

Who speaks for Earth?

Climate discourses and voice in Greta Thunberg's speech in UN Climate Action
Summit on September 23, 2019

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Abstract

The aim of this paper is to analyse Greta Thunberg's speech, given in UN Climate Action Summit on September 23, 2019, to find climate change discourses and outside voices that surface in the speech. This paper will map out the pre-existing climate change discourses by looking into previous research on the subject and then compare these discourses to Thunberg's speech. The analysis is conducted on a transcript of the speech that is hosted online at www.npr.org. The analysis of voices in the speech will be done with the methods of intertextuality and critical discourse analysis. The tools of analysis that are used in this paper are discussed by Pietikäinen and Mäntynen in *Kurssi Kohti Diskurssia*, and by Wodak and Meyer in *Methods of Critical Discourse Studies*.

Keywords: Discourse, critical discourse analysis, climate change, intertextuality, voice.

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1 Introduction

In his famous 1980 TV-series *Cosmos*, Carl Sagan, the American astronomer and Pulitzer prize winning author asked the question: 'Who speaks for Earth?' With this question Dr. Sagan was referring specifically to the era defining crisis of the time; the Cold War and the possibility of the two superpowers, USA and the Soviet Union, slipping into nuclear war and possibly annihilating all life on the planet in the process (2013, p. 336–339). 'Who speaks for Earth?' in this context, meant that the arguments of the superpowers for the ongoing nuclear arms race was known to everyone, but what about the harm and destruction that this path they were taking the whole human race and possibly all life on the planet on, who would offer arguments for peace and preservation of nature and life? Who speaks for Earth?

One crisis has surfaced and perhaps surpassed others in the media and in the collective mind of the human race to become the era defining crisis of our time; the climate change. As the life-threatening crisis that faces us has changed from 1980's immediate threat of nuclear annihilation to a slower annihilation by global warming in today's world, we can again ask the question 'Who speaks for Earth?' In the fall of 2019, the United Nations held a Climate Action Summit in New York. The summit, as its name suggests, was about action to be taken in the face of climate change. In the summit, on September 23, a 16-year old climate activist from Sweden, Greta Thunberg, took to the podium and gave a speech to a world that was watching, a speech about the existential threat that faces possibly all life on the planet and the hesitance of those in power to do anything about it. Doing this, Thunberg delivered a message to world leaders from her generation and from the generations to come. Arguing for action to be taken against climate change, it was this 16-year old girl from Sweden who became the face of the fight against climate change. In 2019, Greta Thunberg speaks for Earth. This thesis seeks to answer two questions about the speech of this climate activist. The first is: What are the climate change discourses that can be found in the speech? And the second: What voices can be heard in the speech?

The research on climate discourses that I will discuss in the thesis includes the comprehensive list of discourses identified by Taylor (2013). I will analyse Greta Thunberg's speech with the methods of discourse analysis to find the climate discourses present in the speech. I will identify the key climate change discourses in Thunberg's speech. I will also draw on previous research on climate discourses and see if the discourses identified in that research are also present in Thunberg's speech and also look for new emerging discourses in the speech. Rationale for the focus on this material is that the topic and issues are current and on the forefront of issues that Humanity as a whole has to tackle, if we are to survive. As Dryzek (2005) notes, discourse is important, and conditions the way we define, interpret, and address environmental affairs (p. 11). It is due to this

reason that it is important to investigate the existing discourses and to ways of speaking about the climate change. Thunberg's speech in UN is recent and it will be interesting to see what climate discourses surface in her speech and if there are some new ones.

The discourses will be discussed further in section 2.3. The structure of this thesis is the following. In section 2 the terms climate change and discourse will be discussed and then the previous research on climate change discourses will be presented. Section 3 is about the data and tools of analysis. The data of this thesis is the speech by Greta Thunberg on 23 September 2019. Tools of analysis relate to the terms of intertextuality and voice according to Pietikäinen and Mäntynen (2009). Section 4 contains the analysis of the material and its discussion. After the analysis, conclusions will be presented in section 5.

2 Climate Change and discourse

2.1 Climate Change

The Earth's climate has changed throughout history (NASA, n.d.). Climate change as a term is used to refer to the warming of our planet and climate change is basically interchangeable with the term global warming, as currently both are used to refer to the same phenomenon. According to the National Aeronautics and Space Administration, the majority of scientists agree that climate change and the warming of the planet are due to human activities:

Multiple studies published in peer-reviewed scientific journals show that 97 percent or more of actively publishing climate scientists agree: Climate-warming trends over the past century are extremely likely due to human activities. In addition, most of the leading scientific organizations worldwide have issued public statements endorsing this position. (NASA, n.d.).

The ways in which climate change is talked about in the media and in public discourse, and how the discourses of climate change started off in the first place, are enabled by the access to data about the changing climate, something that has been available only quite recently in terms of human history. This access to data has been provided by technological advancements and the data reveals the signals of the ongoing climate change (NASA, n.d.). Governmental and international panels, agencies, think tanks, and research units devoted to the subject have been formed during recent decades. One such agency is the Intergovernmental Panel on Climate Change (IPCC), which was created to provide policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options. (IPCC, n.d.) As Carvalho (2007a) points out, media depictions of humanity's impact on climate

change may often suggest the scientific community to be divided to two competing views on the issue (p. 223).

2.2 Discourse

Discourses are a way of looking at the world and speaking about defined subjects. They tell a story that humans use to derive meaning out of the world and construct their own reality around them. Discourse, according to Pietikäinen and Mäntynen (2009), has multiple meanings and is dynamic as a term. It can be used in different circumstances and contexts to mean different things. It can be thought as crossing circles, each representing the evolution of discourse studies and the use of its own terms in different professional fields. (p. 22). Further, discourse studies and discourse analysis can mean a way to study language use in its context – by real people in real situations and communities. (p. 24). Discourse also means the established use of language, or established narratives, in certain situations and fields (p. 25). Thus, it is the repetition of narratives and ways of speaking about a certain subject what is called discourse. This repetition naturally means that it is shared by other people. According to Dryzek (2005):

A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts. Discourses construct meanings and relationships, helping to define common sense and legitimate knowledge. (p. 9)

Although a discourse is ‘a shared way of apprehending the world’, there are also competing discourses, for not all people share the same discourses about the surrounding world. This, according to Dryzek, means that the way the world is viewed through a certain discourse is not easily comprehended by people who subscribe to other discourses. Discourses also hold a great deal of political power. (p. 9). In Critical Discourse Studies (CDS), according to Wodak and Meyer (2016), discourse means language use in speech and writing as a form of social practice. This implies a dialectical relationship between a particular event where language is used, a discursive event, and the situations, institutions, and social structures which frame it. The discursive event is shaped by them, but it also shapes them. (p. 6). Furthermore, the evidence for the existence of discourses has to come from texts, e.g. from what is said or written and more specifically from the similarities between what is said or written about a given topic in different texts and sources that circulate the same context. Based on these similarities that are repeated or paraphrased in different texts as well as dispersed among the texts in different ways that the discourses that the texts draw on can be unveiled and reconstructed. (p. 139).

2.3 Discourses of Climate Change

The different discourses that will be investigated in this section are climate change discourses, which includes global warming discourses, and environmental discourses. The literary review was conducted by searching for articles related to climate change discourse in books and online journals. It should be noted, as Carvalho (2007b) mentions, that in liberal democracies the citizenship itself is largely mediated and the mental construct of the political world and the political self is based on and reinforced by a constant flow of media-generated imagery (p. 180). This naturally means that the discourses of climate change are largely mediated as well. An instance of this mediation is mentioned by Nisbet (2009), who discusses climate change communication and in part how nuclear energy has been framed for the public in the media (p. 16-17).

On previous research about climate change discourse, I lean heavily on Taylor (2013) and Dryzek (2005). Dryzek identifies seven environmental discourses:

1. administrative rationalism,
2. democratic pragmatism,
3. ecological modernization,
4. sustainable development,
5. green radicalism,
6. survivalism, and
7. promethean.

These are discussed by Murphy (2017) as well. In his article on discourses of climate change Taylor (2013 p. 24-37) identified eight discourses:

1. climate change as a threat,
2. climate change represented as a change in a statistical average,
3. climate change and the discourse of limits to growth,
4. climate change and the discourse of sustainable development,
5. climate change and the discourse of liberal environmentalism,
6. the governmentality of climate change,
7. ecological modernisation as a discourse of climate change, and
8. governing climate change through technocratic expertise.

The last three of these are related to governing the threat, climate change, through discourse. Climate change as a threat is also mentioned by Humphreys (2010, p. 161). According to Humphreys, human rights and climate change are interlinked (p. 1). Due to this interlinkage

described by Humphreys, human rights have a place in climate change discourse as ‘a human rights discourse of climate change’. Ziser and Sze (2007) mention global coalitions calling for ‘climate justice’. These coalitions have become more and more vocal and visible at global forums where climate change is discussed, e.g. at United Nations climate change conferences (p. 401). Kristoffersen, St. Clair, and O’Brien (2010) cite ‘human security’ as a rising discourse in the context of climate change (p. 14). They also discuss the view that human influence on the climate system can be controlled and call this the ‘managerial discourse’ of climate change (p. 7).

Flusberg, Matlock, and Thibodeau (2017) point out that climate change discourse is filled with metaphorical language drawing on framings of ‘war’ and ‘race’. (p. 779). Climate change is being also portrayed as ‘an enemy’ in the war frame (p. 776) and as ‘a pressing threat’ (p. 769). From these we get the discourses of ‘war on climate change’ and ‘the race against climate change’. In the discourse of war against climate change, there is also a discourse of ‘climate change as an enemy’.

Bonnen, Horsbøl, Lassen, and Pedersen (2011) summarized earlier scholars’ work on climate change discourses in the fields of social and political sciences, environmental and natural sciences, and in media and communication studies, and suggest that three prominent discourses surface in the work they analysed. These three are the discourse of ecological modernization, green governmentality, and civic environmentalism. (p. 413-414). The first, ecological modernization discourse, calls for the need for top-down institutional or political intervention while also leaving room for regulation by the markets. The discourse of green governmentality relates to sustainable growth. In both two first discourses issues related to climate change are monitored as top-down processes. In the discourse of civic environmentalism surfaces the idea that citizens should play an important role in changing social practices, an idea which sets it apart from the two first discourses mentioned. (p. 414).

Sabet (2014) analysed pro-environmentalist behaviour (PEB) initiatives promoting low-carbon lifestyles in the UK. ‘Green governmentality’ and an emerging ‘environmental (/ecological/green/ sustainability) citizenship’, green consumption’ and ‘preservation’ discourses are most clearly present (p. 109). The article also groups the core appeals of the most popular discourses on the subject to two semiotic categories, which are ‘economic opportunities or setbacks’ and ‘moral/normative obligation’. Among the first of these belong the three discourses of ‘economic efficiency’, ‘sustainable (green) consumption’, and ‘ecological modernisation’. The second of the two categories consists of four discourses; ‘civic environmentalism’, ‘preservation’, ‘conservation’, and ‘ecocentric’ discourse (p. 97-98). In the context of ‘citizenship discourse’,

mentioned above, are also mentioned the ‘normative obligation’, sustainable consumption’, and ‘neo-liberal’ discourses (p. 98).

Boykoff (2011) mentions alarmist and contrarian discourses of climate change (p. 56-57). He also identified climate mitigation and adaptation as a public discourse and that much of the climate change discourse is happening on blogs (p. 170).

Doulton and Brown (2009) also identified eight discourses of climate change from their material of 150 newspaper articles published in the UK press (p. 191) The discourses they identified were (p. 193):

1. optimism,
2. rationalism,
3. ethical mitigation,
4. self-righteous mitigation,
5. disaster strikes,
6. potential catastrophe,
7. crisis, and
8. opportunity.

Kirilenko and Stepchenkova (2012) identified 11 major topics of climate change discourse in mass media by computer assisted content analysis. These topics were (p. 182-184):

1. polar regions,
2. physics of climate,
3. climate change impacts on coastal erosion, permafrost, droughts and floods,
4. scientific debates,
5. politics,
6. food production and poverty,
7. global warming hoax,
8. business responsibility and risks,
9. smog and car pollution,
10. biodiversity and pests, and
11. religion and faith.

There are also some discourses that can be identified from previous research that are not mentioned as discourses in the research itself.

Nisbet (2009) discusses climate change communication and in part how nuclear energy has been framed for the public in the media (p. 16-17). It is possible to extract a ‘nuclear power discourse’ that relates to climate change from the article. Diakopoulos et. al. (2015) found out that for characterizing the discourse on climate change in the blogosphere, particularly two topics are important: ‘climate change science’ and ‘climate change politics’ (p. 169). These could be called political- and scientific discourse on climate change, respectively. In Grundmann and Krishnamurthy’s (2010) corpus-based approach to climate discourse the collocates of the term ‘greenhouse effect’ indicate ‘a highly scientific discourse’ (p. 129). There are bound to be mainly and strictly scientific discourses of climate change within the scientific community. The finding of the above-mentioned study serves as another example of the existence of a ‘scientific discourse’ of climate change. ‘Scientific discourse’ could also, conceivably, be used as an umbrella term for a lot of varying discourses on climate change. Sedlaczek (2017) mentions that climate change has been presented as ‘a service topic: saving money through saving energy’ (p. 490). The study also finds that religious programmes represent ‘climate change mitigation’ as ‘a responsibility’ (p. 492-493). This can be read as a discourse of climate change as an ethical responsibility and it relates to the discourse of mitigation and adaptation. Foust and O’Shannon (2009) found that inside global warming discourse, there is apocalyptic rhetoric which divides to two main variants, ‘a comic apocalypse’ and ‘a tragic apocalypse’. These variants are used by scientists, journalists and environmentalists in their discourse of climate change. (p. 154-155). Apocalypse related, or apocalyptic, discourse is thus identified. In summary, these discourses that I identified are nuclear power, political, scientific, ethical responsibility, and apocalyptic discourses. By grouping together all these discourses that I have discussed, and arranging them within greater wholes by theme, larger categories can be identified. I was able to identify ten categories of discourses from this research material. These ten categories, with the discourses that belong them, are shown below in Table 1:

Table 1				
Discourses of climate change summarized in ten umbrella categories				
1. Governmentality and administration	2. Economic	3. Political	4. Ecological modernization	5. Climate change as a threat
governmentality	green consumption	democratic pragmatism		survivalism
green governmentality	sustainable consumption	liberal environmentalism		preservation
governing through technocratic expertise	sustainable (green) consumption	environmental citizenship		conservation
administrative rationalism	saving money through technology	civic environmentalism		ecocentric
managerial	economic efficiency	neo-liberal		war
limits to growth	food production and poverty	politics		race
normative obligation	business responsibility and risks			enemy
				disaster strikes
			crisis	
			potential catastrophe	
			biodiversity and pests	
			apocalyptic	
6. Ethical (Human)	7. Impacts	8. Scientific	9. Optimistic	10. Fringe discourses
human rights	coastal erosion, permafrost, droughts and floods	scientific debates	promethean	self-righteous mitigation
climate change justice	polar regions	physics of climate	optimism	global warming hoax
ethical responsibility	smog and car pollution	nuclear power	opportunity	alarmist
ethical mitigation		science	religion and faith	contrarian
human security		climate change represented as a change in a statistical average		green radicalism

Table 1

3 Data and Tools of analysis

3.1 Greta Thunberg's speech

The main material for this thesis is the speech that Greta Thunberg, the 16-year-old climate activist from Sweden, gave at the United Nations Climate Action Summit on 23 September 2019. The climate action summit was held with the rationale that climate change is the defining issue of our time and now is the defining time to do something about it. (Climate Action Summit). Greta Thunberg's speech was in nature emotional and accusatory towards world leaders for failing to take action, even though the science behind the data of climate change and the influence that humans have on it is sound. The speech is just under 5 minutes long and I am using a transcript of the

speech that is hosted online by National Public Radio (NPR) (2019). I will not be analysing the delivery of the speech, only the speech as a text.

I chose to analyse this speech because of two reasons. First is, that Greta Thunberg has emerged as a prominent figure in the climate action debate, which itself is interesting. She has given a face and a voice to the desperate and the anxious, to those who have not seen enough action taken by the people and governments in power with the ability to change course on humanity's impact on the climate of the planet. Greta Thunberg has become the unlikely spokesperson for action for mitigation of the effects of climate change. How does a 16-year old girl become the face of the current climate discourse? Why her, and not someone else? To take a strong stance on the issue could be one that is not so easy to do; it might be difficult for an individual to act upon the threat of climate change. The issue might simply feel too big to make a meaningful contribution towards mitigating our individual impact on the climate, not to mention starting on the path to become a person whose voice gets a global audience. Carvalho (2007b) writes that:

In 1957, Anthony Downs argued that the aggregative model of democracy led people to develop an attitude of 'rational ignorance' towards public affairs. Given how small the individual's contribution is in determining the ruling power in democratic systems and the effort involved in gathering the information necessary for a well-informed decision, it is rational – Downs noted – to simply ignore politics altogether. Our mediated political culture is conducive to the development of what I would call rational oblivion towards climate change. In a society that cultivates the values of freedom of choice and individualism, constantly associating them to consumption and mobility, and in a context of growing disengagement with democratic politics, the perception of lack of commitment of governments and co-citizens in relation to climate change can only lead to 'rational' individual inaction. (p. 182).

In spite of these obstacles mentioned by Carvalho, obstacles which can be attributed to what an individual might feel about their chances to affect the outcome of climate change or even climate change debate, Greta Thunberg has risen up to the occasion and chosen action instead of inaction. Carvalho further describes the problem of acting on climate change (2007b):

Given the unprecedented volume of media coverage of climate change in the last decade, widespread consciousness of the problem is to be expected. Paradoxically, while awareness of humanity's environmentally destructive power may indeed be at its highest point so is the exercise of that same power. Locked in this cycle,

individuals go by with a mild feeling of guilt. The discursive fabric of global politics will have to be reworked to get us out of the cycle. Notwithstanding the potential of recent developments such as global activism and citizen journalism for the construction of a global political subjectivity, the mainstream media's professional and ideological cultures appear to continue to block this transformation. (p. 182).

The second reason why I chose to analyse this speech is the fact that the speech is fresh and recent and contains interesting elements and contexts that make it different from the everyday climate discourse. I will analyse the discourses and voices present in the speech.

3.2 Critical Discourse Analysis

Critical Discourse Analysis (CDA) is a method of qualitative analysis. 'Discourse' as a term is in many cases used to mean an extended stretch of connected writing or speech, 'a text'. 'Discourse analysis' then means 'the analysis of a text or type of text' (Wodak & Meyer, 2016, p. 138). According to Wodak and Meyer (2016) there are three concepts that figure in all forms of Critical Discourse Studies (CDS): critique, ideology and power. Within the scope of this thesis, I will focus on these three concepts. Wodak and Meyer write of critique:

'Critique' carries many different meanings ... Adhering to a 'critical' stance should be understood as getting closer to the data (despite the fact that critique is mostly 'situated critique'), embedding the data in a social context, clarifying the positioning of the discourse participants, and engaging in continuous self-reflection while undertaking research. (2016, p. 24).

Wodak and Meyer (2016) further cite Foucault, according to whom critique means the examination, evaluation and assessment of actions, objects, persons, and social institutions among other things (p. 24). Critique may also relate to a quest to uncover truth, to specific values or ethics, to appropriate text exegesis, to self-reflection, to emancipation and enlightenment, to specific aspects of social change, to ecological protection and to aesthetic orientation. (2016, p. 24). The critical part of CDA in this thesis is the one according to Foucault, explained above. Ideology is seen by Wodak and Meyer (2016) as a perspective which is often one-sided. What is of interest when it comes to ideology are the ways in which linguistic and other semiotic practices mediate and reproduce ideologies within social institutions (p. 25). Ideology is described as a worldview and a system composed of related mental representations, convictions, opinions, attitudes, values and evaluations, which is shared by a specific social group (2016, p. 25). Power is described by Wodak and Meyer (2016) as socially ubiquitous. Power is either legitimized or de-legitimized in discourses and power

relations also limit and regulate discourses (p. 26). I will be analysing the way in which these power relations surface in the discourses on my research material. As Wodak and Meyer (2016) write:

Power is discursively realized not only by grammatical forms, but also by a person's control of the social occasion by means of the genre of a text, or by the regulation of access to specific public spheres. (p. 26).

The concepts of critique, ideology and power will be used when analysing the climate change discourses and voices in Greta Thunberg's speech.

3.3 Intertextuality

This thesis uses the definition of intertextuality by Pietikäinen and Mäntynen (2009). Intertextuality, as a concept, describes the historical and social aspects of language use: every time when we use language, we use other people's words, quote other people's expressions and recycle meanings that were there before we ever started to use language (Pietikäinen & Mäntynen, p. 116). Thus, each expression has its history and whether we mean to or not, this history comes along with the expressions themselves (p. 116). However, intertextuality does not only mean the recycling or loaning of words and expressions, but in the same way different discourses, genres and narratives move from one situation of language use to the next (p. 116). Intertextuality places discourse research strongly as a part of the study of society, culture, and history (p. 120). Each word and utterance that has been said before carries with it its history as well as the previous times it has been used – social, cultural and political meanings and contexts. (p. 120). According to Johnstone (2008), intertextual relations between texts and other texts enable people to interpret new instances of discourse with reference to familiar activities and familiar categories of style and form. (Johnstone, p. 16). This intertextuality of discourse means that discourses, as well as words and utterances, can have meanings attached on to them by instances where they have been used before.

As Pietikäinen and Mäntynen (2009) write, previous instances of language use can be said to leave marks in the expressions that are used in them (p. 117). This is why we can recognize particular speeches; it happens because the speeches have traces of previous situations and functions in which they have been used (p. 117). A function of a celebratory speech, for instance, when used in a new situation, changes (p. 117). When it is used in a commercial, it carries with it echoes of previous situations of language use it has been used in and its prototypical context and form, from what we recognize it, now brought to a new context with new affiliations, is given a new function which deviates from the previous one and thus new meanings are created (p. 117). This phenomenon is called intertextuality (p. 117). We quote others and make use of other instances of

language in action modifying them in every situation into something new, something with meaning, something that fits into that particular situation (p. 116). In this way language is always historical and social, it is related to both previous and present situations of language use (p. 116). When we use language, we are connected not only to the present moment but also to the previous situations of language use. (p. 116). This view is originally from Bakhtin, according to whom, intertextuality means that no text is created in a vacuum, but it carries with it traces of other texts and that all language use is riddled with other texts. (Pietikäinen & Mäntynen, p. 118). The view that words and utterances carry with them social and historical relations and meanings is shared by other scholars as well. As Allen (2011) writes:

If words, for Bakhtin, Medvedev and Volosinov, are relational, it is simply not because of their place within an abstract system of language, but because of the nature of all language viewed in its concrete social situatedness. All utterances are responses to previous utterances and are addressed to specific addressees. (Allen, p. 19).

In Orr (2006) intertextuality is defined by the view of Plottel and Charney as

Interpretation is shaped by a complex of relations between the text, the reader, reading, writing, printing, publishing and history: the history that is inscribed in the language of the text and in the history that is carried in the reader's reading. (Orr, p. 11).

3.3.1 Voice

The intertextuality of language use can also be described with the concept of *voice* (Pietikäinen & Mäntynen, 2009, p. 122). Voices exist in all texts and they also bring discourses to the texts (p. 124). Voice has, as do many of the concepts in discourse studies, multiple meanings (p. 122). First of all, it can be used to refer to the language user's own vision of truth or to speech that is tailored as one's own with the use and choice of differing resources (p. 122). Secondly, the term can mean "outsider voice", meaning how language use can entail a voice or voices that do not originate from the particular speaker speaking at that particular moment and are therefore something foreign or alien in the speech; it includes someone else's voice (p. 122). This kind of intertextuality of language use is often described with the concept of *polyphony*, meaning voices in a speech coming from many different sources (p. 123). These different sources mean that the voice is does not originate with the speaker in that particular moment. Multiple voices in a speech are not necessarily easily distinguishable from one another (p. 123). Polyphony often means that a speech or text has multiple simultaneous voices overlapping, sliding, and interweaving (p. 123). For instance, in the

microlevel of language use, this polyphony may appear in the form of some utterances that sound like they are quoted from someone else and sounding like someone else's voice but look as though coming from the speaker and not being quotes from anyone else (p. 124). In a speech or text polyphony can be expressed in different ways, for example changing the tone of one's voice or directly referring to other speeches or texts with the use of quotation marks (p. 124). This kind of polyphony, although often being visible and easily deducible, is essential to finding out what kind of voices exist in any given text and what kinds of discourses are brought to the text by these voices (p. 124). In addition to referring to other work, other voices can be brought to language use with the devices of *presuppositions* and *denials* (Pietikäinen & Mäntynen, 2009, p. 126). Presupposition means an assumption that works as a basis of a claim that is made with an utterance, while a denial assumes the existence of a particular claim by denying it (p. 126). In my analysis of voice in Greta Thunberg's speech I will be looking to find these overlapping and intertwined voices that might be present in the speech to see if they bring more discourses of climate change to the surface. I will also look for discourses and outsider voices by analyzing the references, presuppositions, and denials in the speech.

4 Analysis

In this section will analyse Greta Thunberg's speech and discuss the findings. First, I will discuss the climate change discourses that I have identified in the speech and then compare them to the discourses that I identified in previous research in section 2.2. After this, I will analyse Thunberg's speech to see if any outsider voices can be found in the speech.

4.1 Analysis of Climate Change discourses

In section 2.3 I identified the main discourses of climate change that exists in previous research on the subject. Comparing these discourses to elements in Greta Thunberg's speech can reveal the climate change discourses in the speech. To start the comparative analysis, let's go through the umbrella categories of climate change identified in table 1. The categories are as follows:

1. Discourses of governmentality and administration
2. Economic discourses
3. Political discourses
4. Ecological modernization discourses
5. Climate change as a threat
6. Ethical and human discourses
7. Discourses of impacts of climate change
8. Scientific discourses

9. Optimistic discourses

10. Fringe discourses

Most of the climate change discourses I identified in Greta Thunberg's speech relate to numbers 4–8 of these ten categories. Next, I will go through the discourses identified and their reasoning by each category. Ecological modernization discourse is referenced by Thunberg when she says:

They also rely on my generation sucking hundreds of billions of tons of your CO₂ out of the air with technologies that barely exist. (NPR).

The technologies that barely exist here is referring to a claim that future technologies will solve or help solve climate change. This can be tied to ecological modernization, for such technologies would be the result of a top-down institutional or political intervention. The discourse of climate change as a threat is evident in the speech, for example from the line:

The popular idea of cutting our emissions in half in 10 years only gives us a 50% chance of staying below 1.5 degrees [Celsius], and the risk of setting off irreversible chain reactions beyond human control. (NPR).

This can be also read as a discourse of climate change as a race, with goals that have to be met in a certain timeframe in order to avoid irreversible outcomes. These irreversible outcomes also suggest a discourse of disaster strikes, potential catastrophe discourse, and apocalyptic discourse. Ethical and human discourses in the speech are chiefly human rights and climate change justice discourses, as can be read from the following two examples. First is:

People are suffering. People are dying.” (NPR).

And the second:

... aspects of equity and climate justice. (NPR).

The discourse of climate change justice, or just climate justice, is thus referenced directly by Thunberg in the speech. Impacts of climate change discourses are also quite plainly stated by Thunberg, when she says:

Entire ecosystems are collapsing. We are in the beginning of a mass extinction. (NPR).

The mass extinction is also yet another example of an apocalyptic discourse. Scientific discourses in the speech come in the form of climate change represented as a change in a statistical average and

by general referring to science as an authority on the subject of climate change. The first of these two discourses is deducible from the passage:

To have a 67% chance of staying below a 1.5 degrees global temperature rise – the best odds given by the [IPCC] – the world had 420 gigatons of CO₂ left to emit back on Jan. 1st, 2018. (NPR).

The second is evident from the following excerpt:

For more than 30 years, the science has been crystal clear. (NPR).

In addition to the discourses of these umbrella categories, and the discourses discussed in accordance with them, there are other interesting possible discourses of climate change identified in the analysis that will be discussed next.

The whole premise of Greta Thunberg's speech seems to rest upon the confrontation of those in power and the older generations by those who are young today, the young people's generation. Thunberg confronts the very top of the power structures of the world. By addressing the world leaders on the issue of climate change, she is speaking for the people who do not at the moment have power to those who do. An opposition that is realized in the speech is an 'us vs. them', or even an, 'an us vs. you' manner. 'How dare you!' is a phrase which Thunberg repeats often in the speech. This brings forth a clear accusatory tone to the speech, and it is a sign of an accusatory discourse. This means that Thunberg accuses the older generations of not doing enough to stop climate change, even though it is clearly happening and caused by humans, as is her premise. It is clear to Thunberg, that the issue lies with the older generations not doing enough and by this inaction causing misery on the younger generation of today as well as the future generations yet to come. This can be seen in the following excerpts:

You have stolen my dreams and my childhood with your empty words. (NPR).

How dare you continue to look away and come here saying that you're doing enough, when the politics and solutions needed are still nowhere in sight. (NPR).

You say you hear us and that you understand the urgency. But no matter how sad and angry I am, I do not want to believe that. Because if you really understood the situation and still kept on failing to act, then you would be evil. And that I refuse to believe. (NPR).

Fifty percent may be acceptable to you. ... They also rely on my generation sucking hundreds of billions of tons of your CO2 out of the air with technologies that barely exist. So a 50% risk is simply not acceptable to us — we who have to live with the consequences. (NPR).

And you are still not mature enough to tell it like it is. (NPR).

You are failing us. But the young people are starting to understand your betrayal. (NPR).

And if you choose to fail us, I say: We will never forgive you. (NPR).

And, of course, the finishing remarks by Thunberg, which seem to also deliver a threat to the older generations:

We will not let you get away with this. Right here, right now is where we draw the line. The world is waking up. And change is coming, whether you like it or not. (NPR).

Thunberg's accusatory manner also seems to assume that her own generation, once in power, will choose differently and not repeat the same mistakes of inaction and scepticism of human caused climate change that she accuses the older generations of making.

In total, eleven discourses of climate change were identified in the data. These discourses are:

1. Discourse of ecological modernization
2. The discourse of climate change as a threat
3. Discourse of climate change as a race
4. Discourse of disaster strikes
5. Potential catastrophe discourse
6. Apocalyptic discourse
7. Human rights discourse
8. The discourse of climate change justice
9. Impacts of climate change discourse
10. Climate change represented as a change in a statistical average
11. Accusatory discourse

4.2 Analysis of Voice

In the analysis of the voices in Greta Thunberg's speech I will be looking to separate the different voices in the text, as discussed in section 3.3.1. I will look for outsider voices by analyzing the references, presuppositions, and denials in the speech. It will be important to keep in mind who the speaker is addressing in the speech, while conducting the analysis. The speaker's often-used pronoun *you*, in plural, refers to world leaders, to those in power and to those with influence over humanity's policy towards climate change and its mitigation. The analysis of the speech yielded six instances of referring, six instances of presupposition and two instances of denial. These will be discussed in the following sections of 4.3.1, 4.3.2, and 4.3.3, respectively. The voices outsider identified based on this analysis are:

1. the voice of the business world and the capitalist
2. the voice of the scientific community, the IPCC, and the climate scientist
3. the voice of the world leaders [claiming to be doing enough]
4. the voice of the young people and the future generations
5. the voice of the speaker's own lost childhood
6. the voice of the older generations
7. the voice of the technological industry and engineers
8. the mature voice in favor of climate action

4.2.1 Referring

In the analysis of references made by the speaker six instances of referring were found. The first instance of referring is:

... all you can talk about is money and fairy tales of eternal economic growth. (NPC).

In this sentence, the speaker refers to people who prefer to think and give precedence to money instead of the climate. This is identified as the voice of the business world and the economy. It is the voice of the capitalist. The second instance of referring is:

For more than 30 years, the science has been crystal clear. (NPC).

Here in this sentence the voice of science, the scientific community, and the climate scientist is heard. The third reference is:

How dare you continue to look away and come here saying that you're doing enough. (NPC).

This refers to the world leaders saying they are doing enough. In this way the voice of those leaders who think they are doing enough is identified. The fourth instance of referring is:

The popular idea of cutting our emissions in half in 10 years only gives us a 50% chance of staying below 1.5 degrees [Celsius]. (NPC).

Here again comes up the voice of the scientific community. ‘The popular idea’ that is referred to is that which comes from the climate scientists. The fifth reference is next:

To have a 67% chance of staying below a 1.5 degrees global temperature rise – the best odds given by the [IPCC] – the world had 420 gigatons of CO2 left to emit back on Jan. 1st, 2018. (NPC).

This excerpt is a direct quote to the IPCC, so the voice of the climate science community and the IPCC is identified yet again. The sixth and final instance of referring is:

The eyes of all future generations are upon you. And if you choose to fail us, I say: We will never forgive you. (NPC).

Here the speaker refers directly to the future generations, whose eyes are, according to the speaker, now upon the world leaders. This direct reference to the future generations brings the voice of young people, the voice of the next generation and perhaps even the voices of all the generations to come into the speech. With this analysis of the references the speaker makes, four distinct outsider voices were identified. The voices are:

1. the voice of the business world and the capitalist
2. the voice of the scientific community, the IPCC, and the climate scientist
3. the voice of the world leaders [claiming to be doing enough]
4. the voice of the young people and the future generations

4.2.2 Presupposition

Six instances of presupposition were identified in the analysis. The first is:

You have stolen my dreams and my childhood with your empty words. (NPC).

Here the presupposition is that if the childhood and dreams had not been stolen, the speaker would still have them. This is the voice of the speaker’s own lost childhood, which presents a personal grievance towards the world leaders the speaker is addressing. The second instance of presupposition is:

Fifty percent [chance of staying below 1.5 degrees] may be acceptable to you. (NPC).

The presupposition, in this case, is that fifty percent chance of staying below 1.5 degrees warming is acceptable to the older generations, who won't, in any case, be around to see the consequences or feel the impacts of the dice roll that this 50% chance essentially is. The voice behind this presupposition is also present in another case of presupposition, which is:

So a 50% risk is simply not acceptable to us — we who have to live with the consequences. (NPC).

With these two instances of presupposition, the voice of the older generations is identified. Next is the fourth presupposition:

They also rely on my generation sucking hundreds of billions of tons of your CO2 out of the air with technologies that barely exist. (NPC).

With this presupposition, the voice of the technological industry and engineers is identified. The presupposition is that technologies that can such CO2 out of the atmosphere will be developed in the future. The fifth presupposition is next:

How dare you pretend that this can be solved with just 'business as usual' and some technical solutions? (NPC).

Here the presupposition implies that someone thinks that the issue of climate change can be solved with 'business as usual'. This is again instance of the voice of the world leaders who claim to be doing enough. This voice was already mentioned in section 4.3.1. The sixth and final presupposition is:

The world is waking up. And change is coming, whether you like it or not. (NPC).

The presupposition in this case is that the world is waking up and change is coming. The change is that which is brought about by the young generation and the future generations. Thus, once again, the voice of the young people and the future generations is identified. To sum up, five outsider voices were identified with the analysis of presuppositions in the speech. These five are:

1. the voice of the speaker's own lost childhood
2. the voice of the older generations
3. the voice of the technological industry and engineers
4. the voice of the world leaders [claiming to be doing enough]
5. the voice of the young people and the future generations

4.2.3 Denial

The analysis yielded two instances of denial used by the speaker. The first one, although an instance of referring directly to things that the world leaders, to whom the speaker refers to multiple times during the speech, have said, also contains a presupposition, the unit as a whole is mostly an instance of denial and has been positioned as such in the analysis. This instance is:

You say you hear us and that you understand the urgency. But no matter how sad and angry I am, I do not want to believe that. Because if you really understood the situation and still kept on failing to act, then you would be evil. And that I refuse to believe. (NPC).

The speaker says she does not want to believe that the world leaders understand the urgency and that she refuses to believe them to be evil. The outsider voice identified in this instance is that of the world leaders. As mentioned in the beginning of this section, while this excerpt is analyzed as a denial, it contains elements of referring and presupposition as well. The voice of the world leaders was also mentioned in section 4.3.1, when identified in a reference made by the speaker. The second instance of denial is:

And you are still not mature enough to tell it like it is. (NPC).

This denial implies that it is not the world leaders who are mature enough, but someone else, perhaps even the speaker, is. This outsider voice is the mature voice in favor of climate action. In total, the analysis of denials in the speech resulted in the identification of two different outsider voices. These are:

1. the voice of the world leaders
2. the mature voice in favor of climate action

5 Conclusions

In this thesis my objective was to answer the question ‘Who speaks for Earth?’ in the speech given by Greta Thunberg on September 23, 2019. To answer this question, I investigated the climate change discourses and outsider voices present in the speech. The research questions became ‘What are the climate change discourses that can be found in the speech?’, and: ‘what voices can be heard in the speech?’ I set to answer the first question by forming a coherent set of discourses from previous research on climate change related discourses. I then compared this list to the chosen material of this thesis, Greta Thunberg’s speech on September 23, 2019, to analyse the different climate change discourses present in the speech. Even though I think I have completed an extensive

examination into previous research about climate change discourses, it is likely that there exist more relevant discourses on the topic than what have been discussed in this thesis. Keeping this limitation in mind, eleven different climate change discourses were identified in the analysis of the speech. These eleven are:

1. Discourse of ecological modernization
2. The discourse of climate change as a threat
3. Discourse of climate change as a race
4. Discourse of disaster strikes
5. Potential catastrophe discourse
6. Apocalyptic discourse
7. Human rights discourse
8. The discourse of climate change justice
9. Impacts of climate change discourse
10. Climate change represented as a change in a statistical average
11. Accusatory discourse.

Of these eleven, accusatory discourse was a newly identified discourse, while the other ten were also identified in previous research. To answer the second question, I set to find out the outsider voices that are present in the speech with the tools of discourse analysis. This analysis resulted in the identification of eight different outsider voices:

1. the voice of the business world and the capitalist
2. the voice of the scientific community, the IPCC, and the climate scientist
3. the voice of the world leaders [claiming to be doing enough]
4. the voice of the young people and the future generations
5. the voice of the speaker's own lost childhood
6. the voice of the older generations
7. the voice of the technological industry and engineers
8. the mature voice in favor of climate action.

Future work could look into mapping out the vast field of climate change or climate discourses in order to update the cohesive list by Taylor (2013). Voices that appear in speeches about climate change, by Greta Thunberg or by someone else, could also be researched in future work.

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