantitative analysis the codebook will solely focus on the frequency with which a word or a certain phrase is used, instead of providing an interpretation of what lies behind what the spokespersons' words. Overall, quantitative content analysis is an effective and flexible research tool that makes it possible to navigate the content of, in this case, a press conference. In addition, it is a complementary method to include when one is using multiple methods to analyse the empirical material (Østbye et al., 2013).

3.1.2 QUALITATIVE CONTENT ANALYSIS

The reasoning behind choosing qualitative content analysis as the main method for analysis of the empirical material lies in that the main goal of this method is to research how a certain result comes about. Using content analysis as the main method in an analysis centres around understanding how the empirical textual material is attempting to portray reality in turn revealing how language shapes reality and the public's perception of it (Tjora, 2021). Grønmo argued that qualitative content analysis is based on a systematic review of

documents with the aim of categorising the content and recording data that are relevant to the research question in the study. The content is processed, systemized and registered so that they can be used as a basis for the study (Grønmo, 2016). Adopting Grønmo's definition, the qualitative content analysis in this thesis will thoroughly investigate– the reality presented in the empirical source material that has been selected, in accordance with the theoretical framework presented earlier.

The qualitative analysis of the content of these press conferences is a means of categorising and recording content that is relevant to the research question. Furthermore, a qualitative content analysis examines not only the information provided in a text, but also how the information is expressed and contextualised (Østbye et al., 2013). In contrast to a quantitative content analysis, where one examines what can be relatively easily observed on the surface of the text, the quantitative content analysis searches through the depths of the text with the goal of uncovering hidden layers of significance (Østbye et al., 2013). Finally, it is important to acknowledge the challenges inherent to using a qualitative content analysis to analyse empirical material. A qualitative content analysis on this scale demands, according to Tjora (2021), a high level of intensive thinking and of systematic work when it comes to conducting the analysis, that research question should also be kept in mind (Tjora, 2021). Furthermore, it has been argued that much of the potential of this type of research lies in the analysis itself, and it is also here that many projects misstep and end up with a collection of anecdotes instead of an actual analysis (Tjora, 2021). Hopefully, by acknowledging these challenges and possible missteps, I can avoid making these mistakes.

3.1.3 COMPARATIVE AND HISTORICAL RESEARCH

One further method that will be applied to the empirical material is comparative and historical research, with an emphasis on the comparative aspect. Comparative and historical research is defined as "the examination of societies (or other social units) over time and in comparison, with one another" (Babbie, 2014, p. 359). It is also a method that complements the other methods that are to be used in this thesis, particularly regarding the sampling of empirical material, which includes press conferences from different countries, over a short period of time, during which the countries were sharing similar experiences at similar times. This will help to present a clear picture of the differences and similarities between the nations' communication with their respective publics during the given time period.

3.2 SAMPLING

According to Babbie (2014), when studying communications, it is counter-productive and indeed impossible to research or observe everything that one might wish to examine. Therefore, I have conducted a sampling of the content that falls within the unit of analysis, defined in this thesis as the press conferences from the Scandinavian governments which have as their subject the initial period of the Covid-19 pandemic. The sample size will consist of three conferences from each country, resulting in a total of nine press conferences. I believe three press conferences from each country will provide sufficient information in order for me to conduct this analysis. All the sampled press conferences will relate to the initial period of the Covid-19 pandemic. When analysing these press conferences, I will solely be looking at the verbalised content. I will not look at multimodal forms of rhetoric that other researchers (Kjeldsen, 2022) have previously done.

All the press conferences sampled will come from the initial period of the pandemic, that is from March 2020 until the middle of May 2020. The first group of press conferences will relate to the moment in which the pandemic began to take hold in Scandinavia itself, and the countries decided to implement strict social boundaries and restrictions. In Norway, Sweden, and Denmark this all happened more or less at the same time, on the 11th and 12th of March 2020. However, there is a slight difference between the countries that is worth mentioning early on, as it could influence the analysis. Sweden, in contrast to Norway and Denmark, decided to follow a different strategy for handling and containing the spread of the virus. This is clearly reflected in the number of deaths that occurred in each country during this initial period (WHO, 2022). In addition, it may also have influenced how the Swedish governmental officials talked about the virus. It is also important to mention here that Sweden is also different from Denmark and Norway when it comes to who held the authority over decisions about social restrictions and other health-related aspects of the pandemic's management. In Denmark and Norway, it was the elected government who stood behind these decisions, whilst in Sweden it was Folkhälsmyndigheten who made these decisions (Folkhalsmyndigheten, 2020). Due to this, the press conferences where the Swedish Prime Minister was present were far fewer than in the other countries.

The second round of press conferences that will be analysed, took place roughly two weeks after the first. There is some slight variation between countries, due to the fact that not all of the press conferences held on Covid-19 at this time were relevant to the theme and

research questions of this thesis. I chose this second set of press conferences, because they occurred after a significant amount of time had passed since the first conference was held. When the first round of restrictions was implemented on March 11 and 12, the Norwegian and Danish governments set a limit of 10 to 14 days, in order to observe the effectiveness of the restrictions when it came to slowing down or stopping the spread of the virus. Therefore, these press conferences are likely to hold more information concerning the development of the pandemic. They may also provide insight as to whether the expression of uncertainty became more or less prominent over the course of those early and critical weeks, given that the public would have had approximately two weeks to adjust to the situation

By contrast, the third set of press conferences are spread across a wider time period. As summarised below, Denmark and Sweden had press conferences within one day of each other – 12 and 13 May – whilst Norway's press conference took place a few weeks earlier, on April 24. There are two main reasons behind this range in dates. I first looked at press conferences held in the middle of April, but the Norwegian press conference held at this time focused solely on the development of Smittestop, an app to track individuals who had tested positive and alert their close contacts. As this was not at all relevant to my research into uncertainty communication, I decided to broaden the possible time period by about two weeks. Here another problem arose. Denmark did not have a government press conference between April 12 and May 12 that was available to access via the Prime Minister's office webpage, which is where all the other press conferences were uploaded.

I then debated whether or not to push the timeline by another couple of weeks, but then the Swedish press conferences became a problem. The Swedish empirical material has been difficult to access as they are only stored on the government's webpage for six months, before being archived at the National Archives of Sweden (Riksarkivet). The contents of which are not easily accessible online. The Swedish press conferences I did find on May 13, talked about similar topics to the press conferences I have sampled from Norway and Denmark at the time. However, the Norwegian press conferences around May 13, focuses more on the re-opening of the country, and gives an impression of being 'past' the uncertainty surrounding the virus. As a result, I ended up with empirical material that has a slightly different timeline, although the subjects are more or less the same. Moreover, these three last press conferences are still firmly planted in the 'initial phase' of the pandemic. Meaning that the uncertainty is still arguably high due to the 'newness' of the virus.

Country	Date	Year	Source
Denmark	11 March	2020	Statsministeriet.dk
Sweden	11 March	2020	Regjeringen.se
Norway	12 March	2020	Regjeringen.no
Sweden	22 March	2020	Regjeringen.se
Denmark	23 March	2020	Statsministeriet.dk
Norway	24 March	2020	Regjeringen.no
Norway	24 April	2020	Regjeringen.no
Denmark	12 May	2020	Statsministeriet.dk
Sweden	13 May	2020	Regjeringen.se

Table 1.0: The dates, codes and where the press conferences were gathered from.

To summarise, I argue that these three sets of samples from each country provide insight into how the situation has both escalated and de-escalated, depending on the country, during the initial phase of the pandemic. In addition, the comparison of the press conferences to each other is an important aspect of the analysis, which is why I have chosen to keep as tight a timeline as possible between the conferences held in each country, in order to make the analysis as reliable as possible. Table 1.0 presents the final sampling frame.

A further aspect of efficiently analysing the press conferences is to analyse them after they have been transcribed. This is because I am not analysing these press conferences on a multimodal level, as I have previously mentioned; I am simply researching the choice of words and phrases the authorities have opted to use, and not the medium of communication or their use of accompanying graphs and images, for example a few of the press conferences were sent to me already transcribed, whilst the rest of them I found online. The Danish press conferences were available already transcribed at the Danish Prime Minister homepage, Statsministeriet.dk.. The remaining press conferences I found online in video format. I downloaded and converted them into audio-only files, in order to reduce the file size. After that, I uploaded the audio files into Word Online, which produces high quality transcriptions.

Sampling was also necessary for the coded empirical material, as the full extent of the quotes and statements would have been too much to include in the analysis. The numerous relevant statements would have become too repetitive. Therefore, in situations where one country's press conference yielded numerous references sharing the same code, I have selected one

single statement which clearly represents my arguments. In other instances, where a code only had one or two references but they belonged to different countries, I have used both references in the analysis in order to highlight any differences in the countries' communication. In instances where only one country yielded relevant references to a given code, I will at times use more than one reference if the statements clearly exemplify my arguments.

3.2.2 THE USE OF NVIVO

Throughout this thesis, I have used the text analysis program NVivo as a tool to conduct a valid analysis. The analysis consists of three distinct methods. Firstly, a simple quantitative analysis was conducted, before the focus shifted to a qualitative analysis of the empirical material. Both of the analyses' have comparative elements to them, which makes up for the third research method.

There were ups and downs when it came to using NVivo as a tool for the analysis. A positive aspect of the program was that one can conduct word searches throughout all the documents to look for one particular word, which in this case was uncertainty. The negative side to this was that search results did not include words which shared a common stem to the original searched term, meaning that all the conjugations had to be done manually. Nonetheless, the word search was conducted. However, it ended up being much less fruitful than what I had first expected. This is also where I decided that the main focus of the thesis would be on the qualitative analysis, and that the quantitative analysis would only serve as a means of guiding the direction of the analysis.

In the qualitative content analysis on the other hand, I found that using NVivo gave me a clear overview of the empirical material. This includes the way in which the codes were created, as well as the annotations, both of which are easy to refer back to at a later date. Furthermore, NVivo offered a clear way of exploring the codes, including moving them around so that they would fit into the different categories created. This made the process of actually analysing the material much easier as clicking on the code showed the coded reference and where it was located within the document. This made it easier to grasp in which context the reference was used, as well as to explore the hidden meaning in what was stated by the authorities.

By using the analysis program NVivo, I looked at the number of times a word closely related to uncertainty emerged from the empirical material. I also noted in which press conferences uncertainty was not explicitly mentioned through the use of this program. I was able to search through all the documents at the same time to see how many times a certain word or concept appeared. However, as the press conferences are transcribed in the three Scandinavian languages, most of the concepts are expressed using different words. The first action to take was to decide which words to use in the beginning stages of the analysis. The word "uncertainty" and its synonyms in Norwegian, Danish and Swedish, as well as other semantically-related words, such as uncertain. It is of interest to examine how many times these concepts were mentioned, in which of the three press conferences in each country they appeared, and in which press conferences "uncertainty" and related lexical items were not mentioned at all. I do, however, recognize that limiting the search to only variations of uncertainty is a rather restrictive way of analysing the material, and I do realise that there are other ways of recognizing uncertainty.

Overall, I found that the use of NVivo was very helpful in certain respects, whilst in other instances the same outcome could have been achieved equally as effectively through a word search in Word. This is especially true regarding the quantitative analysis. On the other hand, I do not think the findings of the quantitative analysis would have been so clear if it were not for how straightforward NVivo made it to navigate the codes.

3.3 CODING

At the beginning of the coded process I was not bound to any particular principles. I expected that there would be references to uncertainty throughout the press conferences that would lead to codes emerging from the empirical material. In this respect, I took an inductive approach to coding the material (Babbie, 2014). However, there was also a larger element of deductive thinking present, as I first and foremost looked for references and mentions of uncertainty (Babbie, 2014).

As such, when reading through all the sampled press conferences and coding them as I went, new codes emerged from the material (Babbie, 2014), in line with the context in which uncertainty was mentioned. However, as the codebook grew and I commenced the analysis, the categories that I had previously created needed to be edited. Some turned out to

deal with more or less the same thing, whilst others turned out to be fully irrelevant and needed to be removed. During this process, I realised that Brasher's six dimensions (2001), – complexity, insecurity concerning the knowledge, unavailable or inconsistent knowledge, ambiguity, unpredictability, and future outcomes and available predictions –, could be applicable to the indirect references of uncertainty, as they rather effectively convey the messages behind the references and statements that were made. When it came to the referencing of direct uncertainty, including the explicit mentions of uncertainty, I opted for a different coding system, which was structured using the following terms: transparent use of uncertainty, implicit uses of uncertainty, and communicating international uncertainty. These references were coded according to the context in which they were used, as well as from the importance of the statements that were made. I will come back to what these categories mean in the analysis section. This way of coding, in contrast to the indirect references, had a more inductive approach as the codes developed from the empirical material (Babbie, 2014).

In both quantitative and qualitative content analysis, the codebook has an important role as it lists the different variables in which the empirical material has been categorised. Even more important when it comes to the codebook is how one chooses to define the variables and the entities, as technically, an entity should only belong to one variable, and not multiple. This can make the process of defining the variables even more complicated (Østbye et al., 2013). Furthermore, these researchers argued that it is through each individual definition of the attributes in the codebook that an agreement between the text and the coded materials' definitional validity is created. They also argue that without such a compliance, even the most refined analysis cannot say anything about the content in the media (Østbye et al., 2013). As such, the process of coding the empirical material needs to be thoroughly and clearly done so I can have a clear compliance between the tools and the coded material. As such, the coded material for this thesis looks like this extract from the codebook, which can be seen below in table 2.0.

Name	Description	References
Indirect uncertainty	When I say indirect ways of communicating uncertainty, I refer to the instances where the government are communicating their uncertainty in a more subdued or hidden way, than what the direct way of communicating uncertainty does.	69
Complexity	The complexity of a situation can be because those talking about the situation can be indirect or vague when it comes to their willingness to share the information.	2
Insecurity concerning the knowledge	The insecurity about one's own knowledge, in the sense that do they trust in what they already know, or it includes insecurity concerning the knowledge that is available.	4

Table 2.0: Presented here is an extract from the codebook, which portrays some of the codes for indirect uncertainty. The full codebook can be found in the appendix.

In the table presented above, the name of the code is presented, followed by the description of the code and the number of times the code was referenced in the empirical material. However, there is a difference between some of the codes. For example, the code for indirect uncertainty' is a parent code. This means that the two codes listed below, and who have indents before the text, are child codes of the parent code. This results in that all the times the child codes have been referenced, makes up for the total sum presented in the parent code, which can be seen in appendix 1.

In order to operationalize uncertainty, I searched for the different variations of the concept in all three of the Scandinavian languages – Norwegian, Danish, and Swedish. However, this approach turned out to have limitations as the concept of uncertainty can also be implicit. By applying such a narrow definition of uncertainty to the empirical material, I ended up with a rather slim selection of data - which I will come back to in the first part of the analysis - and I therefore saw the need to expand the definition. Therefore, the initial definition of the concept, which focused on the explicit use of uncertainty, had to be adapted to encompass indirect references to uncertainty as well as the direct references.

3.4 ETHICS

By using unobstructive measures I am largely avoiding some ethical issues that more invasive methods of research may present. However, unobstructive research methods do present potential ethical issues. For example, respecting the confidentiality of the source material might pose a significant challenge in certain studies. That said, I do not consider it to be an obstacle to this research project as all the source material is already freely available to the public, and the people holding the press conferences can be categorised as public persons. Another potential risk, as is the same with all types of research (Babbie, 2014), is that I am obligated to gather the data, analyse it, and thereby honestly report my findings rather than write up my findings in such a way that they support my own hypothesis, or possible preferred outcome. Babbie argued that agreeing to such principles is easy in theory, but applying them while conducting the research is more difficult (2014). Therefore, I consider this last issue to be one of the larger ethical challenges I might encounter whilst researching and writing this thesis.

Finally, although I am handling personal information (in the form of names of government officials who have been present at press briefings and conferences), this information, according to the Norwegian agency for shared services in education and research (Sikt), is not something I need report to them[1]. This is because those present at press conferences expect that the recordings will be used in research, and those who direct the press conferences are also individuals with a prominent public profile. This information has been provided by a senior advisor in the division for privacy services within Sikt. As a result, the application process through Sikt for the 'go ahead' to begin research for this thesis was not necessary, and this has been confirmed by the agency itself.

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[1] From January 1. 2022 NSD became a part of Sikt – Norwegian agency for shared services in education and research.

3.5 RELIABILITY AND VALIDITY

When using different research methods within any field, it is important to acknowledge that there are different types of content, and that the validity and the reliability of the coded material is important when it comes to extrapolating the findings of the study.

First, reliability refers to the "extent to which a measuring procedure yields the same results on repeated trials" (Neuendorf, 2002, p. 112). Reliability can also refer to the dependability or accuracy of the data material. If reliability is high, the research and the sampling will yield accurate material (Grønmo, 2016; Østbye, 2013). One can measure reliability by applying the same research design to different samples of data that all focus on the same situations or instances (Grønmo, 2016). However, "the notion relevant to content analysis is that a measure is not valuable if it can be conducted only once or by a particular person" (Neuendorf, 2002, p. 112).

Evaluating the reliability of this thesis according to the above criteria highlights a number of weaknesses. Firstly, I am the only person who has coded the material. That said, I coded the material multiple times, and continually reviewed the empirical material alongside the theoretical framework. Another weakness is that I have utilised only a small proportion of the empirical material that I could potentially have accessed. The number of press conferences that I have analysed is very small, as I have had a limited time to conduct this thesis, and also needed to take a sample of the available material that was relevant as to what I am researching. However, having only a few press conferences to analyse has encouraged me to explore their contents in more depth, and as a result I have made finding I might not have done otherwise.

Moving on to validity, this concept refers to "the extent to which a measuring procedure represents the intended, and only the intended concept. In thinking about validity, we ask the question "are we measuring what we want to measure?" (Neuendorf, 2002, p. 112). This means that validity centres around how the sampled and coded material highlights the research question, and what the researcher is actually looking for (Grønmo, 2016). When I reflect on the question presented by Neuendorf, I conclude that there is a strong sense of validity throughout the thesis, since the coded and analysed material reflects what the research question set out to find.

Finally, I will consider types of content and their relationship to reliability and validity. Firstly, manifest content is objective. It is the content that we can see, the content on the surface - an example being to count the number of times a certain word appears in the

texts. This method of analysing the content offers both advantages and disadvantages. One advantage is the ease and reliability of coding, and the fact that it lets the reader of the research know exactly how uncertainty was measured. A disadvantage to the method would be the level of validity it can provide, as there is more to the text - a deeper meaning, so to speak - than just the number of times uncertainty was mentioned (Babbie, 2014).

The other type of content is subjective. This is latent content and analyses a text's underlying meaning. This involves the researcher reading the whole text that is to be analysed, and then making an informed overall assessment of how, in this case, the governments have communicated uncertainty in the given time period. This method too, has its disadvantages and advantages. The greatest disadvantage is the reliability and specificity of the findings might be reduced or compromised, especially if more than one person does the coding. This is because different individuals may have different perceptions of the concepts, even although the concepts have been defined within a theoretical framework.

Babbie (2014) recommends that whenever possible, it is best to use both methods in an analysis. So, to obtain the most accurate overview of the full extent of the research, both manifest and latent content methods will be of value. Furthermore, using them both provides a fuller picture of the debate surrounding uncertainty in the given time period.

4.0 ANALYSIS AND DISCUSSION

This analysis will begin with a brief quantitative analysis, before moving on to the more extensive and in-depth qualitative content analysis. The different themes, variables and findings will be discussed and compared between countries as they arise in the empirical material.

The analysis will begin by providing detail on the significant individuals present at the press conferences, and the duration of the events. Then, it will indicate how frequently the concept of uncertainty was referred to. I will go on to contextualise these references in the analysis.

The first part of the analysis focuses on the ways in which the authorities have directly communicated their uncertainty. It does so by first looking at how many times and where this occurred in the empirical material, before moving on to in what context these references to direct communication of uncertainty happened.

The second part of this analysis focuses on the indirect ways of communicating uncertainty. This is undoubtedly the largest section within the analysis, and has therefore been divided into different dimensions of uncertainty, to facilitate analysing the material. The material has been divided into two sections in order to highlight more clearly the differences between direct and indirect communication of uncertainty.

4.1 THE EMPIRICAL MATERIAL

I argue that the use of press conferences as my empirical material in this thesis is a relevant choice because I am researching how governments communicated with their publics regarding of Covid-19, and press conferences are the most official spaces for such communication to take place. I have, however, used transcriptions of the press conferences in order to make the material easier to work with, and have not used a multimodal approach like other scholars have done when it comes to analysing press conferences (Kjeldsen, 2022).

In the next couple of sections, I will provide more detail on the press conferences, in terms of their duration, the dates they were held on and who was present as representatives from the authorities and what role they had in the communication of information of Covid-19.

It has as already been made quite clear that the empirical material is taken from the initial phase of the pandemic in each of the three countries, and they all made discoveries of the virus at more or less the same time. However, to quickly summarise the timeline of which the thesis is focusing on, it is from the beginning of March 2020 until the middle of May 2020. That means, more or less, the first two months where the counties had to adapt to the virus changed the everyday lives of each country's population.

The length of the press conferences varies significantly. As I do not have the video file for all of the press conferences, their length is considered in pages of transcribed text. I have used the same formatting - line spacing, text size, font - for all the transcriptions. Table 3.0 sets out the range in lengths between the countries. Sweden had the least number of pages, with a total of 17 pages. Norway was not very much ahead, with 19 pages worth of transcribed press conferences. Denmark on the other hand, had a total of 26 pages, and is thereby the country here with the largest sample size of empirical material.

Country	Date	Pages	Words
Denmark – 2	23.03	11	4044
Denmark – 3	12.05	9	3370
Sweden – 1	11.03	8	2976
Norway – 1	12.03	7	2816
Norway – 2	24.03	6	2764
Norway – 3	24.04	6	2426
Sweden – 3	13.05	6	2070
Denmark – 1	11.03	6	1798
Sweden – 2	22.03	3	692

Table 3.0: This table illustrates how many pages and how many words each country's press conferences consist of.

4.1.2 SPEAKERS AT THE PRESS CONFERENCES

As chapter 2.4 (sources of uncertainty) explains, when communicating uncertainty to the public it is important that the person who shares the information is considered a credible source and a trusted individual in the eyes of the public. Therefore, an in-depth look at who is present at these press conferences and how often they are present is of relevance.

A common trait across all the countries is that the Prime Minister is present at every sampled press conference. This is to be expected, as the Prime Minister is an elected representative, and therefore it can be argued that a significant proportion of the public believes in or trusts in them. They are also the head of the Danish, Norwegian and Swedish governments, and therefore should – in my opinion - be present in press conferences of this scale, as well as being the most important speaker at the press conferences (Kjeldsen, 2022).

An observation that has been made when looking at the empirical material, is that in all three of the countries, the Prime Ministers are always the first to speak. This is arguably because the first person in the line of speakers is the most important individual (Kjeldsen, 2022). In some of the press conferences, however, the Prime Minister is the only one to speak. Nonetheless, in the press conferences with multiple speakers, the individual following the Prime Minister varies between press conferences and between countries. Indeed, the individuals who were present besides the Prime Minister also differed depending on the occasion and the country. Table 4.0 details the individuals who were present across all the press conferences, and with what frequency.

Country	Title	Department	Name	Present
Norway	Prime Minister	The office of the Prime Minister	Erna Solberg	3/3
Denmark	Prime Minister	The Prime Minister's Office	Mette Frederiksen	3/3
Sweden	Prime Minister	The Prime Minister's Office	Stefan Löfven	3/3
Norway	Minister of Health and Care Services	Ministry of Health and Care Services	Bent Høie	3/3
Sweden	Minister for Health and Social Affairs	Ministry of Health and Social Affairs	Lena Hallengren	2/3

Denmark	Minister of Health	Danish Ministry of Health	Magnus Heunicke	2/3
Sweden	Director General	Public Health Agency of Sweden	Johan Carlson	1/3
Denmark	Director General	Danish Health Authority	Søren Brostrøm	1/3
Norway	Assisting Health Director	Directorate of Health	Espen Rostrup Nakstad	1/3
Denmark	Executive Vice President	Statens Serum Institutt (SSI)	Kåre Mølbak	1/3
Norway	Director General	Norwegian Institute of Public Health	Camilla Stoltenberg	1/3
Norway	Health Director	Directorate of Health	Bjørn Guldvog	1/3
Sweden	Minister for Foreign Affairs	The Ministry for Foreign Affairs	Ann Linde	1/3
Norway	Department Director for infection control and emergency preparedness	Norwegian Institute of Public Health	Line Vold	1/3
Denmark	Chairman	Local Government Denmark (KL)	Jacob Bundsgaard	1/3
Denmark	Minister of Justice	The Ministry of Justice	Nick Hækkerup	1/3
Denmark	Representative	The Danish Foreign Department	Unknown	1/3
Norway	Professor Emeritus	Member of the Norwegian Covid-19 Commission	Stener Kvinnsland	1/3
Denmark	Chairman	Danish Regions	Stephanie Lose	1/3

Table 4.0: List over the people present as speakers at the press conferences, and how many times they made an appearance[2].

It is important to note that the individuals present are a mixture of bureaucrats and politicians. Another observation that is important to note, is that there is a mix of politicians and other

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[2] Some of the public personas or politicians listed here are no longer in office, but their titles here are as they were in the initial period of Covid-19 in 2020.

high-profile individuals in these press conferences in all three countries. The non-politicians present are for the most part highly qualified and experienced individuals in the field of public health. Having these experts present is especially important when there is a public health crisis such as the pandemic (Clarke & McComas, 2012). This is because the information that is shared, as well as the person sharing it, can affect the level of trust the public extends towards those in control. If the government shares erroneous information, or the spokesperson is perceived to be unreliable, this will lead to a reduced level of trust amongst the public. In turn, this will adversely affect how the public choosed to respond to recommendations made by the authorities in charge of the situation (Liu et al., 2016).

4.2 DIRECT WAYS OF COMMUNICATING UNCERTAINTY

There are many ways of communicating uncertainty, as have been presented thus far in the thesis. However, a clear distinction as to what separates direct communication of uncertainty from indirect communication of uncertainty I have not yet come across in the literature within the field. Earlier research has suggested that when communicating uncertainty, it is rarely expressed in a clear or direct way, when it comes to health crises (Han et al., 2021). This previous research can provide context as to why the Scandinavian governments were not more direct in expressing their uncertainty during their press conferences. It also might help to understand why they opted for a more indirect and subtle approach when communicating their uncertainty to the public.

When talking about direct uncertainty I refer to times the actual word 'uncertainty' or words sharing the same morphology, such as the word 'uncertain', has been used. One can argue that direct communication of uncertainty is a more honest and more transparent way of communicating the concept. When talking about direct use of uncertainty, I refer to the instances in which the communicators, in this case politicians, make it clear that they are discussing a matter where uncertainty is inherent. This is done either from themselves as individuals, form the government, or from acknowledging the uncertainty present within the populations. By first looking at the direct references to uncertainty, or in some cases explicit admittance of uncertainty, I look at the extent to which the governments' communication aligns with theories presented in earlier sections. This is done by looking at how open and transparent the countries' representatives were when it came to communicating their uncertainty.

When talking about indirect communication of uncertainty, I refer to the times when uncertainty is expressed in a more implicit way, that might not be so obvious at first glance. Of course, if the government, or another important organisation, were to consistently express uncertainty throughout their press conferences, I believe that this would be excessive and counterproductive, as too much openness about uncertainty can result in doing more harm than good (Driedger et al., 2018). Therefore, indirect ways of communicating uncertainty which one must 'read between the lines' of the empirical material, might provide more insight into the extent of a government's uncertainty, than direct references to uncertainty. This will be further discussed in the second part of the analysis.

In table 5.0 below, one can see in how many of the transcripts the concept of uncertainty was referred to explicitly and directly, as well as the total number of times this occurred in each transcript. In addition, one can see in which transcripts these references were made. More interesting though, are the press conferences where uncertainty was not explicitly mentioned at all. This is the case in one out of the three sampled press conferences from each country. For Norway and Sweden, this was the second press conference, whilst for Denmark it was the first.

This is rather interesting as Norway made explicit reference to uncertainty quite frequently in their first press conference. Sweden also mentioned uncertainty in their first press conference, which is surprising as Sweden has been criticised for omitting uncertainty from their communication (Hanson et al., 2021). Whilst the same has not been said about Denmark, this country in fact completely omitted explicit references to uncertainty from their first press conference. That is not to say it was not indirectly referred to, but I will return to this point later in the analysis.

Name	Number of Files	Where were the mentions	References
Osäkerheten	1	Sweden 13.05.2020	2
Osäkerhet	1	Sweden 11.03.2020	1
Usikkerhed	2	Denmark 12.05.2020 and Denmark 23.03.2020	4
Usikkerhet	1	Norway 24.04.2020	3
Usikkert	1	Norway 12.03.2020	1
Usikkerheten	1	Norway 12.03.2020	1
Usikre	1	Norway 12.03.2020	1

Table 5.0: The number of times the different variations of uncertainty was mentioned throughout the press conferences.

Although explicit references to uncertainty were few and far between in the empirical material, this does not mean that uncertainty was not a central topic at the press conferences. Rather, it only indicated that I would need to use other methods to detect uncertainty in the empirical material, which I will do later in the chapter. However, what can be stated as a result of the quantitative analysis is that the authorities of the individual countries rarely made outright reference to uncertainty when approaching the subject of the pandemic.

Therefore, the second part of the analysis is important when researching uncertainty, as it will permit me to 'read between the lines' of the empirical material and look for the hidden or nicely wrapped ways of admitting or referring to uncertainty.

In the empirical material, the speakers at the press conferences used uncertainty explicitly a total number of thirteen times. However, when also including direct references to uncertainty, without the strict criteria for the concept to be explicitly used, it increases to a total number of 24 times. By including these direct references, one can also see that direct uncertainty is also referred to in almost all the sampled press conferences, with one exception – the second Swedish press conference.

Name	Description	References
Direct uncertainty	When talking about direct uncertainty I refer to times the actual word uncertainty or a conjugation of the concept has been used.	20
Directly communicating uncertainty	Statements where the admissions to uncertainty have been direct.	8
Transparent use of uncertainty	When talking about transparent use of uncertainty, I refer to the times when the authorities of each individual country has been open and honest in their direct communication of uncertainty.	4
Implicit uses of uncertainty	The instances where one can find the uncertainty is the statement, but that it is not directly said. In these instances, it is rather concealed behind other meanings, or by saying that there is uncertainty, but without mentioning who the uncertainty belongs to.	5
Communicating international uncertainty	The times uncertainty was brought forwards in relation to an international context.	3

Table 6.0: Extract from the codebook. The full file can be found in the appendix.

These direct references to uncertainty, as well as the explicit use of the concept are illustrated in the extract from the codebook presented here. The direct references of uncertainty here, are for the most part rooted in the lack of knowledge of the situation, and the extent to which the authorities admit this (Brashers, 2001; Markon et al. 2013). However, it also holds elements of epistemic uncertainty about the future (van der Bles et al., 2020), as does much of the uncertainty connected to the pandemic. These references to uncertainty are what I will now explore further in the next section of the analysis.

All three of the countries, at some point or another, explicitly referred to uncertainty in their press conferences. There are, however, differences when it comes to who expressed these uncertainties.

Norway's authorities directly admitted to uncertainty two times during their first press conference, and these references both came from representatives of the Norwegian Institute of Public Health. The first reference was made by the Director General, Camilla Stoltenberg, whilst the second was made by the Department Director for Infection Control and Emergency Preparedness, Line Vold. These individuals are not politicians but experts in the field of

public health. The fact that they explicitly expressed uncertainty may be considered surprising because experts sharing their uncertainty has been a contested subject within the field of risk- and crisis communication (Markon et al., 2013). In addition, experts can also be deemed unqualified to serious situations that include uncertainty, as they are, in most cases, not prepared to handle such a situation (Liu et al., 2016).

By contrast, this separates Norway from the two other counties, as in the press conferences that has been analysed here, it is not the bureaucrats there who make references to uncertainty. It is the opposite actually. In Denmark and Sweden, it is the elected politicians who explicitly and openly use the concept of uncertainty, more than the experts. Which is also important when wanting to earn the public trust (Quinn et al., 2009).

The following paragraphs reference relevant extracts from the press conferences in each country, to exemplify how different spokespeople expressed uncertainty.

This means that we also do not know the extent of this epidemic.
(Director General for the Norwegian Institute of Public Health, Camilla Stoltenberg,
12.03.2020)

In this first sentence, taken from the first Norwegian press conference, Stoltenberg admits to uncertainty by confirming that – the Institute of Public Health – does not know the full extent of what they, at the time, called an epidemic. This sentence thus provides a good example of lack of knowledge as an aspect of uncertainty (Markon et al., 2013). However, by stating that they do not know what this 'epidemic' will bring, they also confirm uncertainty about the future (van der Bles et al., 2020), and the full extent of the crisis, that at this point had just barely begun.

We don't know what R is right now, but if we assume it's been 1.3 since March 12th.
(Department Director for infection control and emergency preparedness within the Norwegian Institute of Public Health, Line Vold, 12.03.2020)

In this second sentence, taken from the same press conference as the previous statement, Vold also admits to uncertainty by stating that the Institute of Public Health does not know what the reproduction number (R-number) was at this time. Similarly to the previous example, this is also a good example of admittance of lack of knowledge (Markon et al.,

2013). Furthermore, in the second part of the sentence, she says that they *assume* that it had been on a higher number. By choosing to use that particular world, she admits that they have not been sure, and still do not know what the r-number has been on. This is then a more complex way of admitting uncertainty (Brashers, 2001), albeit a bit more indirectly, which I will come back to later in the analysis.

> We stand on untrodden land, and there are many heavy dilemmas.
>> (The Danish Prime Minister, Mette Frederiksen, 23.03.2020)

The last quote is taken from the second Danish press conference. According to my coding, it is the only time the Danish government directly admitted to uncertainty. Apart from the times uncertainty was explicitly mentioned in the empirical material. In this quote, the expression that I take as a direct admission to uncertainty is that Frederiksen says that they (the Danish authorities) are standing on *untrodden land.* With that statement comes the perception of unknowingness and uncertainty of the future (van der Bles et al., 2020), as untrodden land is by definition an area of land not explored or touched upon. This perception is reiterated in the second part of the quote, where the Prime Minister admits that there are many dilemmas where the decisions weigh heavily.

One can argue that to some extent, these are not direct admissions of uncertainty as the speakers do not say outright 'we are uncertain'. However, I would argue that there are other ways of directly admitting to uncertainty, without explicitly mentioning the idea of uncertainty itself.

As far as my analysis of the empirical material goes, I only found evidence of this category present in some of the Danish and Norwegian press conferences. To my knowledge, this type of direct uncertainty was not used in the Swedish press conferences.

An interesting element I found when looking at the Danish material, was one instance where fear became a very prominent idea when Frederiksen was speaking. Fear, as has already been established, is an important aspect of uncertainty (Liu et al., 2016). It is therefore highly relevant to discuss here.

> Italy is shut down. Hospitals lack ventilators and staff. I would like to
> emphasise that it is not a scare. It's not an imaginatively conceived future
> scenario. That's the reality of a country that most of us know.

My perception of the press conference is that the Danish Prime Minister did not intend to use fear as a way of scaring the public into accepting the new reality. This is demonstrated when Frederiksen states that "this is not a scary image, nor a fantasy filled future scenario" (Frederiksen, 11.03.2020). However, Frederiksen then describes the situation of Italy at the time - a European country which most Danes know and/or have visited - and goes on to emphatically frame it as a 'reality'.

Arguably, this portrayal creates a vivid and scary possible future scenario for Denmark. Reality is presented in an ominous, fear-inducing way: It happened to Italy, so it can happen here. While it is unlikely that the Prime Minister wished to instil fear in the Dansig public, this could have been a possible outcome of the press conference. As mentioned earlier, fear can impact the way the public reacts to crisis situations (Gigerenzer, 2004; Göritz & Weiss, 2014). New, unfamiliar and, in this case, frightening information can lead to uncertainty, which in turn increases fear, which in turn can affect the way the public chooses to behave regarding crisis information shared by for example the government (Liu et al., 2016).

Returning to the Norwegian communication, in the quote presented below, the Norwegian Prime Minister admits that even though the infection numbers might be down as of right now, they might not stay low in the future.

> The fact that we have low numbers now, is no guarantee that the infection rates will remain low in the period ahead. And then that's an important message for me to say. We can't lower our shoulders; we still have to work hard to keep control of the infection.
>
> (The Prime Minister of Norway, Erna Solberg, 24.04.2020)

Here, Solberg confirms that there is an epistemic uncertainty about the future when it comes to the virus and the infection rates (van der Bles et al. 2020). Solberg also clearly states that the authorities must continue to work hard in order to continue to contain the spread of the virus. This can be considered an act of transparency, as this is not something she necessarily needed to share with the general public. Therefore, it implies the openness of the authorities (Ihlen et al., In press). In addition, the statement about the authorities having to continue to

work hard clearly implies that containing the virus has been a challenge for the authorities. It also insinuates that the reason that controlling the spread of the virus has been so challenging, is because of a general lack of knowledge of how this virus operates (Brashers, 2001).

> In other words, infection that we do not have an overview of and spread domestically. The numbers we have presented in this scenario are not forecasts. To do that, the uncertainty about what is reality is far too great.
>
> (The Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, 12.03.2020)

In this quotation, the general director of the Norwegian Public Health Institute, Camilla Stoltenberg, mentioned uncertainty when talking about the spread of the virus. However, before elaborating further on the untraceability of the virus, Stoltenberg clearly states that there is uncertainty about what the reality is in relation to the infection numbers in Norway. This implies a certain lack of knowledge (Markon et al., 2013). Stoltenberg also admits that the numbers she presented in the press conferences are not a correct representation of what the future numbers of infected people might be, due to the high levels of uncertainty which surrounded the virus at this stage.

This quote from the first press conference in Norway, is linked to the question of whether the governments have control over the spread of the virus within each country. By that I refer to the instances where governments can trace down the virus, and thereby know how, where and when an individual was infected.. When the authorities are not able to establish such information, that is when they have lost control over the spread of the virus, most likely due to lack of knowledge as to how the virus behaves (Markon et al., 2013).

There are some admissions amongst the three countries as to whether they, at some points, have lost track of the spread of the virus. Then there are other instances where they have been more transparent about the spread of the virus, which will be discussed later in the chapter.

Surprisingly, only Norway directly admitted to having lost track of the ways people contracted the virus, and they did so only in their first press conference.

We still expect that among those under clarification, most have been in areas with widespread infection such as Austria and Italy, especially Austria, but we also expect that there will be some who cannot be traced back.

(The Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, 12.03.2020)

In this first quote taken from the press conference, the Director General for the Norwegian Institute of Public Health prepares the public by saying that the Institute of Public Health expect some of those who recently tested positive for Covid-19 to not come from the first countries in Europe where the infection numbers were high, namely Italy and Austria, and that they will not be able to track down the infection source of these people. This clearly indicates transparency regarding their capacity to track down infection sources (Ihlen et al., In press), as well as the epistemic uncertainty about the future (van der Bles et al., 2020).

Stoltenberg goes to prepare the public for the authorities' incapacity to track down the infection source.

The five we reported with infection where we cannot trace the infection back to a trip abroad yesterday and those that will come too today, they are the clear signal that we have an epidemic, a silent infection out in the population also in Norway.

(The Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, 12.03.2020)

Stoltenberg here clearly confirmed that the spread of the virus at this point was occurring within the Norwegian borders, since cases of Covis-19 had been confirmed that could not be attributed to travel abroad. However, Stoltenberg does not directly say the authorities have lost control over the spread of the virus among the Norwegian public. She states only that there is a "quiet spread" amongst the public. A "quiet spread" can be interpreted in many ways, one of those being that an individual can contract the virus at any time and in any location. This implication confirms the uncertainty surrounding the infection rates of the current number of people infected (Markon et al., 2013).

A little later in the press conference, Stoltenberg admits that the virus is spreading in Norway, and that there are instances where the authorities do not have a clear picture in terms od who is infected and where infections are occurring:

> In other words, infection that we do not have an overview of and the spread domestically.
>
> (The Director General of the Norwegian Institute of Public Health, Camilla
>
> Stoltenberg, 12.03.2020)

This statement can furthermore be interpreted as a general lack of knowledge as to how to trace down the virus (Markon et al., 2013).

Overall, these direct admissions of uncertainty in the authorities' communication with their publics lies mainly in the spokespeople's choice of words and language. Therefore, this part of the analysis does bear some similarities to the previous section, but considers in more detail what the spokespeople actually mean when using certain words. Very clear statements such as 'we don't know' and similar phrases directly connect to uncertainty, and I would argue that the other key words presented in the above quotations represent equally direct references to uncertainty. What stands out in this section of the analysis is that the references to uncertainty are often presented through the authorities essentially admitting to a lack of knowledge, albeit to differing extents (Markon et al., 2013). Furthermore, uncertainty about the future is also expressed (van der Bles et al., 2020), which I argue is only natural in such a high uncertainty event (Seeger, 2006), where questions concerning the future are inevitably raised.

4.2.1 UNCERTAINTY PUT INTO CONTEXT

The very use of the words 'uncertainty' and 'uncertain' invites the questions of why the authorities' used these words, and in what context. The circumstances surrounding these mentions of uncertainty have provided an insight, as well as an opportunity, to further examine how the authorities addressed the concept. The rest of this subchapter has been divided into three different sections, where each section analyses and discusses the use of uncertainty in different contexts. First, in the context of transparency, as the Scandinavian

countries have shown great appreciation when their authorities acknowledge uncertainty (Ihlen et al., In press). Secondly, in the context of implicit uses of uncertainty, where uncertinay is referenced in opaque ways.. Lastly, references to uncertainty will be analysed and discussed in relation to the international context they were presented in. The reason for this sequence is because I deem the first section to be the most important, as transparency is arguably an important aspect of uncertainty. As implicit use of uncertainty, however vague it might be, remains an example of references to uncertainty, this section is placed second. The international context is placed last, as it discusses exactly that, the international situation, and not the domestic situation, which is arguably most relevant to a comparative analysis of national governments' communication with their publics.

TRANSPARENT USE OF UNCERTAINTY

When talking about transparent use of uncertainty, I refer to the times when the authorities of each individual country have been open and honest in their direct communication of uncertainty. Before examining the context in which the concept of uncertainty was used, I hypothesised that these mentions of uncertainty might be used in relation to admitting uncertainty, or to express reservations that the governments might have had prior to the implementation of various restrictions nationwide in the beginning of March 2020. As it turned out, this was only the case in some of the press conferences.

The Norwegian authorities used the concept of uncertainty directly, in their last sampled press conference, when they admitted that the decisions surrounding the implementation of the first restrictions had been taken whilst there was still a high level of uncertainty amongst the decision-makers.

> The decisions we made on 12 March 2020, and the following days were taken under a high degree of uncertainty. There is more knowledge today about the virus about how things develop, but there is still a high degree of uncertainty.
>
> (The Prime Minister of Norway, Erna Solberg, 24.04.2020)

The Norwegian Prime Minister continues on by reassuring the public that they have gained more knowledge about the virus since the day those restrictions were implemented. She

thereby admits to them having *been* uncertain, and that they previously did not have enough knowledge of the virus (Markon et al., 2013). By contrast, in the next sentence Solberg affirms that while the authorities have gained more knowledge of the virus, the situation remains inherently uncertain - among both the general public and the authorities. That is both amongst the general public, but also amongst the governmental branch and the decision makers. Such an admission is a rather contested action within the field of risk- and crisis communication, as it might not always have the desired effect (Driedger et al., 2018). However, as previously mentioned, an important discovery was recently made when it came to how the Scandinavian governments had handled transparency throughout Covid-19, namely that the Scandinavian countries actually appreciated their governments' admissions of uncertainty (Ihlen et al., In press).

The concept of uncertainty was also referenced in Norway's first press conference, in which the Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, mentioned that the virus' spread and its development was surrounded by uncertainty.

> This means that we also do not know the extent of this epidemic. We hope and have indications that it may be at an early stage. But this is uncertain. It may also have gone further.
> In other words, we expect major health consequences in Norway, but we are still very uncertain about how big they are.
> (The Director General of the Norwegian Institute of Public Health, Camilla
> Stoltenberg, 12.03.2020)

This was also the only time throughout the first Norwegian press conference that any of the governmental representatives or health representatives directly admitted to uncertainty about the virus. In fact, Stoltenberg also admitted to not knowing the full scale of the virus in the first sentence, when she says that the authorities do not know 'the full extent of the epidemic' However, this represents an indirect reference to uncertainty which I will elaborate on later in the chapter. In the following sentence, she admits that the stage of the virus is uncertain, before continuing on in an indirect way, by saying that the developmental stage of the virus *might* have come further than what the authorities suspect.

The third reference to uncertainty in the press conferences comes from the first press conference in the Swedish sample. Considering the literature in the field, the presence of Sweden in this section might come as a surprise, as Sweden has been listed as a country which seemed to avoid communicating uncertainty (Hanson et al., 2021). However, the reason for placing this quote so highly on the continuum of expressions of uncertainty is because the Swedish Prime Minister admits to his own uncertainty, as well as the uncertainty of others within the governmental branch. The concept of uncertainty was brought up in relation to how the virus might impact the business sector, and its workforce. By mentioning uncertainty, the way he did, Löfven directly admits to being uncertain about the situation surrounding the Covid-19 virus.

> I have also, together with the Minister of Finance and the Minister for Enterprise and Industry, today for a conversation with representatives of the business community and the trade union movement. There is, of course, concern and uncertainty about what this situation means for both wage earners and companies.
>
> (The Prime Minister of Sweden, Stefan Löfven, 11.03.2020)

In addition to mentioning uncertainty about the future, he also admits to there being uncertainty surrounding the virus from the very beginning. He admitted not only his own uncertainty about the virus, but he also informed the Swedish public about other government departments who were uncertain about how the virus might impact different sectors of industry. This demonstrates transparency about their uncertainty (Ihlen et al., In press).

These first three quotes from the press conferences have been chosen as the most direct and relevant, as they talk about uncertainty on a governmental level, as well as being transparent about the level of uncertainty that is present. These three quotes refer to the Swedish and Norwegian authorities' own uncertainty about the pandemic in a direct and rather clear manner.

IMPLICIT USES OF UNCERTAINTY

When talking about implicit uses of uncertainty, I am referring to the instances where one can detect uncertainty in a statement, but it is not referenced outright. In these instances, uncertainty is concealed behind other ideas, or uncertainty is acknowledged but not linked to

any particular person or organisation. The quotations references in this section are different from those referenced in subchapter 4.3, because they exemplify direct yet implicit references to uncertainty. By contrast, the references in subchapter 4.3 exemplify only indirect references to uncertainty.

The fourth reference to uncertainty in the press conferences sampled is a quote from the second of Norway's press conferences. The quote is taken from the Minister of Health and Care Services, Bent Høie. It centres around the visitation of the elderly and those who are categorised as 'high risk' people, who are institutionalised or who live in care homes.

> This may be due to good infection professional assessments from the municipalities and hospitals, but it may also be due to uncertainty about how to facilitate visits that safeguard the infection control advice.
> (The Norwegian Minister of Health and Care Services, Bent Høie, 24.04.2020)

The aspect of uncertainty here focused on how the care homes or institutions might not have the knowledge of how to safely let relatives see their loved ones (Markon et al., 2013). By introducing this aspect of uncertainty, not only does Høie admit that the caretakers lack information, but also that the health department also lacks the knowledge of how to advise the institutions on how to conduct safe visitations. Again, this shows that the authorities are being transparent (Ihlen et al., In press).

When introducing new information to the public, the information should be accurate and reliable. Otherwise, the individuals providing the information and the organisations they represent may suffer negative consequences, such as the public doubting the status of 'experts' and placing less trust in authority figures (Rogers et al., 2007). This, in turn, can have further negative ramifications (Quinn et al., 2009). Therefore, when introducing information that is not one hundred percent accurate or certain, highlighting these weaknesses in the information being presented can work as a safety net for the spokesperson (Rogers et al., 2007) - since providing outright erroneous information can lead to the public choosing not to follow the advice given by the authorities (Taha, Matheson & Anisman, 2013). Clearly stating the insecurity and uncertainty of the situation, and the insecurity concerning the available information, is exactly what the Norwegian Minister of Health and Public Affairs did when talking about the spread of the virus within Norway's borders.

> The increase in the number of new infections in Norway now appears to be
> stable. These may be signs that it is working, but it is too early to be sure.
> (The Norwegian Minister of Health and Care Services, Bent Høie, 24.03.2020)

Here, by stating that the increase in the spread of the virus in Norway *seems* to be stable, Høie avoids claiming certainty about the contagion rate of the virus. He admits that this is something the authorities do not know, by extension admitting to insecurity about the knowledge to which the government does have access.This also indicates a high level of transparency about the situation. However, it is important to recognise that in the weeks leading up to this press conference, the trend in infection rate has most likely been favourable; therefore, this may have encouraged the health authorities to believe that contamination rates were stable, and also have encouraged them to share this information even although it may have not been fully accurate. As well as the reason for why they are sharing this information, even though it might not be fully accurate (Rogers et al., 2007).

This reasoning is confirmed in the next sentence of the statement. Høie is transparent here, saying that the stabilisation might be a sign that the strict restriction within the country is working. However, he also ends the statement by saying that it is too soon to be sure if that is the case. In this way, he confirms the insecurity of the information, thus ensuring that no damage will come to the government if the information does turn out to be wrong (Rogers et al., 2007).

This evidence all substantiates the claim that there is epistemic uncertainty surrounding the topic of the virus (van der Bles et al., 2021). It also brings attention to the fact that Høie is insecure about the information he is sharing, which again confirms his own uncertainty and/or that of the authorities, and supports the claim that the authorities are transparent in their communication (Ihlen et al., In press).

To summarise, Norway's government employed a significant degree of transparency in their communication with their public (Ihlen et al., In press). The government chose to share information which they could not confirm as being completely true, and admitted to being uncertain regarding certain aspects of the pandemic. However, the government's openness in this respect may have been to protect itself from repercussions in the event that the information they were sharing turned out to be false (Rogers et al., 2007). Nonetheless, Norway was the only country to adopt such an approach.

The two following statements are taken from two of the Danish press conferences. The Danish Prime Minister, Mette Frederiksen referred to uncertainty in the second press conference, where she acknowledged that the day-to-day operations of Denmark were changing. Frederiksen also made it clear that this uncertainty in the society, with the spread of the virus, opened up for a new kind of vulnerability in the daily lives of the population.

On the whole, there is a new uncertainty in everyday life – a vulnerability.
(The Prime Minister of Denmark, Mette Frederiksen, 23.03.2020)

The reason for why this statement is situated here instead of in the previous section under 'transparent uses of uncertainty', is because Denmark does not directly admit to uncertainty in this context. In the quote presented above, the holder of the uncertainty is concealed in the phrase "there is a new uncertainty in everyday life" (Frederiksen, 12.05.2020). While the Danish government does explicitly reference uncertainty in this press conference, it stops short of directly admitting to its own uncertainty.This same strategy is also revealed in later press conferences. The next statement is taken from the last of the Danish press conferences, where Frederiksen was introducing the slow re-opening of the society. Here, again, uncertainty is acknowledged, but only in that its existence is confirmed:

Indeed, for many, the reopening is accompanied by a new uncertainty.
(The Prime Minister of Denmark, Mette Frederiksen, 12.05.2020)

In this context, Frederiksen is not directly admitting to uncertainty or that the government has been uncertain in the previous two months of the global pandemic. Rather, she projects uncertainty onto the population.

Here the Norwegian Health Minister admits to uncertainty within one area of the society, and that is why it is placed here. The two quotes from the Norwegian Minister of Health and Public Affairs, are placed highest up, because uncertainty is admitted in the first, and very directly referred to in the second, where the same cannot be said for the Danish mentions of uncertainty where it is highly conditioned, even though it is explicitly mentioned. The reason for why they have been placed here and not in the next section, is because the next section is specified to a certain area. Namely the international area. This differs from the specific area

where the Norwegian Health Ministers quote was placed, as the area of health amidst this crisis has arguably been the more important one.

I argue that these three statements belong in this section, as they are not as direct and transparent as those introduced in the previous section. In these statements, the context in which uncertainty is mentioned and the refusal to admit uncertainty within the government contrasts with recent research that showed that all three of the Scandinavian countries had been transparent in their communication of uncertainty of the Covid-19 pandemic (Ihlen et al., In press). However, that is not to say that Denmark is not transparent at all in this circumstance. It is only that Denmark is not showing the same level of transparency as the two other countries in this particular phase of the pandemic.

COMMUNICATING INTERNATIONAL UNCERTAINTY

Following the continuum of the level of uncertainty expressed in the statements presented, this next section will discuss the occasions where uncertainty was associated with the international context. Surprisingly, if uncertainty was not directly or explicitly mentioned by non-politician spokespeople, it was in quite a few instances referenced by politicians from the different Foreign Departments. These representatives from the Foreign Departments talked about uncertainty on a global scale, or in relation to international or national travelling.

The first quote here is taken from the last of Denmark's sampled press conferences, and directly mentions uncertainty twice in relation to the travel restrictions that have been implemented. It was a representative from the Danish Foreign Department that informed the Danish public that the country was experiencing two different responses to the re-opening of the country at this time. One of the Danes' reactions was to continue with the restrictions, and the other to open up the country so that people would again be able to leave their homes and local area.

> You also just have to say that when they go in both directions, they reflect exactly the uncertainty that there is. There is still infection out in the world, we would very, very much like to prevent it from getting to Denmark. There is considerable uncertainty about how, if you wanted to travel, you could travel around at all.
>
> (Unknown, the Danish Foreign Department, 12.05.2020)

In this sense, the fundamental question surrounding uncertainty here lies in whether it is safe to re-open travel routes. The Danish Foreign Department implies that the different reaction they have gotten in terms of re-opening the country, mirrors the level of uncertainty in the population. In addition, they highlight that Covid-19 is still spreading at an alarming rate across the world, even though Denmark has achieved some level of control over the spread of the virus domestically. The question was then whether or not Danes should travel, and through this press conference the answer was very clearly stated as no. This is due to the uncertainty and lack of knowledge surrounding how to travel safely without importing untraceable Covid-19 cases to Denmark (Markon et al., 2013).

The second and third quote presented below are from Sweden's last sampled press conference. During this press conference, the Swedish Foreign Minister, Ann Linde, mentioned uncertainty at two different points. Both references to uncertainty were in relation to international travel. They reflected the fact that even though there are reliefs when it comes to the restrictions, the virus is still encompassed by international uncertainty and insecurity; and secondly, that the restrictions will continue until the middle of July 2020 due to the international health situation and the spread of the virus. In this sense, the Foreign Minister is not directly admitting to the government's uncertainty. Rather, she is admitting that uncertainty exists on an international level. Rather, she is admitting that uncertainty exists on an international level surrounding the virus, and by extension that the governments around the world do not know, for certain, anything about the future development of the virus, and how the next few months will look (van der Bles et al., 2020).

> The decision is valid until and including July 15, 2020, due to the continued uncertainty that prevails in international travel and due to the spread of the new coronavirus and the consequences that the spread has on the outside world.
>
> (The Swedish Foreign Minister, Ann Linde, 13.05.2020)

When looking at the next quote, taken from the same press conference as the one presented above, it is clear that when Linde talks about uncertainty, she mentions it exclusively in connection with international challenges - in this case, challenges regarding how to travel freely and safely, and the possibility of the virus limiting or completely preventing international travel.

> The disruption of international passenger traffic in the extensive uncertainty is
> still great and it is not possible at the present to predict when it will be possible
> to travel safely and freely.
>
> (The Swedish Foreign Minister, Ann Linde, Linde, 13.05.2020)

Linde's language here reveals both a lack of knowledge (Markon et al., 2013), as well as uncertainty about the future (van der Bles et al., 2020).

To summarise, both of the Swedish quotes focused more on the international uncertainty regarding the virus and its consequences, rather than admitting directly to the Swedish government's own uncertainty. However, the last quote from Sweden is an exception to this, as the Foreign Minister indirectly admits to epistemic uncertainty about future travel restrictions (van der Bles et al., 2020).

As stated in the introduction of this subchapter, these quotations belong in this section as they are centred around the specific area of international uncertainty, and uncertainty encompassing travelling. I argue that the quote by the Danish representative from the Danish Foreign Department belongs at the beginning of this section, reflecting a higher degree of relevance to the thesis, as while it is a statement made by the Foreign Department, it also addresses uncertainty within Denmark's borders. It also acknowledges that the people of Denmark are divided, which reflects the uncertainty surrounding Covid-19, the future, and the other consequences of the pandemic (van der Bles et al., 2020). By contrast, the two Swedish quotes presented simply reflect uncertainty surrounding travel, on both a national and international level. Whilst these are still important aspects of the communication from the government, they do not reflect the government's own uncertainty. Nor do they reference uncertainty amongst the Swedish population, as they discuss exclusively the international uncertainty and a lack of knowledge surrounding travelling freely (Markon et al., 2013).

To review the comparisons made in this sub-chapter, there is a high degree of variance between countries in terms of how they contextualised uncertainty, and the extent to which they made direct reference to the concept.

If the countries had chosen a more similar level of openness, and thereby transparency, about uncertainty (Ihlen et al., In press), the distribution of the quotes across the three sections would most likely have been more even. However, in reality, all of Norway's statements

were presented at the top of the sections discussing 'transparent use of uncertainty' and 'concealed uses of uncertainty'. This means that Norway on a higher level were open and transparent about their uncertainty in their communication - an approach that is essential if the public are to follow the guidelines and be active participants in gaining control of the crisis situation (Markon et al., 2013).

Regarding Denmark, the country had two out of its three statements placed in the middle of the section on 'concealed uses of uncertainty', whilst one was placed first in the final section on 'communicating international uncertainty'. This is due to the conditioning of the Danish authorities uncertainty, whilst still making references to the concept to highlight that there is indeed uncertainty amongst the public. There may be many reasons for why they have opted to communicate this way, but one is the possibility of decreased trust in the authorities from the public when communicating uncertainty (Bakker et al., 2019).

Finally, Sweden had two of their statements placed in the final section, as these statements focused solely on uncertainty on an international level. The statement from the final press conference, however, was placed in the first section as it mentioned uncertainty in the context of the Prime Minister admitting to being uncertain, and thereby showing transparency about the concept.

However, as can clearly be seen in this sub-chapter, the level of openness about uncertainty varies between the three Scandinavian countries when it comes to communicating uncertainty about the Covid-19 pandemic. Overall, this is consistent with the research about the Scandinavian publics' perception of the way the governments communicated uncertainty during Covid-19 (Ihlen et al., In press).

4.3 INDIRECT WAYS OF COMMUNICATING UNCERTAINTY

As previously mentioned, the Norwegian Covid-19 commission praised the Norwegian authorities for their openness and transparency when it came to their communication of uncertainty (NOU, 2021:6; NOU, 2022:5). Therefore, looking for topics relating to uncertainty in the country's press conferences is a highly relevant undertaking. However, what I found when looking for uncertainty by using explicit references to the concept, was that it was not as prominent as I first expected. Therefore, looking deeper into the meaning of uncertainty though using the idea that the authorities in the three countries might have indirectly referred to uncertainty seems a good place to start.

By the phrase "indirect ways of communicating uncertainty", I refer to the instances where the government communicates its uncertainty in a more subdued or opaque way, compared to direct ways of communicating uncertainty. By subdued or opaque, I mean occasions where uncertainty can only be detected when the language used in the press conferences is analysed in more depth, rather than taken at face value. Therefore, I will examine the language that spokespeople prefer to employ during the press conferences, when they are not certain about the knowledge available, or the development of the virus (Markon et al., 2013).

In chapter two, I introduce different dimensions that had earlier been presented in Brashers (2001) definitions of uncertainty. Six of these dimensions – namely complexity, insecurity concerning the knowledge, unavailable or inconsistent knowledge, ambiguity, unpredictability, future outcomes, and available predictions – will now be used as a way to categorise the empirical material, and thereby provide a reliable structure for this following part of the analysis. However, that is not to say, that some of the empirical material cannot be connected to more than one dimension. When this occurs, I will explain why the material is categorised under one particular dimension and not another.

In contrast to the empirical material presented in the sections concerning ways of directly communicating uncertainty, the indirect ways of communicating uncertainty are more frequently referenced in the empirical material, and therefore encompasses significantly more statements and extracts from the press conferences. As such, I do acknowledge that there might be more references made to indirect uncertainty in the material, than the ones that I have identified when coding.

4.3.1 COMPLEXITY

The complexity of a situation is an important dimension of uncertainty, due to the knowledge that might be necessary to fully grasp what the uncertainty or situation is actually about (Brashers, 2001). This again can be connected to researchers arguing that sharing the full extent of their uncertainty to the public is necessarily optimal, as the situation might be too complex and the general public may not have the necessary knowledge to fully comprehend it (Folker & Sandoe, 2008). The complexity of a situation can also arise from those talking

about the situation being indirect or vague when it comes to their willingness to share the information. Alternatively, authorities may be reluctant to share the knowledge because they do not yet have the necessary information (Brashers, 2001). As such, there are many different factors within the dimension of complexity, and connections that can be made to much of the empirical material. However, in this thesis the main focus of the dimension of complexity is to look at the difficulty of understanding the topic the spokesperson is trying to share. Again, this emphasises the importance of having a trusted spokesperson (Clarke & McComas 2012). If the public does not trust the person communicating information they cannot fully grasp, how can they then trust the information given to them by this person? (Liu et al., 2016).

It should not come as a surprise that many countries debated whether or not the pandemic would impact national economies. The Scandinavian countries are all welfare states with a stable economy that, in situations like these, can support the public during a time of crisis. However, when a country is shut down to the extent and length of time as occurred in response to the pandemic, the national economy is inevitably eventually affected. In addition, the complexity of ensuring how the economy can continue to be stable after, or even during, the pandemic can cause uncertainty on many fronts (Brashers, 2001).

It is unlikely that the public will fail to anticipate the social and economic restrictions having an impact on the national economy. Therefore, it is not surprising that the governments show transparency (Ihlen et al., In press) when talking about the country's economy in this crisis situation; the public is likely to have questions about the topic because it is a complex issue in a complex set of circumstances (Brashers, 2001). What is surprising, however, is that out of the three countries analysed in this thesis, only Denmark seemed to be transparent within this area of uncertainty. This finding is discussed in more detail below.

The Danish Prime Minister argued along the line of a complex and difficult situation when talking about the restrictions implemented in Denmark. She explained that the government is limiting activities which take place outside one's own home, but that the government is doing so without putting the country in a state of crisis. The reasoning behind the limitations put on the society is that they do not want Denmark to end up in an economic crisis and closing down everything would most likely do just that if it was to stay closed for a longer period of time.

We must minimise the activity as much as possible. But without putting

Denmark completely at a standstill. We should not plunge Denmark into an

economic crisis.

(The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

Here, Frederiksen indirectly talks about uncertainty surrounding the economy of Denmark if

the country were to close down completely for an extended period in response to the virus.

On this point, Frederiksen is being fairly transparent as to a possible consequence of the

restrictions this means the same as consequence. However, this decision involves risk

concerning the economy and as such is something that the public arguably has a right to

know about (Seeger, 2006). There is also an indirect reference to a certain "balance point" in

the statement presented above, as well as in the statement presented below. The Danish

authorities are minimising the activity as much as possible – in order to gain control of the

spread of the virus – but they are not closing down fully due to the anticipated economic

consequences. This brings complex questions to the surface, such as how the government can

know where this important balance point lies.

In the same way, we must do what we can to ensure that the economy does not

come to a complete standstill. And we must reduce the consequences – both for

Danish employees and for Danish companies.

(The Prime Minister of Denmark, Mette Frederiksen, 23.03.2020)

The uncertainty in the above statements relates to where the balance point is, and if the

authorities do in fact know where this point lies. In the second statement, they give the

impression of knowing, but the lack of transparency as to where this point is seems to imply

otherwise (Markon et al., 2013).

To summarise, when it comes to the topic of the national economy, only Denmark seemed to

address it in a relatively direct, but also complex, way (Brashers, 2001). Denmark did not,

however, say how the pandemic had affected the economy up until the moment of the press

conference, but rather stated very clearly what they would do to avoid putting the economy of

Denmark in jeopardy from that point onwards. As such, I would argue that Denmark was

somewhat transparent regarding the topic of the economy (Ihlen et al., In press), but not to

the extent that there was no complexity present, which contributed to a certain sense of uncertainty (Brashers, 2001).

4.3.2 INSECURITY CONCERNING THE KNOWLEDGE

Knowledge itself has, as discussed in the literature review, proven to be an important factor when it comes to uncertainty (Brashers, 2001; Markon et al., 2013; Seeger, 2006) It therefore makes sense that more than one of the dimensions of uncertainty relates to knowledge. This section of the analysis discusses, on one hand, insecurity about one's own knowledge, i.e. the extent to which an individual trusts the knowledge they already possess; and on the other hand, insecurity concerning the knowledge that is available. Such insecurity can be attributed to a number of reasons, but trust in the source of the information, and the credibility of the aforementioned source, can be important factors here. These factors can also make a significant difference when it comes to the level of uncertainty that is experienced (Brashers, 2001): if the level of insecurity is high, then the level of uncertainty is almo most likely to be high.

Once the virus began to spread among the Scandinavian populations, tracing the individuals who had entered the countries from abroad and contributed to the spread of the virus after their arrival became a rather large challenge for the Scandinavian governments. In some instances, they failed in their attempts to trace and control the transmission of the virus. This failure in itself indicates that the authorities were insecure about their own knowledge as to how many people had contracted the virus at the time (Markon et al., 2013).

The analysis of the sampled material reveals that Norway's authorities are the only country whose press conferences addressed the rapid spread of the virus, and acknowledged the challenges the government faced in trying to understand and contain infections.

In the very first press conference, the Director General of the Institute of Public Health, Camilla Stoltenberg, addresses the stage of the pandemic which Norway was experiencing at the time. At this point, the authorities hoped that Norway was still in the early stages of the virus' spread – I will come back to the use of hope in a later section - but acknowledged that the proportion of people infected may actually be higher than the authorities were aware of.

And it can be about a lot of people who are infected and who we don't know about.

<div align="right">(The Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, 12.03.2020)</div>

Stoltenberg's statement in the first press conference thereby indicates that tracing the sources of infection and infected individuals was rather challenging for the local authorities. She also admits to uncertainty regarding the actual number of infected people, thus admitting to lack of knowledge (Markon et al., 2013). The fact that an expert is admitting uncertainty about the information she is providing highlights the gravity of the situation, (Rogers et al., 2007).

In the next press conference sampled out as empirical material, the Norwegian Prime Minister also addresses the topic of the unknown number of infected individuals. At this point in the pandemic, the authorities had estimated that before the implementation of the restrictions, one person was spreading the virus to more than two other people. This connects the variable to the dimension of future outcomes and available predictions (Brashers, 2001), as this is a prediction by the health authorities. However, the dimension of insecurity concerning knowledge is more prominent, so the material therefore belongs in this section and it therefore belongs here.

When this press conference was held, on 24 March 2020, Solberg also stated that it was too soon to determine whether or not the restrictions had been successful in reducing the spread of the virus.

Unfortunately, it is not possible today to say how quickly the virus is spreading.

<div align="right">(The Prime Minister of Norway, Erna Solberg, 24.03.2020)</div>

As such, there was a clear lack of knowledge in two respects (Markon et al., 2013): firstly, whether or not the restrictions had been effective or not, and secondly, the rate at which the virus was spreading.

By stating that the government does not know how many individuals had contracted the virus nor how fast the virus was spreading, Solberg is indirectly implying that the government has lost control of the situation. This indicated a high degree of insecurity on the part of the government regarding the knowledge available (Markon et al., 2013). The government is being transparent in the sense that it is open about not knowing at what rate the

virus was spreading, or how many people had contracted it. As I explained earlier, admitting to having lost control can create fear (Goodall et al., 2012; Liu et al., 2016), and uncertain situations combined with fear normally do not make for positive outcomes.

As earlier in this dimension, only Norway's authorities addressed the insecurity of their own knowledge regarding the number of people who had contracted the virus (Brashers, 2001). The government also admitted that it did not have control over the number of infections at the time, which shows a high level of transparency as well as risk-taking, since the government did not know how this information would be received by the public (Driedger et al., 2018).

The above admissions of lack of knowledge regarding the spread of the virus links to the idea that the pandemic's initial stages represented an uncontrollable situation. This idea is also connected to the dimension of insecurity concerning knowledge, as the government admits to not having control of the situation (Markon et al., 2013). It can be argued that this insecurity stems from the epistemic uncertainty (van der Bles et al., 2021) that was ever-present as the pandemic unfolded, reflecting the fact that a crisis is a high uncertainty event (Seeger, 2006). Denmark seems to be the only Scandinavian country who addressed the uncontrollability of the pandemic. However, this was done in an indirect and subtle way. In Denmark's first press conference, who initiated the press conference by expressing the seriousness of the situation at hand by stating that circumstances were changing too quickly for the government to keep pace when it came to the spread of the Covid-19 virus.

Things are already moving fast here at home. Too fast.
(The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

This is very similar to the previous variable where Norway was expressing a similar message. However, Norway explicitly discussed the virus and its transmission in detail. By contrast, Denmark's emphasis here is on the topic of control. This approach to the situation can be interpreted as a way for the Danish authorities to subtly communicate the uncertainty of the situation to the public, without directly using words that indicate the government's own uncertainty. The statement also gives the impression that lack of knowledge plays an important role here (Markon et al., 2013), as the repetition of the statement that "things are moving too fast" indicates that it is a situation where one cannot be certain of the numbers. If the government had possessed greater knowledge of the virus and of how to contain and

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handle the crisis, then the authorities would have had to be more transparent, as they would have had the information to share.

In contrast to the previous quote, in the last Danish press conference from the empirical material, the Prime Minister began by saying that the governments had now controlled the spread of the virus. From this unambiguous statement, it can be deduced that for the last two months, the Danish authorities had control over the transmission of the virus within the country. In other words, the Danish authorities condition the uncertainty that was present within the government.

> In Denmark, we have got the corona infection under control.
> (The Prime Minister of Denmark, Mette Frederiksen, 12.05.2020)

This quote demonstrates how the authorities tended not to admit directly to uncertainty when they, in fact, have been uncertain during the crisis period. It is not until a resolution to the problem in place that they admit to having been uncertain in the past, or to not having had control of the situation. This further implies that there was a degree of insecurity when it came to the knowledge the authorities possessed regarding how to handle a crisis situation like this one (Markon et al., 2013). It also relates to the dimension of unavailable or inconsistent knowledge, as one can question whether or not there was actually any useful information in place when it came to deciding how to control the pandemic (Brashers, 2001).

Throughout this section, looking at the dimension of insecurity regarding knowledge, both Danish and Norwegian governments have indirectly referred to insecurity concerning either their own knowledge, or the knowledge available to them (Brashers, 2001). The governments have done so by addressing facts such as not knowing the total number of infections, nor having control over the rate of transmission. Sweden's government, in contrast to the two other Scandinavian countries, has not addressed any insecurities regarding its own knowledge nor the knowledge available.

Another important dimension to uncertainty is unavailable or inconsistent knowledge (Brashers, 2001). The reasoning behind the importance of this dimension is that a great source of uncertainty is lack of knowledge (Walker et al., 2003; Markon et al., 2013). Furthermore, the absence of knowledge can also contribute to an increased level of uncertainty (Brashers, 2001). Another element of this dimension is the knowledge that something will happen, but not having information regarding when it will happen. This is an example of inconsistent information, which-again can lead to increased uncertainty (Brashers, 2001).

When the governments or their representatives admit to having made hurried decisions regarding a situation, it implies that there was insufficient information available to help the authorities to decide how best to navigate the situation (Markon et al., 2013). In terms of uncertainty, this means that the situation at hand has been affected by uncertainty as to how to act or conduct necessary steps. When a government admits to having made quick decisions, they are being transparent in that they are acknowledging that they have made decisions with insufficient information (Ihlen et al., In press).

The Danish Minister of Justice, Nick Hækkerup, made a similar argument when referring to how Denmark has handled the pandemic. Hækkerup begins by admitting that the pandemic has challenged the way in which the Danish authorities normally make decisions. Here, he is being relatively transparent by implying that the uncertainty of the situation impacted decision-making (Ihlen et al., In press) due to a lack of knowledge when it comes to the virus and how to handle it (Markon et al., 2013).

> The coronavirus crisis has challenged the way we normally do things. We have
> made many quick decisions and we have been forced to think innovatively and
> think across the existing authorities and structures.
>
> (The Danish Minister of Justice, Nick Hækkerup, 12.05.2020)

In addition to admitting to having made quick decisions, Hækkerup is also transparent as to how the authorities have had to act and make decisions. He informs the public that the government has been forced to think in different ways and draw on existing infrastructure in novel ways, as there was no one who could have foreseen the crisis and/or possessed

sufficient knowledge to formulate a plan of action. Therefore, Hækkerup shows openness as well as honesty (Ihlen et al., In press).

All the information contained in the statement presented above indirectly implies that the uncertainty of the pandemic has affected the way the Danish authorities work, without the authorities directly saying so. In addition, Hækkerup indirectly indicated that the government does not have access to the necessary information to solve the crisis in a less intrusive way (Markon et al., 2013). This variable also has elements of the dimension of *insecurity about the knowledge* (Brashers, 2001), because the government did not know if its hasty decision-making would in fact have the desired impact on the spread of the virus.

The remainder of this section considers instances of epistemic uncertainty relating to insecurity or unavailability of knowledge. In this section, epistemic uncertainty relates to all the occasions where statements indirectly reference uncertainty, or refer to the consequences the pandemic has on society, on either a national or international scale.

Both the Norwegian and Danish authorities addressed the uncertainty surrounding the pandemic, however they both did so rather indirectly. Firstly, Norway admits to not knowing the full scale of the consequences - both national and international - of the virus (Markon et al., 2013). This emphasises the dimension of unavailable or inconsistent information (Brashers, 2001), as the government admits to a lack of knowledge when it comes to the impact of the virus (Markon et al., 2013). However, Solberg does condition her uncertainty by affirming that the government does know the whole world has been affected by the virus. -

> We still don't know the full extent of the pandemic's global reach and
> consequences, but what we do know is that the whole world is more or less
> affected.
>
> (The Prime Minister of Norway, Erna Solberg, 24.04.2020)

This statement demonstrates that not only is there an element of uncertainty within the Norwegian government, but that there is a sense of uncertainty worldwide regarding the virus and the consequences it might have on all sectors. In addition, by conditioning the uncertainty by stating what the government does in fact know, Solberg also includes elements of the dimension of *complexity* (Brashers, 2001). This is because conditioning the uncertainty is a very complicated and hard to find factor, unless one knows where to look for it. Which I have

earlier stated, some scholars believe that the general public would not be able to grasp (Markon et al., 2013).

On the other hand, the Danish Prime Minister addresses the uncertainty concerning the pandemic.

> Normally, a government would not go out with such intrusive messages
> without having the solutions ready for all concerned. But we are standing in an
> extraordinary situation.
>
> (The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

Frederiksen hereby demonstrates uncertainty surrounding the pandemic quite clearly, albeit indirectly. She implies that if it had not been for the lack of knowledge and the uncertainty of the situation, the Danish government would have had a solution ready (Markon et al., 2013). I therefore argue that this is a good example of indirectly admitting to a government's uncertainty during a crisis situation.

Frederiksen rounds off the same press conference by highlighting that the pandemic situation in which Denmark finds itself is wholly unfamiliar and that no one has experienced this before. This indicates that there is an absence of knowledge as to how to handle the situation, as there is no planned strategy for it (Markon et al., 2013).

> We stand on untrodden land. We're in a situation unlike anything we've tried
> before. Are we going to make mistakes? Yes. Am I going to make mistakes?
> Yes.
>
> (The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

When Frederiksen acknowledges the likelihood that she and the government will make mistakes, she indirectly, but clearly, admits to uncertainty (Markon and Lemyre, 2013). While the references to uncertainty may be indirect, the Danish authorities have clearly chosen to be transparent when it comes to their uncertainty in this situation. Some may argue that the above statement from the Danish Prime Minister is an obvious reference to uncertainty, given the way in which she affirms that mistakes will definitely be made due to the unknown-ness of the situation. However, I argue that her statement is in fact an indirect way of communicating the uncertainty, as the admission is embedded in a conditioned

sentence, which is far less fear-provoking than saying outright that the government does not understand the situation and in reality does not know how to respond (Liu et al., 2016).

As regards the knowledge dimension of uncertainty, Denmark and Norway have consistently, although to differing extents, admitted to inconsistent or unavailable knowledge having an impact on decision making and the consequences of such decisions. However, at least in the knowledge dimension, Denmark has clearly been the more transparent and honest party, as the government admitted that it is doing something no other Danish government has had to do, and acknowledged that it will make mistakes. Norway, on the other hand, was transparent insofar as the government admitted that they lacked knowledge regarding certain aspects of the pandemic, but also conditions its uncertainty by insinuating that many other countries around the world were just as uncertain, and were experiencing similar challenges as a result of the pandemic.

4.3.4 AMBIGUITY

The dimension of ambiguity in the form of the communicator being doubtful or vague is an important dimension (Brashers, 2001) of uncertainty, as it brings attention to how those in power can be indirect when communicating their uncertainty and can cover it up through vagueness. However, as stated in the chapter on theory, ambiguity is also considered to be its own form of uncertainty (Brughnach et al., 2008). This type of uncertainty which Brughnach and his colleagues discuss means that uncertainty is present when there is more than one possible way of interpreting a situation. Moreover, ambiguity as a type of uncertainty can also be understood to be a clear distinction between perspectives or opinions on the significance of an issue (Brugnach et al., 2008). I have chosen to incorporate Brughnach's definition of ambiguity into the wider dimension of ambiguity in order to better analyse the sampled material. Brughnach and colleagues' form of uncertainty is too limited to be applied to the full empirical material, where epistemic uncertainty can be applied to almost all of it (van der Bles et al., 2020). It is thereby more fruitful to incorporate elements from the form of uncertainty into the dimension of ambiguity.

Therefore, I argue that the expressions of ambiguity which are presented in this section portray the uncertainty of the communicator and the government he or she represents in a somewhat ambiguous way (Brashers, 2001). However, these instances also link to the

dimension of unavailable or inconstant knowledge, as well as aspects from the dimension of insecurity concerning the knowledge (Brashers, 2001). This is due to the role knowledge plays when talking about ambiguity in this context. It is also the reason why the analysis of the dimension of ambiguity directly follows the discussion of the dimensions relating to insecurity and lack of knowledge.

The main ambiguity present in the empirical evidence relates to the duality of hope and doubt when authorities are discussing the virus and how they anticipate the virus will develop, or how they anticipate that restrictions will improve the situation. Denmark and Norway both used this type of direct expression to indirectly admit to uncertainty concerning the virus. Sweden, on the other hand, mentioned hope, but more in reference to how the government hoped their population would act and understand the reasons behind the government's decisions. I reckon this is not very important for the context of the analysis, but still necessary to address here.

References to hope were relatively frequent throughout the empirical material and came from a number of different press conferences. However, Denmark only mentioned hope in this context once, whereas Norway was very transparent in this matter, and made references to hope a total of eight times in two different press conferences.

The first time Norway referred to hope was in their first press conference where the government informed the public that it would implement restrictions that would have a significant effect on people's everyday lives.

> The drastic measures we are now implementing are taken in the hope of
> stopping the virus.
> > (The Prime Minister of Norway, Erna Solberg, 12.03.2020)

If one takes pause to consider what Solberg is actually saying, it is clear to see that the Norwegian authorities actually have no idea if the restrictions will work or not. The authorities are being vague in this respect (Brashers, 2001). As earlier discussed, this vagueness is arguably due to a lack of knowledge, both nationally and globally, as to how to handle the virus (Markon et al., 2013). Therefore, it can be argued that there is a level of ambiguity present throughout the whole situation (Brashers, 2001).

In the following press conference from Norway, the Prime Minister again refers to hope. She does so by admitting that the restrictions implemented March 12th, 2020, were done in the hope of stopping the virus. This serves to confirm my interpretation of the previous quote, and the claim that there was a lack of knowledge as to how to handle the spread of the virus. Moreover, Solberg's words indicate vagueness regarding what the government actually believed the outcome of the restrictions would be, which again can indicate that there was a level of doubt as to whether or not the restrictions would actually have the desired effect.

> We did so in the hope of stopping the virus. [...] First, the calculations show
> that it was appropriate to implement the measures.
>
>   (The Prime Minister of Norway, Erna Solberg, 24.03.2020)

However, it is interesting to note that the Norwegian government shows transparency by referring to hope frequently, and particularly by saying that they hope that they are acting in the right way. One can argue that this level of transparency is due to the high level of trust which the Norwegian public has in their government (Ihlen et al., In press), but it can also be argued that the government felt safe to make such statements because of the positive feedback their predictions had given them regarding the impacts of the restrictions. As it turned out, the changes in transmission rates of the virus showed that the authorities had made the right decision by implementing the restrictions.

When it comes to Denmark, the reference to hope was made in the context of the lack of necessary medical equipment that was a global and significant problem during the initial phase of the pandemic (Bryce et al., 2020). Denmark was quite transparent when it came to talking openly about the challenges they faced with this deficiency of vital equipment:

> And we have a hope that the shortage situation is only short-lived.
>
>   (The Chairman for Danish Regions, Stephanie Lose, 23.03.2020)

Here, Lose acknowledges that there is a deficiency of equipment, but also hopes that it is temporary. This demonstrates that there is uncertainty as to how long the country will need to deal with a lack of equipment (van der Bles et al., 2021), as well as a lack of knowledge as to how to solve the problem (Markon et al., 2013). However, the-ambiguity lies in that there is no information as to how, or when, the situation will be resolved (Brashers, 2001), which

suggests that there is doubt, rather than hope, within the government as to when supplies of medical equipment will be significant.

In other sampled material, the use of 'can' in the context of communicating uncertainty presents a possible outcome of the situation. In relation to the quote presented below, the use of 'can' highlights the implementation of restrictions in Sweden. Clearly, there is uncertainty as to whether or not the assertion regarding the effectiveness of the restrictions is correct, due to the simple fact that if the government were certain that the restrictions would have the intended impacts, the Prime Minister would have used another word than 'can'. This again reflects ambiguity, as it is a vague and complex way of expressing uncertainty to the public (Brashers, 2001).

> Now such a ban can make a difference because the corona infection is
> apparently present in society in Sweden, with this measure and others so we
> can limit the spread.
>
> (The Prime Minister of Sweden, Stefan Löfven, 11.03.2020)

It is important to note that this statement was made in the first of Sweden's press conferences, when arguably the information concerning the virus was very scarce. Therefore, it was arguably reasonable for the Prime Minister to use such a word, as providing incorrect information can have a greater negative impact on public trust in the government, than can have the government communicating their uncertainty directly (Liu et al., 2016).

When it comes to admitting to uncertainty, there are alternative methods to directly referring to the concept of uncertainty itself, or employing the phrase 'I do not know'. This is a way of indirectly admitting to epistemic uncertainty about the future through the dimension of ambiguity (Brashers, 2001). In the references below, by saying 'we think' or another similar expression, the governments communicate that they believe that they are making the right decisions, or that they believe in the possibility of a positive outcome to the situation. However, they provide guarantees, and this is indicated in the vagueness present in the expressions 'think' or 'believe'. Furthermore, the use of these expressions also suggests that there is some level of doubt present in the spokespersons or in the organisations they represent (Brashers, 2001).

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The first example of such masking of uncertainty/ambiguity comes from Denmark, where the authorities expressed that they believed that the restrictions would help to reduce the spread of the virus, so that they could save the health sector from having to stretch their capacity.

> I know it's really hard for a lot of people, but it's crucial and we have a belief
> that it's useful.
>
> (The Prime Minister of Denmark, Mette Frederiksen, 23.03.2020)

However, as mentioned earlier, the Danish authorities could not know that the restrictions would help in containing the spread; therefore, they expressed only a belief that their approach was working, thus showing transparency about the situation. Doing the opposite, and claiming that the restrictions would undoubtedly have the desired outcome without actually knowing this would be the case, would most likely have backfired and had a negative impact on the public trust in the government (Rogers et al., 2007; Quinn et al., 2009).

Secondly, Norway, in one press conference, expressed uncertainty about which stage of the pandemic Norway was actually experiencing at the time. Line Vold from the Norwegian Institute of Public Health indicated this by stating that the authorities thought they were in the second phase of the pandemic (Rogers et al., 2007). However, Vold was vague when it came to the reasons behind this analysis (Brashers, 2001), and she also failed to mention what the following phases of the pandemic would entail.

> We believe that we are still in phase two of the outbreak, meaning a little
> before the start of the main wave of the epidemic and at this stage it is a matter
> of delaying the onset of the epidemic.
>
> (Department Director for infection control and emergency preparedness within
> the Norwegian Institute of Public Health Line Vold, 24.03.2020)

Vold clearly and rather directly expressed that the Institute of Public Health thought Norway was in the second phase of the pandemic, but the very fact she framed this statement as a belief indicates doubt (Brashers, 2001). Vold goes on to imply that higher numbers of positive cases are likely in the near future. However, once again these statements are framed as beliefs, which reflects uncertainty around the behaviour of the virus, and also emphasises the presence of doubt and vagueness in Norway's communication (Brashers, 2001).

Similarly, the Assistant Director of the Norwegian Directorate for Health, Espen Rostrup Nakstad, expressed uncertainty when discussing implementing restrictions and other measures to slow down the spread of the virus as much as possible. Below, Nakstad indirectly expresses uncertainty as to whether this approach will indeed be as effective in Norway as it has been in other countries.

> We have seen that several other countries have succeeded and believe that we too can do it in Norway.
>> (The Assistant Director of the Norwegian Directorate for Health, Espen Rostrup Nakstad, 24.03.2020)

If Nakstad had been sure that the desired outcome was achievable, he would have said that such measures 'will' slow down transmission. This language shows the ambiguity of the situation. However, this ambiguity can once again be traced back to the epistemic uncertainty of the pandemic situation as a whole and how no one knows how it will develop in the future (van der Bles et al., 2020). There are therefore links to several other dimensions, but most of all the dimension of unpredictability (Brashers, 2001).

Another example of expressing uncertainty in a crisis is wishing for an outcome without the necessary knowledge to steer the situation towards that outcome. This is also closely related to the dimension of future outcomes and available predictions, but belongs in this dimension of ambiguity, as it is an expression that reflects the communicator's uncertainty of the crisis through a desire and wish for the situation to change (Brashers, 2001). This is illustrated below in the quotation from the Prime Minister of Sweden in the last of the sampled press conferences.

> I wish I could say today, I wish I could say this is over, we have the crisis behind us.
>> (The Prime Minister of Sweden, Stefan Löfven, 13.05.2020)

If the Swedish authorities had had the necessary information to make the pandemic a thing of the past, they would have already taken the necessary action. Löfven expresses uncertainty surrounding the pandemic in general, as well as indirectly admits to a lack of knowledge of Covid-19 (Markon et al., 2013). Löfven does so through by referencing the frustration that

comes with the desire to do something, but not having the necessary knowledge to achieve the desired goal. In addition, by repeating 'I wish' two times in the same sentence, Löfven also implies that the crisis is far from being over, and that the authorities are also tired of the uncertain situation in which they find themselves. This last point is presented rather vaguely through the repetition of the words, which emphasises the ambiguity within this case.

Finally, when authorities talk about how they will try to change a situation or its outcomes, they are indirectly referring to the uncertainty of actually being able to do so, and the doubt that is present as to how to go about achieving the change. (Brashers, 2001). In the empirical material, Norway was the only country to use this strategy of indirectly addressing its uncertainty. This is illustrated through the use of the word 'try' in the quotation below, from the Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, in the context of presenting the Institute's forecasts regarding infection and hospitalisation rates.

> What is really important in addition to continuing to adjust these figures according to the information we get about what is actually happening, is to postpone and try and stop the infection.
>
> (The Director General of the Norwegian Institute of Public Health, Camilla Stoltenberg, 12.03.2020)

Stoltenberg has presented numbers which demonstrate that there is a dire need for the Norwegian government to halt or at least reduce infections. The fact that Stoltenberg says the government will *try* to do so indicates that the authorities do not know how to stop or slow down transmission. (Markon et al., 2013). This lack of knowledge is presented vaguely since there is no admission to lacking the required knowledge (Brashers, 2001). There is also an element of not knowing how to control the spread of the virus present in the statement. This further demonstrates that there is a clear lack of knowledge as to how to act and react to the virus (Markon et al., 2013).

To summarise, this dimension has demonstrated that representatives from all three of the Scandinavian countries referred to uncertainty through the dimension of ambiguity (Brashers, 2001). They have done so by choosing vague, and at times, doubt-infused language that reflects the uncertainty of the crisis they found themselves in.

Arguably, the Covid-19 pandemic was marked by unpredictability from its very earliest stages - indeed, even prior to the point at which the situation was designated a pandemic (Brashers, 2001). The virus has evolved and mutated in ways that the general public could not predict (Lewis et al., 2021) and it was unimaginable that the world's population would have their day-to-day lives impacted to the extent that occurred. The unlimited ways in which the future might play out can arguably create a strong sense of uncertainty amongst both those in power and amongst the general public (Bradac, 2001), at least when one is presented with a crisis as serious as a pandemic. Unpredictability, alongside complexity and ambiguity, can affect how one interprets a situation (Brashers, 2001). Multiple ways of interpreting situations can lead to contradicting opinions, which again is a source of uncertainty (Folker & Sandoe 2008).

Throughout the whole pandemic there has been constant worry and uncertainty as to possible mutations of the virus and how the pandemic would ultimately progress (Lewis et al., 2021). Information that would have helped to resolve these questions has also been unavailable on a global scale, as no country had had experience of handling such a highly transmissible and difficult to trace disease on such a large scale. The dimension of unpredictability (Brashers, 2001) provides a number of insights into how each country decided to move forwards with very little available information.

Whilst Denmark expressed uncertainty through indirect use of words four times, Norway only did so once throughout the empirical material.

Firstly, in the quotation below Denmark's second sampled press conference, the Prime Minister talks about how Statens Serum Institut (SSI) are evaluating the effect of implementing restrictions as a way of reducing or containing the spread of the virus. The capacity of the Danish hospitals is also brought up here. The government admits that the strain on the health sector has been challenging, and that the restrictions would hopefully provide some relief.

> Statens Seruminstitut assesses that the measures may have an effect on the spread of infection and thus on the strain on the hospitals, if all the initiatives continue.
>
> (The Prime Minister of Denmark, Mette Frederiksen, 23.03.2020)

Frederiksen here admits to the government's uncertainty of the outcome, even as they implement the restrictions (Liu et al., 2016). Furthermore, while she confirms that limiting the public's ability to socialise has had a positive impact on the spread, she only indicates that continued compliance with the restrictions *may* have a positive effect on medical care capacity.

In the first of Denmark's press conferences, a similar statement was made, but it was more obvious that the government lacked knowledge about the future development of the virus (van der Bles et al., 2021). Therefore, if we link these aspects of Denmark's communication to the dimensions of uncertainty, it is clear that they are most closely connected to the dimension of future outcomes and available predictions (Brashers, 2001).

> We'd better act today than regret tomorrow.
> (The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

The above assertion by the Danish Prime Minister is a rather vague way of saying that the government has little knowledge as to what is happening (Brashers, 2001; Markon et al., 2013), thus admitting that the situation is plagued by unpredictability (Brashers, 2001). The underlying message here that the government prefers excessive caution to uncontrolled and untraceable transmission implies that there is insecurity about the available knowledge - as the government could not say how the pandemic would develop (Lewis et al., 2021) - and also confirms the place of this statement within the dimension of unpredictability.

Similarly, the Norwegian Institute of Public Health argued along the same lines in the quotation below. Its representative, Line Vold, explained the models they had developed in an attempt to foresee the future development and spread of the virus. These models connect the variable to the dimension of future outcomes and available predictions, as the Institute of Public Health is attempting to grasp what will happen in the near future in relation to the virus (van der Bles et al., 2020).

> And it is important to emphasise that no model will be able to accurately predict the development of the epidemic, but it is the best tool we have as of now.
> (Department Director for infection control and emergency preparedness within the Norwegian Institute of Public Health, Line Vold, 24.03.2020)

Here, Vold is being transparent as to the fact that the organisation she represents does not hold all the answers, but that it is doing its very best to make predictions about the future. Through this statement, she admits to there being epistemic uncertainty about the future (van der Bles et al., 2020), and this uncertainty is indeed the reason for which such modelling is necessary: it is a way of preparing, at least to some extent, for what may happen and it also informs which actions should be taken to counteract the possible transmission rates indicated by the modelling. Nonetheless, the fact remains that the authorities transparently admit that there is room for error in this model, meaning that the pandemic entails a great deal of unpredictability (Brashers, 2001).

It is important to note that the statement is also closely connected to the dimension of unavailable or inconsistent knowledge, as necessary information about the virus was unavailable in the beginning of the pandemic (Brashers, 2001). The reason for why this variable has been placed within the dimension of unpredictability, and not the dimension of unavailable or inconsistent knowledge, is because while the lack of necessary knowledge is the root of the unpredictability, it is still a variable that is highly influences by the unpredictable nature of how a viral disease evolves and progresses in its transmission (Brashers, 2001).

At times, the governments' representatives have asked for patience from their respective publics in regards to how the pandemic has, and will, unfold. This appeal for patience is for a number of reasons. First and foremost, it is because the virus has had an unpredictable nature (Brashers, 2001), whereby no one has been able to foresee the future outcomes of the pandemic situation (Lewis et al., 2021). Secondly, it is because there is a lack of knowledge surrounding the virus (Markon et al., 2013), which has caused the governments to act hastily, without knowing what impact, if any, their actions will have on the future outcome.

Interestingly, it was only Denmark that asked this of the Danish population. However, it was brough up two times in two different press conferences. Implying that the Danish government very much desired the public understanding of the situation, and the uncertainty that comes along with it. In addition to implying that they – the government – do not have all the answers to the questions yet (Markon et al., 2013). Connecting the topic to the dimension of unavailable or inconsistent knowledge, as well as the dimension of future outcomes and available predictions (Brashers, 2001). However, I would argue that the element of unpredictability outweighs the elements of the other dimensions (Brashers, 2001).

The following quotation illustrates how uncertainty is buried within the need for patience.

> I'm going to need your patience. We can't answer every question right now. But on several as fast as it can be done.
>
> (The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

The Danish Prime Minister here is asking for patience because of the epistemic uncertainty about the future (van der Bles et al., 2013), when Frederiksen states that they cannot answer the public questions at that time. This stems from a lack of knowledge (Markon et al., 2013), as to how the pandemic will develop. In addition, the unpredictability that was inherent to any set of circumstances in which Covid-19 was a factor (Brashers, 2001).

As part of the dimension of uncertainty, I have also looked at times when governments have warned the public that despite all the limitations to people's lives, the pandemic might continue to affect their lives. I argue that this warning is rooted in the sense that the pandemic has proven to have an unpredictable nature, where it has been difficult to see a timeline for when it would end, as well as how it would evolve prior to coming to an end (van der Bles er al., 2020; Lewis et al., 2021).

Norway and Denmark both issued this kind of warning to their respective publics. However, Norway did so in a direct manner, by stating that there were margins for error in terms of the impact of the restrictions. By contrast, Denmark did so rather indirectly. The following quotation is from the Norwegian government.

> At the same time, we must also prepare for the fact that it may not succeed.
>
> (The Prime Minister of Norway, Erna Solberg, 24.03.2020)

Here, Solberg is explicitly informing the public that the restrictions may not be effective. She is thus also asking the people for patience regarding solving the riddle of how to handle the pandemic. Moreover, the Norwegian Prime Minister also indirectly admits to uncertainty when she is transparent about the unknown outcome of the restrictions (Ihlen er al., 2021). By stating that the measures they have taken to stop or contain the spread of the virus might not succeed, she admits to a lack of knowledge as to how to act regarding the virus (Markon et al., 2013). By doing so, Solberg also draws in elements of the dimension of unavailable or

inconsistent knowledge (Brashers, 2001). Therefore, in this instance Solberg communicates the government's uncertainty indirectly to the people, but it is relatively clear to those who know where to look for it.

In Norway's last sampled press conference Solberg also warns the public about the epistemic uncertainty about the future (van der Bles et al., 2020).

> The fact that we have low numbers now is no guarantee that the infection rates
> will remain low in the period ahead.
>
> (The Prime Minister of Norway, Erna Solberg, 24.04.2020)

Here, Solberg says that the infection rates may not remain constant, again bringing attention to the unpredictability of the crisis (Brashers, 2001). Similarly, there is once again an element of the epistemic uncertainty about the future (van der Bles et al., 2020), as Solberg admits to the government not having the knowledge of how to keep infection rates low (Markon et al., 2013). This admission draws in the dimension of unavailable or inconsistent information (Brashers, 2001). Together, these admissions of uncertainty can be linked to many different aspects of the pandemic. However, one key aspect is the fact that while the virus was expected to mutate, it was not possible to foresee the ways in which it would mutate. Furthermore, following a mutation, the knowledge and experience gained from the earlier variant was no longer necessarily applicable to the new variant, making the pandemic therefore a highly unpredictable event (Seeger, 2006).

To summarise, when it comes to being transparent and open about the unpredictability of the Covid-19 crisis, the Danish authorities have been relatively transparent about the situation throughout their communication of uncertainty. Norway also frequently referred to the unpredictable nature of the pandemic in their communication with the public (Ihlen et al., In press). I would argue that the most noticeable difference between the two countries is that Denmark had a tendency to be more vague (Brashers, 2001), and more indirect in their communication, whilst Norway was more open and direct as to how unpredictable the virus was and how it might affect the Norwegian public. Sweden, on the other hand, made no references to the unpredictability that warranted discussion in this section of the analysis. Sweden did, however, make references to uncertainty that involved the dimension of unpredictability (Brashers, 2001), but these are more closely connected to alternative dimensions of uncertainty.

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4.3.6 FUTURE OUTCOMES AND AVAILABLE PREDICTIONS

This analysis will round off by presenting the empirical material that belongs to the dimension of future outcomes and available predictions (Brashers, 2001). The reason for why this is the last dimension to be discussed is because all of the previous dimensions contain elements that belong to this last category. This can arguably be because epistemic uncertainty about the future is inherent to the pandemic (van der Bles et al., 2020). Nonetheless, some of the empirical material is more relevant to this dimension, than to others, although there are certainly connections to other dimensions too.

Considering the present dimension in more detail, it is indisputable that the Covid-19 pandemic caused uncertainty about the future. Both the near future and the distant future were questioned (van der Bles et al., 2020). There was no knowledge of how long the pandemic situation would last, of the implications it would have on national and global economies, nor of how many lives the virus would take (Markon et al., 2013). There was also a time when uncertainty surrounding the creation of a vaccine dominated the public sphere. In this way, uncertainty, or more accurately epistemic uncertainty about the future has been a prominent feature of the pandemic throughout the pandemic (van der Bles et al., 2020). This is even more so the case during the initial phase. The empirical material shows that indirect references to epistemic uncertainty about the future were made nine times. I have sampled out the most relevant examples of epistemic uncertainty about the future from each of the countries, in order to exemplify the similar pattern of indirectly talking about the subject.

Firstly, Sweden expressed its uncertainty fairly indirectly in their statements on the subject. The country indicates that some level of uncertainty exists, but this uncertainty is conditioned (Ihlen et al., In press) - similarly to what Denmark and Norway also have done at times throughout their communication about Covid-19. Sweden's Prime Minister conditions his uncertainty in the reference below by stating that he knew the pandemic was to last for a longer period of time, although he fails to actually define this length of time.

Be prepared for this to last for a long time. Be ready for the fact that the situation can change quickly. But you should also know that we as a society are facing this crisis with all our combined strength.

Here, Löfven's admission that "the situation can change quickly" indicates epistemic uncertainty about the near future (van der Bles et al., 2020). However, such uncertainty is also conditioned by expressing that the government is indeed aware that circumstances could change in the blink of an eye, although the government cannot say exactly how. Therefore, the dimension of unpredictability is also present (Brashers, 2001), as well as elements of ambiguity, due to how vague Löfven is in his communication (Brashers, 2001).

Secondly, Norway, in contrast to Sweden, was more transparent in their communication of the future uncertainty. The following statement made by the Norwegian Prime Minister could almost be argued to be a direct reference to uncertainty. However, I argue that there is still some level of indirectness in the communication, due to the way the sentence is structured.

A lot is going to be different, maybe for a long time to come.
(The Prime Minister of Norway, Erna Solberg, 24.04.2020)

Solberg shows transparency here by stating clearly and honestly that much will be different in the upcoming period. In the second part of the sentence, she indicates that this may be the case for a long period of time. I would argue that herein lies the indirect communication of the epistemic uncertainty of the future, since by using the word 'perhaps', Solberg admits that this is something about which the government does not have knowledge (Markon et al., 2013). So, by saying that the virus will perhaps cause the day-to-day life of Norwegians to be different for an unknown period of time, Solberg is admitting to an uncertainty of the future on the part of the authorities (van der Bles et al., 2020), as well as connecting it to the dimension of unpredictability (Brashers, 2001).

Similarly to Norway and Sweden, Denmark has also made statements that refer to the epistemic uncertainty about the future (van der Bles et al., 2020). The level of indirectness in Denmark's communication between that of the two other countries: it is not as vague as Sweden, yet not as clear as Norway, in terms of uncertainty communication.

In the statement below, Denmark is talking about the lack of necessary equipment for those on the frontline of the pandemic – such as first responders - as well as those working within the health sector. There was a time in the initial stage of the pandemic where there was a global shortage of this sort of equipment (Brown, 2021). Here, the chairman for Danish

Regions (Danske Regioner), Stephanie Lose – whose responsibilities include defending the healthcare infrastructure of the regional governments - affirms that the authorities are working hard to ensure that the lack of necessary equipment is only temporary.

> We're working intensely to make sure that's how it's going to be. But it's too
> early to say for sure.
>> (The Chairman for Danish Regions, Stephanie Lose, 23.03.2020)

However, in the second part of the quotation, Lose continues on to say that it is too soon to say if the shortage will lessen. Thereby, she admits that there is uncertainty on two points: firstly, where the authorities will secure the necessary equipment for the health sector etc, and secondly, when Lose admits to epistemic uncertainty of the future. In the sense that she is being transparent about not knowing when Denmark will receive the vital equipment to ensure the front liners and health sectors safety.

Similarly, The Danish Prime Minister also referred to uncertainty in a short statement in one press conference.

> We're in something that we haven't tried before.
>> (The Prime Minister of Denmark, Mette Frederiksen, 23.03.2020)

Frederiksen here says that Denmark now stands in a wholly unfamiliar situation. Through this statement, she indirectly implies that there is uncertainty about the future (van der Bles et al., 2020), since no country has experienced such circumstances before. Therefore, it is evidently a situation to which uncertainty about future outcomes and available predictions is inherent (Brashers, 2001).

Further examples of uncertainty regarding future outcomes and available predictions can be found in the warnings issued by Norway and Denmark regarding the hoarding of food and other necessities. This happened two times in Norway in the same press conference, and one time in Denmark. As can be seen in the examples presented below, the Prime Minister of each of the countries made it very clear that hoarding and panic-buying was not necessary.

…but it is incredibly important that we now make sure that we do not start hoarding. The stores are going to be open. We have good access to food. We have good access to different things.

(The Prime Minister of Norway, Erna Solberg, 12.03.2020)

And here I want to emphasise: We are not in a food crisis. There is no need to hoard rye bread and toilet paper.

(The Prime Minister of Denmark, Mette Frederiksen, 11.03.2020)

Although these references do not express-uncertainty on the part of the government, it can be argued that they mirror the public's uncertainty, when it comes to epistemic uncertainty about the near future (van der Bles et al., 2013); people were concerned about the future security of supplies of food and other necessities. Such hoarding, as occurred in Norway and Denmark at the beginning of the pandemic, can also be linked to fear. This is because fear impacts human behaviour (Liu et al., 2016). In addition, new or unfamiliar information can also lead to uncertainty, which again can lead to increased fear (Goodall et al., 2012), as was arguably the situation during the initial phase of the pandemic, when very little was known about the virus and about the consequences it would have on society (Markon et al., 2013).

Furthermore, references to epistemic uncertainty about the future (van der Bles et al., 2020), have been made in the context of the restrictions that were implemented in each country. Throughout the empirical material, there were a number of indirect references to the restrictions and the uncertainty that surrounded them..

I have earlier mentioned that Sweden has been referred to as a country that omitted uncertainty from their communication (Hanson et al., 2021). However, as a result of my own analysis of statements made by the Swedish authorities, I would argue that Sweden has not omitted uncertainty. Rather, the country has simply hidden it within longer sentences dealing with a variety of topics.

The reference below provides a good example. Löfven is informing the public that the restrictions the Swedish authorities have implemented might change quickly, without prior warning, and that this will most likely not have a positive impact on the everyday life of Swedes.

> I want you to be prepared for the fact that more intervening decisions may
> come, sometimes at short notice, sometimes that interfere with everyday life
> even more.
>
> (Prime Minister of Sweden, Stefan Löfven, 22.03.2020)

The Swedish Prime Minister is here preparing the public for changes that might come. The use of *'may'* indicates that the Swedish authorities lack knowledge of what the next phase of the virus will bring (Markon et al., 2013), which connects the statement to the dimension of unavailable or inconsistent knowledge. In the next section of the statement, Löfven claims that the changes at times can come with short notice. This relates to future outcomes and available predictions (Brashers, 2001), as the development of the virus is wholly unknown, and can bring about changes in circumstances rather quickly. This admission also relates to the dimension of unpredictability (Brashers, 2001).

Similarly, in Denmark, the Prime Minister informed the public that the authorities were implementing changes to operations in significant sectors of the society's infrastructure.. However, she openly stated that these were temporary solutions.

> In both areas – health and the economy – we are putting in place fast,
> consistent, and temporary solutions.
>
> (The Prime Minister of Denmark, Mette Frederiksen, 23.03.2020)

As observed in Sweden's communication, the use of language in the statement implies that there is uncertainty about both the near and distant future. Frederiksen conditions the uncertainty by affirming that the measures are temporary, which shows transparency in this respect. However, Frederiksen fails to say exactly what "temporary" means. Again, this is similar to Sweden's communication, because neither country has the answer as to how long the pandemic will last, and therefore how long restrictions or economic adaptionas will be necessary (Lewis et al., 2021). This is why the variable is presented in the dimension of future outcomes and available predictions (Brashers, 2001).

Finally, Norway's communication about the restrictions followed the same lines as Sweden's. However, Norway's uncertainty communication tends to be more direct in its indirectness. By that, I mean that Norway is more open and transparent in its communication about

uncertainty, and that the reference to the concept is not as hidden as it tends to be in Swedish or even Danish communication.

For example, in the reference below, the Norwegian Prime Minister informs the Norwegian public that they should be prepared for changes to the restrictions that have already been implemented, if the spread of the virus proves it to be necessary.

> Everyone must also be prepared for the possibility that these measures can be extended if needed.
>
> (The Prime Minister of Norway, Erna Solberg, 12.03.2020)

So, very similarly to the two other countries, the uncertainty here lies in the lack of knowledge of the future development of the virus (Lewis et al., 2021, and how this might impact Norwegian society. As in the examples from Denmark and Sweden, this uncertainty about the future all comes from the same source: an international unknowingness regarding the Covid-19 virus, and the questions that have arisen when it comes to future outcomes of different decisions / measures, and available predictions of the future.

Another relevant quotation from the Norwegian Prime Minister is as follows:

> If we are careless, we could have serious consequences for others, and at worst we will have to tighten the measures again.
>
> (The Prime Minister of Norway, Erna Solberg, 2020)

This quotation comes from a press conference which focused on the transmission of the virus within the country. I have previously mentioned that fear and uncertainty combined can have a negative effect on the public, as the two concepts can reinforce one another and result in making the situation worse (Liu et al., 2016). In this statement, Solberg arguably uses a scare tactic when addressing the restrictions. She warns the public that if they do not carefully follow the recommendations of the authorities, this might cause the government to have to implement even stricter restrictions that will impact people's lives on an even larger scale. Solberg thereby places responsibility for the country's future situation, in other words the future outcome (van der Bles et al., 2020), on the shoulders of the general public.

Finally, in its third press conference, Sweden, quite clearly admits to being uncertain about the future outcome of the pandemic through a series of rhetorical questions posed by the

Prime Minister (van der Bles et al., 2020). Although the Danish Prime Minister, Mette Frederiksen, also asked herself questions in one press conference, she actually answered the questions, while Löfven's questions, asking when restricted activities will be possible once again, are simply unanswerable.

> You and I know that there are many in our country who live with unanswered questions. When do I get to see my grandchildren again?
>
> When do we get to hug grandparents? When can the wedding be carried out? The birthday party and so on? Simply. When will our life become normal again?
>
> How, then, to remember that our country chose measures that we could hold on to for a longer period of time?
>
> (Prime Minister of Sweden, Stefan Löfven, 13.05.2020)

This sequence of questions clearly indicates that there is uncertainty surrounding the virus and the consequences it might have on Swedish society, as well as how it might shape daily life in? the near future (Lewis et al., 2021). However, these questions are unanswerable, because they all relate to epistemic uncertainty about the future, outcomes of the pandemic (van der Bles et al., 2020), a matter which nobody can truly predict.

To summarise, throughout this dimension and the statements presented here, all three of the Scandinavian countries have referred to future outcomes and available predictions in the empirical material (Brashers, 2001). However, I argue that they have done so in quite different ways. For example, the clearest way in which the Swedish authorities refer to epistemic uncertainty about the future, is through a series of rhetorical questions from the Prime Minister. Meanwhile, Denmark expresses its uncertainty of the future outcomes by clearly stating that the country is now in a situation that no other Danish government has experienced. As for Norway, the Norwegian authorities affirm that much will be different in the future, but also admit that they do not know for how long things will be different.

5.0 CONCLUSION

This thesis began by asking the question: *What role did uncertainty play in the communication concerning Covid-19, and to what extent did the communication strategies differ between the Scandinavian countries?* Thereafter, it presented a summary of relevant theories of uncertainty and existing research literature. After that, a thorough analysis and discussion was conducted of the empirical material, which provides answers to the research question at hand. The central findings of this analysis regarding the role of uncertainty in communication about Covid-19, and the extent to which this varied between Norway, Sweden and Denmark, are reviewed in the following paragraphs.

Firstly, one of the most significant findings of this thesis was that the empirical material did not mention uncertainty as often as I had anticipated, when I applied the definition of uncertainty in order to uncover explicit uses of the concept. These explicit uses of uncertainty were initially intended as a means of introducing the subject matter, by providing a larger quantity of numbers of the times uncertainty was mentioned in the press conferences. However, in reality, such references were infrequent and did not therefore support my hypothesis that the authorities often explicitly express uncertainty in their press conferences. Once I expanded the definition of uncertainty to include indirect as well as direct uses of the concept, uncertainty became a much more prominent feature of the authorities' communication.

The preponderance of indirect references to uncertainty in the communications from all the three Scandinavian countries discussed in this thesis is in itself a central finding, as there are few references to this type of uncertainty communication in the literature within the field of risk- and crisis communication. As demonstrated in the review of literature regarding the field of risk- and crisis communication, I did not find a clear distinction as to what distinguishes direct- and indirect uncertainty from each other. My analysis clearly differentiates between the two approaches and explores in more detail the implications contained within indirect references to uncertainty. I would argue that this is important, as considering indirect communication of uncertainty as an approach in itself can provide new insights into the situation and the specific concerns of the speakers.

Secondly, the analysis revealed differences in relation to how Norway, Denmark and Sweden directly express uncertainty.For example, Norway's Prime Minister uses the very word "uncertain" when she talks about the decisions the government had made regarding the implementation of restrictions in the beginning of March 2020. She thereby directly admits that the authorities had been uncertain as to the best course of action. On the other hand, Denmark's Prime Minister, Mette Frederiksen, clearly addresses the topic of uncertainty, but fails to specifically identify who is uncertain.

Similarly to Norway, Sweden's authorities also mentioned uncertainty explicitly, rather than concealing it within indirect language. However, Sweden's Prime Minister, Stefan Löfven did so only once throughout the press conferences analysed. Nonetheless, according to my analysis, it can be stated that when it comes to the direct communication of uncertainty, Sweden was more transparent than Denmark. Overall, all three countries addressed uncertainty and admitted to uncertainty within the governmental branch, albeit to differing extents. This satisfies the existing theory that the people of Scandinavia place a high level of trust in their governments (Ihlen et al., 2021), because if the people didn't trust the governments, the sharing of uncertainty would be more likely to stir up fear and reduce the likelihood of compliance with government mandates. However, the fact that Sweden was more transparent than Denmark is surprising, since previous literature has suggested that Sweden avoided uncertainty in their communication (Hanson et al., 2021).

A third significant finding is that when it comes to the direct references to uncertainty which contain explicit use of the concept, Norway differs from the two other countries. This is because in Norway, it is the experts or non-politicians who most often explicitly use the concept of uncertainty (Clarke & McComas, 2012), as well as openly and honestly admit to being uncertain (Ihlen et al., 2021). However, in Sweden and Denmark, it is the politicians who make such direct admissions of uncertainty. Moreover, Norway had more non-politicians present at their press conferences than the two other countries. This difference may be attributed to the fact that I have analysed only government press conferences. However, in Sweden it was the Swedish Health Department who handled decision-making regarding the pandemic, and this organisation held their own press conferences where more non-politicians were present.

In the fourth place, is the fact that the analysis shows that the countries have indirectly admitted that the Covid-19 virus has had an unpredictable nature (Brashers, 2001). Moreover,

both Sweden and Denmark have also indirectly addressed that the epistemic uncertainty surrounding future restrictions (van der Bles et al., 2020), very much depends on whether the public actually follows the restrictions or not. As such, I argue that scaring the public into submission through subtle warnings regarding who's at fault and other people's safety is not a good nor necessary way of communicating the uncertainty of the virus. Much in regard to that it has been found that the Scandinavian population has shown great appreciation for the fact that the authorities were so open and transparent in their communication of Covid-19 (Ihlen et al., 2021).

The final finding to discuss in this section is that over the course of the analysis of indirect ways of communicating uncertainty, I have found that Brashers' (2001) six different dimensions of uncertainty are often interconnected. For example, one can argue that the indirect ways of communicating uncertainty all include elements of ambiguity. In this analysis, this is illustrated in that where the governments have communicated their uncertainty indirectly, there has been a clear sense of vagueness present, as well as elements of doubt (Brashers, 2001). Moreover, the dimension of unavailable or inconsistent knowledge (Brashers, 2001), has also been present in more or less every statement taken from the empirical material. This is not just because of the fact that lack of knowledge is an important aspect of what epistemic uncertainty entails (van der Bles et al., 2021), but also because the pandemic has proven to be a crisis where little information has been available. This reasoning can also be applied to the dimension of future outcomes and available predictions, as well as the dimension of unpredictability (Brashers, 2001), due to the fact that no one can foresee the future (Lewis et al., 2021). Throughout the analysis, I have discussed numerous examples of such overlap in dimensions of uncertainty.

This indicates that there are multiple strategies of communicating uncertainty, as illustrated by the fact that all three of the countries opted to communicate their uncertainty differently. These varied strategies may or may not have strong links to single dimensions of uncertainty; it is most likely that a strategy relates to multiple dimensions of uncertainty (Brashers, 2001). The fact that many references to uncertainty in the press conferences relate to more than one dimension lends weight to the hypothesis that all countries expressed uncertainty, regardless of how opaquely or indirectly.

The main findings of the research have been summarised above, and offer insights into how communication between national authorities and the public could be improved in future crisis

situations. It is most important to note that in high-trust countries such as Norway, Denmark, and Sweden (Ihlen et al., 2021), sharing of uncertainty does not have the same negative effect on the public as has been observed in other countries (Driedger et al., 2018). It remains important to acknowledge that the success of communicating uncertainty transparently to the public is highly dependent on the level of trust the public has in the authorities, (Ihlen et al., 2021), as one cannot communicate transparency without trust (Liu et al., 2021). That said, there are also arguments for why authorities should hold back on sharing uncertainty, the most significant being the risk of losing credibility and trust (Bakker et al., 2019). In addition, too much uncertainty can also lead to an increased level of fear (Sheppard et al., 2006), which again can have an impact on behaviour (Liu et al., 2016). Indeed, this phenomenon was observed in Norway and Denmark, when hoarding of basic goods became a problem due to their publics' acute sense of the unfamiliarity of the situation (Goodall et al., 2021). In this situation, the authorities had to take steps to decrease the sense of uncertainty, and therefore fear, by stating unequivocally in press conferences that there was no need to panic-buy and store such items. To answer the second part of the research question, the analysis of empirical material revealed that Norway had a consistent and effective approach to their communication of uncertainty. Therefore, I agree with the Norwegian Covid-19 Commission in their praise of the Norwegian government during the initial phase of the pandemic (NOU, 2021:6; NOU, 2022:5). I would argue that both Denmark and Sweden could adopt elements from Norway's strategy of uncertainty communication if a similar crisis situation were to arise in the future. This recommendation is supported by the fact that the countries are fairly similar in many ways – culture, language, etc – due to their shared history, but more importantly because they are all considered high-trust societies (Ihlen et al., 2021). As such, successful elements from a strategy like the one Norway applied to their communication of uncertainty, would in theory also prove effective in the two other countries.

This thesis has provided insights into the effectiveness of the Norwegian authorities' communication of uncertainty during the initial phase of the Covid-19 pandemic. It has offered significant findings in terms of how national authorities can best communicate with their public in times of crisis, where the level of uncertainty is high. These findings are particularly applicable to societies characterised as high-trust (Ihlen et al., In press), but may also be of use in other contexts. Therefore, this thesis represents a useful contribution to the literature regarding uncertainty communication.

One weakness of this thesis concerns the reliability of the coding, as I was the only person to carry out this interpretative, therefore subjective, task. However, I have had to revisit my coding decisions multiple times over the course of the analysis, continually bearing in mind the theoretical framework. Therefore, I would argue that the final coding is reasonably valid and accurate. Moreover, when it comes to the validity of the thesis, I would say I have managed to follow the topic of the pandemic and uncertainty communication throughout the thesis, and thereby been able to analyse and discuss what I have found accordingly.

This thesis opens up a number of possibilities for future research. For example, the source material for the present analysis was limited in terms of number and time - nine press conferences only, which took place during the first two to three months of the pandemic. Approximately 18 months' worth of communication remains to be examined. In addition, it would be very interesting to bring another country, with similar levels of trust in its government but located outside of Scandinavia, into the comparison. This would allow the findings of the present thesis to be tested, by analysing whether they do indeed apply in a country which does not have a Scandinavian cultural background. Furthermore, a deeper comparative analysis of the Scandinavian countries, as they have opted for different approaches of the communication of uncertainty, can possibly bring forwards larger findings than what this thesis has accomplished.

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Appendix 1

The codebook

Name	Description	References
Direct uncertainty	When talking about direct uncertainty I refer to times the actual word uncertainty or a conjugation of the concept has been used.	20
Directly communicating uncertainty	Statements where the admissions to uncertainty have been direct.	8
Transparent use of uncertainty	When talking about transparent use of uncertainty, I refer to the times when the authorities of each individual country has been open and honest in their direct communication of uncertainty.	4
Implicit uses of uncertainty	The instances where one can find the uncertainty is the statement, but that it is not directly said. In these instances, it is rather concealed behind other meanings, or by saying that there is uncertainty, but without mentioning who the uncertainty belongs to.	5
Communicating international uncertainty	The times uncertainty was brought forwards in relation to an international context.	3
Indirect uncertainty	When I say indirect ways of communicating uncertainty, I refer to the instances where the government are communicating their uncertainty in a more subdued or hidden way, than what the direct way of communicating uncertainty does.	69
Complexity	The complexity of a situation can be because those talking about the situation can be indirect or vague when it comes to their willingness to share the information.	2
Insecurity concerning the knowledge	The insecurity about one's own knowledge, in the sense that do they trust in what they already know, or it includes insecurity concerning the knowledge that is available.	4
Unavailable or inconsistent information	Lack of knowledge can be a great source of uncertainty, as well as contribute to an increased level of uncertainty.	5

Name	Description	References
Ambiguity	Entails the different ways of indirectly admitting to uncertainty, using words that fundamentally expresses lack of knowledge in a vague or doubtful way.	15
Unpredictability	The unlimited ways the future might play out.	13
Future outcomes and available predictions	Closely connected to epistemic uncertainty about the future as is plays around possible future outcomes of situations, as well as predictions of the future that are available but not always certain.	30