

Stancetaking in Online Climate Change Discussion

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Tiivistelmä – Abstract <p>Tämän tutkimuksen aiheena on asennoitumisen (stancetaking) ilmaiseminen ilmastonmuutoskeskustelussa erityisesti verkossa toimivilla alustoilla. Tutkimuksen tavoitteena on tarkastella verkkoympäristössä tapahtuvaa ilmastonmuutoskeskustelua asennoitumisen ilmaisemisen näkökulmasta. Aineisto koostuu 68 lukijoiden kommentista, jotka on julkaistu The Guardian -lehden ilmastonmuutosta käsittelevän artikkelin kommenttikentässä. Aineiston analyysissä on hyödynnetty diskurssianalyysin metodeja, joilla on pyritty selvittämään (1) millä kielellisillä keinoilla asennoitumista ilmaistaan ja tuodaan ilmi ja (2) mihin asennoituminen kohdistuu.</p> <p>Aineiston analyysissä hyödynnettiin Hylandin (2005) metadiskurssimallia ja analyysi osoitti kommentoijien tuovan ilmi omaa positiotaan erilaisilla kielellisillä keinoilla, joiden avulla he pyrkivät joko lieventämään (hedges) tai vahvistamaan (boosters) omaa sitoutumistaan sanomaansa sekä ilmaisemaan asennettaan (attitude marker). Asennoitumisen kohteina ovat poliittiset päätökset sekä päättäjät, ihmisten toiminta, artikkeli, johon kommentit on jätetty sekä ilmastonmuutokseen liittyvä uutisointi. Kommentit ovat tyyliltään kriittisiä ja tutkimus paljasti kommentoijien olevan pääasiassa huolissaan ilmastonmuutoksen vaikutuksista ympäristöön sekä tulevien sukupolvien elämään. Ilmastonmuutos nähdään ongelmana, jonka ratkaiseminen on ensiarvoisen tärkeää.</p>	
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1 INTRODUCTION

Climate change, or climate crisis, as it is often referred to, is one of the most pressing issues in today's world and that is why it is very visible, for example, in political decision making, the news and public discussion. A significant amount of that public discussion takes place on different online platforms. Though causes for climate change have been studied and the effects of it have been known for decades, the discussion and opinions regarding climate change and what should be done to prevent lasting damages to the environment can be quite polarized. This discussion has been the focus of various studies in several fields and researchers have approached it for example by identifying and examining different climate change discourses with the aim to understand how people experience climate change in their daily lives, their attitudes towards it and to find reasons for the lack of action to prevent the situation from escalating even further (e.g. Leichenko and O'Brien 2019, Fleming et al. 2014).

Climate change discussion can be examined from the point of view of stancetaking as well, which is what I'm interested in analyzing in this study. Stance and stancetaking are complex concepts to define and an extensive amount of research can be found. These studies have focused on defining the concept and how stance is expressed in language in different contexts, ranging from everyday language use to academic texts. However, despite the interest that researchers have had in stancetaking, it has not been studied in the context of climate change discussion. The aim of this study is to investigate climate change related discussion from the perspective of stancetaking, specifically on an online platform. To do this I analyze the expression of stance in the comment section of a climate change related article published in the newspaper The Guardian.

In the background section of this thesis I define the concepts that are relevant to my research. These include, of course, the concepts of stance and stancetaking, but I begin by introducing relevant information on climate change discourses and climate change attitudes, which provide a larger context for this study. In the following section I introduce the data and my research questions and talk about the methods of analysis I chose to use. The analysis section provides answers for the research questions. Finally, in the conclusion I summarize the main findings of this study.

2 BACKGROUND

2.1 Discourses and climate change

Before going into climate change discourses, it is necessary to take a look at how the term ‘discourse’ can be understood. There is, however, no distinct agreement on how to define what discourses are (Jørgensen and Phillips, 2002:1). Among discourse analysts the term is commonly understood to mean instances of communicative action using language as the medium (Johnstone 2018). Another, broader definition, is one provided by Blommaert (2005:2), who understands discourse to mean “meaningful symbolic behavior”. When understood in these terms, ‘discourse’ is typically a mass noun and it is used similarly to other mass nouns, such as music or information, speaking of discourse as opposed to discourses. (Johnstone 2018). However, “discourse” is sometimes used as a countable noun as well, in which case it can be referred to in the plural (Johnstone 2018). These “discourses” are generally accepted ways of talking, and they are created by generally accepted ways of thinking. In addition, discourses construct those ways of thinking, and this link between talking and thinking works to establish ideologies in society (Johnstone 2018).

Language is a central concept in defining discourse and discourse analysis. Discourse analysts tend to be interested in the way people use language in order to, for example, express emotions, exchange information, or provide entertainment for themselves and others, instead of concentrating on language as an abstract system (Johnstone 2018). When thinking about language as an abstract system, “language” is considered to consist of a set of generalizations, such as the established rules about grammar (Johnstone 2018). On the other hand, discourse can be seen to include all forms of semiotic human activity that hold meaning and is connected with social, cultural, and historical ways of use (Blommaert 2005:3). Language, as understood in the traditional sense, is only one expression of it, and objects, attributes and activities that can be used to create semiotic signals should be included as well (Blommaert 2005:3). Discourse is also social in nature, and the use of meaningful symbols, including language, is likely what differentiates us from other species and explains the ways we form societies and communities. In fact, it is not possible to use discourse in a non-social manner (Blommaert 2005:4).

As established above, there is a connection between discourses and the way we think (Johnstone 2018), and therefore it is useful to consider climate change from the perspective of different climate change discourses in order to understand the issue. There is, however, many different ways to classify and name the discourses. Leichenko and O’Brien (2019: 62-71) provide one

such classification. They have identified four different discourses on climate change and society that are meant to be seen as broad umbrella terms that help explain how people make sense of climate change. The first and the most dominant of the discourses is the biophysical discourse. Climate change is understood as an environmental problem which is caused by rising amounts of greenhouse gases in the atmosphere as a consequence of human activities. Different policies, technologies and changes in behavior that reduce the emissions and help with adaptation are ways through which climate change can be addressed. The second discourse is called the critical discourse and the name comes from the fact that it questions the biophysical discourse. Climate change is seen as a social problem, which is caused by economic, political, and cultural factors that contribute to the kind of patterns in development and use of energy that are uneven and unsustainable. The aim of this critical discourse is to present a broader critique of society and therefore change the existing dominant systems and structures.

The third discourse the authors identified is the dismissive discourse, in which climate change is not regarded as a problem or an urgent concern and it does not need to be addressed with any actions. Instead, the priority should be other issues. This is a clear contrast to the biophysical and critical discourses that consider climate change to be an urgent issue. The fourth and last discourse is the integrative discourse that takes on a more holistic perspective to view climate change. Climate change is seen as both an environmental and a social problem that has its roots in beliefs and perceptions of the relationship between humans and the environment as well as humanity's place in the world. In order to address climate change, mindsets, norms, rules, institution, and policies that support unsustainability, must be challenged.

While Leichenko and O'Brien's (2019) classification is meant to function as an overarching framework to understand how climate change is understood in society, Fleming, Vanclay, Hiller and Wilson (2014) have identified three major climate change discourses from academic literature in order to explore how discourses can constrain the action that is needed to address and 'solve' the issue. The three dominant discourses were identified from scientific publications from several different fields and were named the logical action discourse, the complexity discourse and the culture of consumption discourse. The first discourse, the logical action discourse, is related to a concern about a lack of information. The need to gain more information as well as the need to better understand the existing information about climate change is what prevents taking, what is assumed to be, logical action. The second discourse, the complexity discourse, presents climate change as something difficult to address because research, the understanding of the information and the required changes in behavior represent interrelated

and complex problems. The last of the three discourses, the culture of consumption discourse, emphasizes the link between climate change and current cultural norms and attitudes. According to this discourse the cause for climate change is primarily materialism and consumerism.

In terms of this study, both of these classifications can be relevant and though Fleming et al. (2014) have investigated climate change discourses in academic context does not necessarily mean that they could not be adapted to other contexts as well. However, because the discourses identified by Leichenko and O'Brien (2019) are broader and are meant to provide a framework to examine how climate change is understood, they might be easier to apply to this study and it will be interesting to find out if some of these discourses are present in my data.

2.2 Climate change attitudes

The failure of public response to global warming has been recognized as a considerable difficulty in both environmental and social scientific communities (Norgaard 2011:1). It has often been explained by highlighting either the lack of information about or the lack of concern for climate change. Such an approach is often called the “information deficit model”, as it emphasizes, explicitly or implicitly, a lack of knowledge as the limiting aspect of the public’s response (Norgaard 2011:1). Norgaard (2011:2) discusses the limitations of this approach, one of which is the fact that it cannot explain the paradox of where interest in the issue keeps declining while evidence for climate change keeps accumulating, predictions become progressively more alarming and scientific consensus increases. She points out that the previous studies that explain how people process information on climate change have heavily focused on two levels: the individual level, by focusing on mental models and cognitive schemas and the national level, by conducting cross-national surveys (Norgaard 2011:3). The way people experience climate change has not been investigated using an open-ended, ethnographic approach, and the few studies that use data gathered from interviews portray complex responses and do not offer support for the information deficit model (Norgaard 2011: 3).

Norgaard (2011: 3-4) has investigated how people describe climate change as an issue by observing and interviewing community members in Bygdaby, Norway. According to her, global warming was a topic that arose regularly, although it was also an uncomfortable issue. The people in Bygdaby described climate change as an issue they do not think about in their daily lives, although they had knowledge of the effects of climate change. Instead, their focus was on topics that were more local and manageable. To explain this phenomenon, Norgaard

(2011:5) has coined the term ‘double reality’. One reality includes the perception of everyday life, while in the other reality is the existence of the troubling knowledge of the causes and consequences of climate change. In addition, she argues that the term ‘implicatory denial, can be used to explain what she observed in Bygdaby. Implicatory denial is one of three varieties of denial described by Cohen (2001). In a case of implicatory denial, instead of denying facts or their conventional interpretation, it is the “psychological, political or moral implications that conventionally follow”, that are being denied (Cohen 2001:8).

2.3 Defining stancetaking

Stancetaking can be defined as “taking up a position with respect to the form or the content of one’s utterance” (Jaffe 2009: 1). Certain forms of spoken and written communication can generally be filled with more instances of stancetaking, but it is not possible to take a completely neutral position, since making the choice to appear neutral can itself be considered a stance (Jaffe 2009: 1). Another possible way to define stance is as “a public act by a social actor, achieved dialogically through overt communicative means (language, gesture, and other symbolic forms), through which social actors simultaneously evaluate objects, position subjects (themselves and others), and align with other subjects, with respect to any salient dimension of the sociocultural field” (Du Bois 2007: 170). Two social dimensions of stance can be identified: epistemic and affective stance (Jaffe 2009: 7). Affective stances represent the speaker’s emotional states while epistemic stances, on the other hand, express how certain speakers are about the propositions they make. By using affective displays, it is possible to carry out evaluation, self-presentation and positioning and these displays also include various social and moral indexicalities. Just like affective stance, epistemic stance is culturally grounded as well, and it can be used to either establish or downgrade authority.

As can be seen from Du Bois’ (2007: 170) definition of stance, evaluation, positioning and alignment are some of the key concepts in stancetaking. These three concepts can be recognized as different forms of stancetaking, although it is not the only way to describe and define stance, as there is no general agreement on how many types of stance should be recognized (Du Bois 2007). In fact, it is possible to view the concepts of evaluation, positioning and alignment as “different aspects of a single stance act”(Du Bois 2007: 163). Evaluation, which can be defined as “the process whereby a stancetaker orients to an object of stance and characterizes it as having some specific quality or value” (p. 143), is perhaps the most noticeable and widely recognized form of stancetaking. A central concept in relation to evaluation is therefore the object of stance, the thing that is being evaluated. Positioning, on the other hand, differs from

evaluation in that means the ways in which speakers position themselves. It can be defined as “the act of situating a social actor with respect to responsibility for stance and for invoking sociocultural value” (p. 143). Lastly, in alignment the speaker defines the stance in other words, aligns themselves in relation to another individual. It can be defined as “the act of calibrating the relationship between two stances, and by implication between two stancetakers” (p. 144).

When analyzing stancetaking, it is important to take into consideration the context in which the utterances are made. According to Du Bois (2007: 146), there are three important things to clarify beyond the sentence itself, when interpreting stancetaking: (1) who is the stancetaker? (2) what is the stance object? and (3) what stance is the stancetaker responding to? When it comes to the context of utterances, the speaker is a key component. In conversational settings participants rely on their perceptions of the current speaker, which affects their stance interpretations. Such associations include not only what is being said at the moment, but also what was said previously, how the speaker speaks, for example in terms of accent and intonation, and what identities they display. Moving to the second question, it is important to know what the speaker is talking about. In other words, what is the stance directed toward? Lastly, it important to know the reasons for the stance that is being taken. Du Bois (2007) has focused on spoken language and has studies stancetaking in conversations, but the findings can be adapted and applied to written communication as well, such as the messages on conversation forums online as I have done in my own analysis.

2.4 Stance markers

Hyland’s (2005) interactional metadiscourse model can be used in order to analyze expressions of stance. The model includes hedges, boosters and attitude markers which can all be considered explicit expressions of stance. In addition, the model includes self-mentions and engagement markers. Hedges refer to devices such as ‘might’, ‘perhaps’, and ‘possible’, and using them is a way of withholding commitment to a particular proposition. They indicate the decision to recognize alternative perspectives, and, by allowing information to be presented as an opinion instead of a fact, they accentuate the subjectivity of a position. Boosters, on the other hand, include words such as ‘clearly’, ‘obviously’ and ‘demonstrate’. By using boosters the writer can express that they are certain about what they say. Hedges and boosters indicate epistemic stance. Attitude markers include attitude verbs such as ‘agree’ and ‘prefer’, sentence adverbs like ‘unfortunately’ and ‘hopefully’, and evaluative adjectives. They communicate for example surprise, agreement, frustration and so on, instead of commenting on relevance, reliability or

truth of information and therefore, unlike hedges and boosters, attitude markers indicate affective stance.

Although Hyland's (2005) focus has been on academic literature, these markers are quite common elements in everyday language use across many different contexts. That is why it is interesting to apply this model to discussion on climate change and analyze the use of the stance markers in that context. In the analysis of my data I use this model to find out how stance is expressed as well as think about what indications does the use of stance markers have about people's opinions and attitudes about climate change.

3 PRESENT STUDY

3.1 Aim and research questions

The discussion on climate change can be polarized with varied opinions on what actions should be taken in order to solve the issue and this can be seen especially in the discussion that takes place online. The aim of this study is to investigate the discussion about climate change, particularly on an online platform, and to better understand it by studying how stance is expressed in the comment section of a climate change related newspaper article. The following two research questions are answered:

1. How do the commenters express their stance?
2. What stance objects do they evaluate?

In the first question I focus on the stance markers that can be found in the comments. As a framework I use Hyland's (2005) interactional metadiscourse model and though it has typically been used to research the stance expressions in academic literature, the model can be applied to other types of language use as well. When it comes to the second question, I use Du Bois' (2007) definitions of stance objects. According to Du Bois' (2007: 146), identifying the stance object, in other words, what the stance is directed towards, is one of the three important things to do when interpreting stancetaking. In addition, Du Bois (2007:143) defines evaluation, a widely recognized form of stancetaking, as "the process whereby a stancetaker orients to an object of stance and characterizes it as having some specific quality or value". This connection between stance objects and evaluation works as a starting point in this part of the analysis as I began identifying the stance objects by first searching for the comments that either explicitly or implicitly evaluate something.

3.2 Data and methods

The data consists of reader comments posted on an opinion piece published by The Guardian. The article I chose is "Changes in Atlantic currents may have dire climate implications for the next century", written by Andrew Meijers (The Guardian, 26.2.2021). His article discusses the importance of the Atlantic Meridional Overturning Circulation (AMOC) to the climate and how climate change is affecting it. The article introduces recent research that has helped scientists predict what consequences, particularly in the long-term, the reduction of the strength of the AMOC can have. For example, it can bring colder weather and more intense winters to the UK and Northern Europe as well as reduce the amount of rainfall during the summer and increase

the risk for more extreme weather events. In addition, changes in ocean circulation poses a risk for the ecosystems and aquaculture we are dependent on.

I began the process of collecting the data by browsing through the climate change related articles on the international edition of The Guardian. Since the comment sections are not open on every article, it naturally limited the choices for possible data, and I limited it even further by deciding to only focus on opinion pieces. I wanted to choose a fairly recent article, and therefore focused on ones published during a six-month period from October 2020 to March 2021. After collecting a selection of articles I went through them again to choose the one for this study. The main criteria was that *climate change* or *climate crisis* had to be listed as the main topic and it had to have a considerable number of comments to ensure that I would be able to collect enough data. I collected the comments that were directly responding to the article and excluded comment-response chains, since for the purposes of this study it was relevant to know what exactly the commenters are directing their comments towards. There were a total of 281 comments on the article, from which I was able to gather 68 comments that the data consists of.

I chose the Guardian, because it has been very transparent about their commitment to fight the climate crisis, and in 2019, they made an environmental pledge in which they defined climate change as “the defining issue of our lifetimes” and intended The Guardian to be in the leading role when it comes to reporting on environmental issues (The Guardian, 2019). In the pledge, they commit to continuing their high quality environmental reporting and to report what effects environmental collapse, including natural disasters and extreme weather conditions, have on people around the world.

I utilize quantitative analysis to find out the frequency of the use of stance markers as well as qualitative analysis to further describe the ways in which stance is expressed. The qualitative method for analyzing the data is discourse analysis. This method was chosen because discourse analysis is interested in the use of language and how it relates to the broader societal and situational context and it can be used to investigate the linguistic choices people make (Pietikäinen and Mäntynen, 2019).

4 ANALYSIS

4.1 The ways of expressing stance

I started the analysis by focusing on stance markers and first the aim was to find out whether or not different stance markers can be found in the data and to what extent. As a framework for this part of the analysis I used Hyland's (2005) interactional metadiscourse model which includes hedges, boosters and attitude markers that mark both epistemic (hedges and boosters) and affective (attitude markers) stance. Since Hyland's model has typically been used to describe stance expression in academic texts and my data for this study consists of reader comments posted on a newspaper article, I had to take into consideration the differences between these text types. Academic texts are written following a detailed set of rules and therefore the stance markers that appear in these texts might be easier to identify than in other types of texts. With my data, while some words and phrases were easy to identify as hedges, boosters or attitude markers, there were several instances when it was not quite so clear. This was the case particularly with hedges and boosters. That is why I have taken into consideration the surrounding context in which the words and phrases appear in as well as the functions they seem to have in order to classify them.

The analysis shows that the data includes comments both with and without stance markers, though the majority of the comments do include at least one stance marker. Out of the 68 comments that the data consists of, stance markers can be found in 47, while 21 comments lacked the use of stance markers completely (see Table 1). When focusing on the comments that did have stance markers, I found that there is quite a lot of variety in how many instances were included in these comments. In some comments there is only one instance of stance marking while others have several. This does not seem to align with the length of the comment since there are some very long comments, with more than one paragraph of text, that do not have more than one or two stance markers while some fairly short comments are more saturated with stance markers. In addition, I found that there is also variety in whether the comments had only one type of stance marker used or several, as illustrated in Table 2. Out of the 47 comments that have stance markers, 26 only included one type of stance marker. In other words they only had either hedges, boosters or attitude markers. More than one type of stance marker can be found in 21 comments.

Table 1. The use of stance markers in the comments

	Number	% from all the comments
Comments with stance markers	47	69
Comments without stance markers	21	31
Total	68	100%

Table 2. Ratio of comments with and without stance markers

	Number	% from the comments with stance markers
Comments with one type of stance marker	26	55
Comments with more than one type of stance marker	21	45
Total	47	100%

Next, I will consider the stance markers in more detail. The total number of all stance markers that can be found from the comments is 130 as Table 3 illustrates. Hedges are the most common with a total of 60 instances. Next, are the instances where an attitude marker is used, of which there are 38. Lastly, boosters are the smallest category with only 32 instances

Table 3. The types of stance markers used in the comments

Type of Stance Marker	Number of Stance Marker in the data	%
Hedges	60	46
Boosters	32	25
Attitude markers	38	29
Total number of stance markers	130	100%

When analyzing the hedges used in the comments, it became apparent that they can be divided into categories based on the context in which they appear in, and I was able to identify three prominent categories. The first category I identified includes instances of commenters speculating about the likelihood of something happening or talking about things that could be inevitable. The focus is, therefore, in the future. When making a list of words and expressions that were most often used in these instances, I noticed that modal verbs are in the majority. In fact, the only other expression used as a hedge in these instances, is the word 'probably'. The remaining instances use the modal verbs 'might', 'may' and 'could'.

Some commenters give concrete examples of the possible consequences of climate change while others do not mention anything specific. Often the commenters discuss the changes in the environment of different geographical locations or remark on what it might take to finally take action to solve the climate crisis. For example, one commenter states that "the world may have to suffer a calamity" before any meaningful effort is made. In comments that do not provide concrete examples the commenters discuss future events in more general terms and, for example, one commenter states that "there could be some interesting consequences" as a result of the changes in the AMOC. The majority of the commenters express concern but there are some where the opposite is true as well. For example, one commenter simply states that "AMOC plus global warming will probably even out".

The second category, as opposed to the first one, is focused on the present and includes instances where the commenters make observations about the current situation regarding climate change. Compared to the first category, there is much more variety in the expressions that are used as hedges. While in the first one the clear majority of them are modal verbs, the second one includes words such as 'seem' in different variations, 'possibly', 'some', 'quite' and 'about', to mention a few. In addition, modal verbs are used in this category as well. Politics is a prominent theme that appears in many of the comments in this category. The comments discuss, for example, the political decisions that are made regarding climate change as well as the politicians making them. The general consensus among the commenters is that not enough effort is made to solve the issue and while some are hopeful, several commenters seem to be of the opinion that it is too late already. For example, one of them states that "we are probably flattering ourselves if we think we have much power to stop this" and another says that "it often feels as if our efforts are about as effective as lighting a candle in a dark cathedral".

The third category includes such comments where the writers are presenting scientific facts. These commenters often use their own personal experiences, for example education, to appear

more authoritative and trustworthy. For example, one commenter says that “Around about 1991 I was doing a degree in Earth Science...” and another is basing their comment on the reading they have done: “I’ve recently read another report on the problem of huge sinkholes appearing in frozen tundra in Siberia” and “I also read a scary article in the New Scientist...”. One thing I noticed about the way hedges are used in these comments is that they are often utilized to avoid being specific about time. This is the case, for example, in the comment saying, “*Around about 1991 I was doing a degree in Earth Science...we learned that the ice age ended rather suddenly*”.

Next, I will move on to boosters. While it was fairly simple to divide hedges into categories, boosters were not quite as easy to categorize. There is a lot of variety in the terms that are used as boosters and no single category of words are used significantly more than others, but I was able to identify four different context categories that boosters are often used in. The first category of boosters is, like the first category of the hedges, future-oriented, but instead of discussing things that might happen, here the commenters talk about what must be done. The expressions used as boosters in this category include phrases such as “we just have to...”, “we are just going to...” and “we absolutely must...”. The comments in the second category on the other hand evaluate the current situation with a strong focus on people and their actions. Expressions such as “indeed”, “definitely”, “especially” and “in fact” are used in these comments.

The third category I identified includes comments that describe things and use boosters to emphasize and accentuate the descriptions. For example, one commenter says that climate change will have devastating effects on their grandchildren’s lives, and it is “*as proven as any future event can be*” while another commenter uses the words “really bizarre” to describe the way sceptics will question climate change altogether based on the cold winters in Britain or Europe. In the fourth category, the commenters use boosters in instances where they talk about their own opinions and the boosters that are used include words such as ‘truly’, ‘surely’ and ‘always’.

I approached the analysis of the attitude markers by first determining what types of attitude markers the commenters use. The analysis showed that all three categories of words determined by Hyland (2005) to be counted as attitude markers, which are attitude verbs, sentence adverbs and evaluative adjectives, are used by the commenters. Evaluative adjectives are the most prominent category as they are used the most frequently, but attitude verbs and sentence adverbs are used on several occasions as well. The next part of the analysis was to find out what kind

of attitudes and feelings do the commenters communicate with the markers. The most visible are the feelings of fear and worry over the situation. This is apparent based on the use of phrases such as ‘I fear’ and ‘what worries me’ as well as describing the climate change related issues such as the possible consequences, as ‘disturbing’, ‘devastating’, ‘worrying’ and ‘scary’.

4.2 Stance objects

After identifying the comments in which the commenters are evaluating something, either explicitly or implicitly, I was able to identify four broad categories of stance objects that come up frequently. The categories are: politicians and political decision making, the general public, the article the comments are posted on and climate change reporting.

Politicians and political decision making are a prominent target of evaluation in the comments and the tone of these comments is, in most cases, quite critical. In particular, the commenters bring up the problem of politicians not making sufficient long term decisions when it comes to climate change policies on several occasions. The commenters think that the reason for the inaction and the inability to think about the future generations is the age and life expectancy of politicians. One commenter says that the way “long term” is understood among elected politicians seems to be only until their next election and they do not think much beyond their lifetimes. A solution for this problem is offered by another commenter who thinks that only young people should have political power. When it comes to concrete decisions made by politicians, the issue of money is brought up in the comments as well. This issue is discussed, for example, by comparing the situation to the ways the COVID-19 pandemic has been dealt with. One commenter says that during the pandemic a “money forest” has been found because a lot of money has been spent in order to protect the population and the economy and the question, therefore, is why not use the money and make similar effort to solve the climate crisis.

In addition to politicians and political decision making, evaluation targets political bodies, such as the IPCC, as well. IPCC stands for Intergovernmental Panel on Climate Change, and it is comprised of governments that are members of the World Meteorological Organization (WMO) or the United Nations. The goal of the IPCC is to provide scientific information and regular assessments of the impacts and future risks of climate change that governments can utilize in the development of their climate policies (IPCC 2022). In the data one commenter states that because of the fact that the IPCC is a political body it is “constrained into conservatism”. The commenter questions the reliability of the information the IPCC provides, because according to them, the IPCCs indications of temperature rises have not been accurate.

While some of the comments evaluate the political aspects of the climate crisis, a significant part of the discussion is also the general public, which I have identified as the second stance object. This is, however, quite a broad category and the evaluation in the comments that are included is directed to many different groups of people. For example, the readership of the Guardian is criticized because of the commenters seemingly having a very limited set of opinions and comments about the situation. There is some overlap between the first and the second category as the inability to look forward far enough was mentioned in these comments as well when discussing the reasons why we do not seem to be able to make sustainable decisions when it comes to the climate. Related to politics is also the fact that the voters' inactivity when it comes to elections is brought up. A commenter notes that losing the Gulf stream will only get the voters to be active if it costs them very little. The commenter discusses a Radio 4 documentary that talked about climate change and climate change politics and the point made in the documentary was that because voters are predominantly older, they do not care about what happens 50 or 100 years into the future.

Both the action and inaction regarding climate change is discussed in the comments. Humans have caused major changes in the atmosphere, and this is a cause for worry among the commenters. One commenter, for example, expresses concern for what happens in the UK, if the changing climate results in the majority of the houses and other built environment to become unfit for their purpose. Another commenter compares the lack of human action to playing a game of Russian Roulette, where humanity "keeps adding bullets to the gun every year we fail to change our ways". The tone of these comments is, overall, highly critical, but while some maintain hopefulness, others think it is a lost cause. For example, one commenter's opinion is that we do not have much power to stop this at this point, because so much damage has already been done because of human activity and the carbon emissions that have followed.

The article and climate change reporting, which are the third and the fourth stance objects, will be discussed together. The reason for this is that many of the comments that evaluate some aspect of the article they are posted on, evaluate, in some way, the climate change reporting in general as well. For example, a commenter discusses and criticizes the way the dangers of climate change are presented by focusing on a certain point in time, such as the turn of the century. This comment is directed to the article in question, but it can be seen as a broader criticism for climate change reporting as well, because similar headlines are not uncommon. These kinds of headlines are a common target of evaluation in these comments, and they are

regarded as ineffective or useless because, according to one commenter, humans are not willing to make the necessary effort to make a change.

5 DISCUSSION AND CONCLUSION

The analysis shows that stance is expressed in the comments using all three types of stance markers included in Hyland's (2005) interactional metadiscourse model. Hedges and boosters can be divided into categories based on the context they appear in, and attitude markers are often used to communicate the commenters' feelings of fear and worry that the climate crisis and its consequences cause. The commenters evaluate politicians and political decision making, the general public, the article the comments are posted on and climate change reporting, which form the four categories of stance objects.

The tone of the comments is often very critical, but that is not necessarily a surprise. Before I even began the process of the analysis, I considered how the choice of data can influence what can be found in the data. Since The Guardian is very open about their environmental values and has made their commitment to fight the climate crisis and aim to continue high quality reporting on environmental issues known, it can be assumed that it attracts a certain kind of readership. The assumptions that I personally expected to be true were related to the values the readers hold regarding climate change. I thought the readers were likely to be passionate about environmental issues and be very well informed about the effects of climate change. On the other hand, because of the fact that the discussion can be polarized when it comes to climate change, the opposite could have been true as well.

When looking at the broader context of climate change discussion and connecting the findings of the analysis to the discourses introduced in the background chapter of this thesis, I think some of the discourses included in Leichenko and O'Brien's (2019) model can be applied at least to some extent. The *biophysical discourse*, in which climate change is regarded as an environmental issue caused by greenhouse gas emissions that are the result of human activities, is the easiest to identify. To some extent, the *dismissive discourse* can be found as well because there are a few comments that do not express urgent concern for the consequences of climate change.

The amount of data gathered for this study is relatively small and it causes certain limitations to way the results can be utilized. They cannot, for example, be generalized to concern stancetaking in climate change discussion in all online interactions. This, however, offers a basis for further research on the same topic. More extensive research can be done to increase the understanding of the expressions of stance in climate change discussion and focusing on different kinds of online platforms could be a good way to extend the research further

6 BIBLIOGRAPHY

- Blommaert, J. (2005). *Discourse: A critical introduction*. Cambridge University Press.
- Cohen, S. (2001). *States of denial: Knowing about atrocities and suffering*. Cambridge: Polity
- Du Bois, J.W. (2007). The stance triangle. In Englebretson, R. (Ed.), *Stancetaking in discourse* (p. 139-182). John Benjamins Pub.
- Fleming, A., Vanclay, F., Hiller, C. and Wilson, S. (2014). Challenging dominant discourses of climate change. *Climatic change*. 127 (3), 407-418. doi: 10.1007/s10584-014-1268-z
- Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. Continuum.
- IPCC (2022). About the IPCC. (Accessed 16.1.2022) <https://www.ipcc.ch/about/>
- Jaffe, A. (Ed.). (2009). *Stance: Sociolinguistic perspectives*. Oxford University Press.
- Johnstone, B. (2018). *Discourse analysis* (Third edition.). Wiley Blackwell.
- Jørgensen, M. and Phillips, L. (2002). *Discourse analysis: As theory and method*. SAGE.
- Leichenko, R.M. and O'Brien, K. (2019). *Climate and society: transforming the future*. Polity.
- Meijers, A. (26.2.2021). Changes in Atlantic currents may have dire implications for the next century. *The Guardian*. <https://www.theguardian.com/commentisfree/2021/feb/26/atlantic-currents-climate-oceans-next-century>
- Norgaard, K. M. (2011). *Living in denial: Climate change, emotions, and everyday life*. MIT Press.
- Pietikäinen, S. and Mäntynen A. (2019). *Uusi kurssi kohti diskurssia*. Vastapaino.
- The Guardian (2019). The Guardian's environmental pledge 2019. <https://www.theguardian.com/environment/ng-interactive/2019/oct/16/the-guardians-climate-pledge-2019> (Accessed 21.4.2021)