Environment and Climate Through the Lens of Presidential Debates

An Explorational Study on the Development and Prominence of
Environmental and Climate Narratives in U.S. Presidential Debates

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Master's Thesis

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Autumn 2021

Abstract in Norwegian

Denne oppgaven utforsker utviklingen av Amerikansk klima- og miljødiskurs med utgangspunkt i TV-sendte amerikanske presidentdebatter. Formålet med oppgaven er todelt. Først å utforske amerikanske presidentdebatter med det for å finne egnede vinklinger og tematikker som videre kunne utforskes. Da valget falt på klima- og miljødiskurs som overordnet tema viste gjennomgangen av tilgjengelig forskning at denne tematikken i liten grad har blitt forsket på i lys av Amerikanske presidentdebatter.

Gjennom en kombinasjon av kvalitativ og kvantitative tilnærminger har det andre målet med denne oppgaven vært å utvide kjennskapen til hvordan Amerikanske presidentkandidater snakker, og har snakket om miljø- og klima i kontekst av sin tid. Videre forsøker oppgaven å besvare hvordan ulike trender har utviklet seg gjennom tidsperioden 1960 til 2020. Dette innebærer en komparativ analyse både i tid, men også mellom enkeltkandidater og partier. Oppgaven forsøker også å besvare spørsmål som blir reist i mindre arbeider knyttet til hvorvidt Republikanere snakker annerledes om denne tematikken enn Demokrater, i hvilken grad kandidatene får spørsmål om klima- og miljø og hvordan de velger å besvare slike spørsmål.

Funnene underbygger tidligere forskning som peker på at Republikanske kandidater har en større tendens til å være negativt innstilt mot prioriteringer av klima og miljø, man ser en større skepsis til innvirkningen mennesker har på miljøet og en mindre interesse for tematikken enn sine Demokratiske motstandere. Oppgaven fant også igjen typiske trekk fra politiske narrativer som at Demokrater tendenserer til å beskrive klima- og miljøpolitikk som en økonomisk mulighet, mens Republikanere ser på det som en økonomisk byrde. Demokrater er også mer positivt innstilt til internasjonalt samarbeid for å bekjempe klimaendringer. Samtidig viser også resultatene at klima- og miljødiskurs er en liten del av Amerikanske presidentdebatter. I en historisk kontekst ser man en jevn, men lav interesse for tematikken med 2020 som eneste store avvik fra denne normen. 2000 og 1988 kan også vise til en viss interesse for tematikken.

Oppgaven kan også bidra til å øke innsikten i hvordan klima- og miljønarrativer er en del av den politiske diskursen i verdens største økonomi. Den kan også være til hjelp i formidlingen av kunnskap i møte med klimaendringer og dets sosioøkonomiske konsekvenser.

"We have the best, lowest number in carbon emissions, which is a big standard that I noticed Obama goes with all the time. Not Joe.

I haven't heard Joe use the term because I'm not sure he knows what it represents or means, but I have heard Obama use it."

Donald J. Trump, October 22nd, 2020.

Acknowledgements

I want to thank my supervisor Carolina Amador-Moreno for her support, guidance, and, most of all, patience throughout this project. Thank you for all your feedback. Although I have always preferred to find solutions myself, your backing has been invaluable to me. Writing a master's thesis has proven itself to be a challenge, and I could certainly not have done it without your backing and insight.

To "Mamma" and "Pappa", thank you for all your support during my years at university and those prior. Thank you for providing a safe space where my sister and I could flourish in love and curiosity. My quest for knowledge started in a loving home, and I want to express my sincerest gratitude for everything you have done for me.

Thank you to colleagues and friends who have supported and inspired me to keep going even though it has, at times, been challenging. A special thanks go out to the "office" for cake, conversations, laughter, and a lot of horrible coffee. Thank you for reminding me also to have some fun amongst all the seriousness.

Lastly, I would like to express my greatest gratitude to Lisbeth Espedal for your unconditional, selfless support and for believing in me. I have always looked to you for inspiration and encouragement, which you have provided in abundance. Thank you for all the times you asked me about my thesis, although I preferred to talk about anything else. Thank you for just being you. I am forever grateful.

- Andreas

Table of Contents

List of Tables, Figures and Screenshots

Note that all Tables, Figures are Hyperlinked for easy digital access. A high-resolution and larger example of all the tables, figures and screenshots can also be found in Appendix G.

1. Introduction

As I started my academic career in the teachers' programme at the University of Bergen, it was never in any way evident that I would write my masters within the linguistics strand, nor that I would focus on U.S. politics. Nevertheless, at the University of Bergen (UiB), I was given a chance to explore the world of politics and expand my knowledge within linguistics while also taking a myriad of other courses ranging from economics to studying religions.

However, politics proved to be one of the most exciting fields of study that I touched upon, and when the time came to find a topic for my master thesis, American Politics was a natural starting point. As a field of study, American Politics was introduced to me through courses at the institute of comparative politics at UiB and through the Institute of foreign languages.

Over the course of the teacher's programme in English, linguistics was introduced through several different courses, providing a broad background for further studies. Especially the notion that language influences human interactions and how people perceive the world around them resonated well with my own understanding of language. Thus, it seemed like a natural choice to combine the two academic fields for this thesis.

It has also been a blessing to be given a chance to work with environmental and climate issues. Throughout this year, my interest in the issue has grown tremendously. Through courses at the University of Bergen, the Western Norway University of Applied Sciences and BI Norwegian Business School, I have been allowed to pursue academic research on sustainability as well as challenges and opportunities arising from climate change. Especially the international ARQUS course[1], where students from seven European Universities examined common and unique challenges originating from climate change, served as an eye-opener.

Combining all three themes in one thesis has been but challenging and captivating at the same time. Through the work on the thesis and supplementary readings, I have been introduced to the world of climate and environmental narratives, to which I am thrilled to be adding a small contribution myself.

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[1] See ARQUS220 – UiB

1.1 Background and Motivation

"It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred." IPCC – Sixth Assessment Report (5, 2021).

In the middle of August 2021, the Intergovernmental Panel on Climate Change (IPCC) released their sixth assessment report on the climate system and climate change. The results presented in the report were unmistakable: Observed climate change is unequivocal at the global scale and more apparent on the regional and local scales (IPCC 2021, 5). Attestation of human influence has been present even from the first IPCC assessments reports as early as the 1990s. However, evidence for human impact has strengthened progressively from the early reports to the fifth report in 2014, and even more so in the latest report released in 2021. The report is a testament to the urgency of the issue at hand. Several prominent voices have, in the wake of the report, argued for an intensified global effort to turn the tide of climate change, or at least to mitigate some of the potential dangers that lay on the horizon for a globe that does not manage to enact a transformation to net zero.

The climate problem, however, is not only a scientific issue. It is also a linguistic one. It is essential to acknowledge that if we, as the global community, can agree on how to write and speak about an issue that is global in its ramifications, there is a higher chance that the world can reach common ground. Understanding is also the pathway to start working on a common solution to one of humankind's most significant challenges. Both experts and ordinary citizens of the world share this same preoccupation. Thus, the question arises: How can we hope to agree about climate change, a global challenge in which many kinds of knowledges can be contested? (Fløttum 2010, 19). The issue at stake, as Fløttum (2010, 19) eloquently puts it, is the transfer of knowledge from science to politics, a transfer that is realized through language. Language reflects and expresses facts and opinions; it also influences attitudes and behaviour (Fløttum 2016). Thus, the basis for any agreement, and sound action, be it on a global, national, regional, or local level, is the foundational need to know what is actually being said and discussed by whom. Therefore, it is also necessary to understand how different political actors are framing science. This is especially the case with actors that can have a significant impact on other people through their rhetoric. By both looking at political actors and the increasingly important topic of climate change through the lens of linguistic analysis, this thesis aims to contribute to the much-needed field of climate change discourse.

As the climate change debate has been evolving over the years, there is now a multitude of voices and opinions. Diverse societal actors, with often competing desires, goals and aims, are getting involved in the discourse on climate, and in doing so, are framing key questions. Therefore, it is necessary to study how climate knowledge, or the opposite, is transmitted to the public in all kinds of different forms and across all types of arenas. Everly little piece of research pertaining to climate discourse can therefore be a part of a grander effort to piece together a more comprehensive picture of the global climate discourse both as it stands in the present and how different narratives have evolved from an earlier stage.

Given that any orator and any platform that utters their learned, or not so learned, opinion on climate or the environment can potentially be a source for research, the research opportunities are more or less infinite. Therefore, choosing which stage, platform, or message form one wants to delve into is far from a simple choice. The same goes for researchers looking at specific actors that might be of interest due to their societal position, message, impact, or other reasons.

Through arduous hours spent reading, watching, and disseminating small pieces of information on U.S. politics, one thing occurred to me that is now also one of the foundations for this thesis; words have an impact. Words can bring people together, but they can also sow seeds of contention, conflict, dissent, and hostility. One of the most vivid examples of the impact of words and the power of narratives occurred on January 6th when a large crowd attacked the U.S. Capitol shortly after a speech by incumbent president Donald J. Trump. Even though it is hard to argue that this incident was spurred on solely on the words of the President during his speech, the point is rather that the narrative the President created turned into reality for some of his supporters. A narrative is a part of the creation of realities. Whether or not others share those can vary, but the world is littered with competing narratives in all kinds of settings. Without delving more into this example, one last point is in order. The event also shows the potential power of the presidency in the United States when it comes to creating narratives that gather extensive support, which can have far-flung implications both politically and on how people choose to act in their daily lives.

Although the rise of new powers such as China might pose a challenge to U.S. global supremacy, the role of the U.S. as the arguably most politically, culturally, and economically influential country in the world, and especially the West, advocates academic attention. Political events, and especially the presidential elections, are also covered extensively by Norwegian media. With late-night live coverage of debates and the broadcasting of both major

and minor events in the campaigns, American politics are close at heart for many Norwegians. Thus, the choice of the U.S. as a field of study, and more precisely American politics, is relevant in a broader sense, as the U.S. plays a pivotal role in most major global issues, such as the climate question. The televised presidential debates are also viewed by millions upon millions of voters and are arguably the largest recurring political event in the world when measured by viewers. Thus, it provides the perfect stage for the presidential candidates to create and present their narratives relating to a broad spectrum of themes concerning the U.S. and the world's past, present, and future.

Whether it is a commercial on Fox News, a speech in the Senate, a presidential debate, addressing the nation, or spurring an insurrection, all political communication can be a source of information. However, my choice fell on political campaign debates, and more precisely, televised presidential debates as they are an intrinsic part of the complex information environment in modern political campaigns. Importantly, debates also offer substantial democratic benefits. First, they provide an additional channel or source of information to the voters in addition to other sources such as webpages, speeches, social media, posters, commercials, and mail advertising. The debates also provide common ground in the presidential campaign for the whole country, contrary to more localized efforts, which are primarily focused on swing states. The huge audiences for the debates both through formal and informal channels also mean that the candidates' potential for influence is substantial. Thus, the debates are also an opportunity for presidential candidates to make policy commitments, allowing voters to hold them accountable for their campaign promises. Another potential advantage of the debates for democratic purposes is how they allow for clashes between the candidates. When it happens, clashes expose differences between the candidates in greater depth and thus enable the viewers to contrast the candidates' position directly (Benoit 2013, 6).

Political campaign debates in the U.S. are also a unique message form. As we will see, some election debates offer closing or opening statements, but most of the time is spent answering questions posed by journalists or a moderator. Occasionally, the questions are also asked by voters, called the *townhall-format*. However, this approach has been eroded through quality controls and other barriers that have turned it into a reflection of standardized debates. Nevertheless, the fact that political debates are structured around questions matters because those questions also prescribe a topic to which the candidates can talk about (Benoit 2013, 35). While the questions allow the candidates to express their opinions and policy stance on several different topics, events, and themes, it also levels the playing field for the participants as the

candidates are pressed on the same issues and often forced to respond to each other's arguments on a broad range of issues. The debates also increase candidates' responsibility for their words and promises, as viewers expect concrete actions to follow such claims and promises should the candidate become president (Epwene 2017, 28).

Debates, therefore, offers a rich context to which a researcher can investigate a presidential candidate's commitment to a myriad of themes and issues. Furthermore, it allows for a comparative perspective on candidates, political parties, or movements across time due to the relatively comparable datasets each debate or set of debates provides during an election year. To Throuw (2005, 4), the debates also serve as a neutral source of reliable information, present a more or less unbiased display of political content, and directly link the politicians and the public. Whether or not this is entirely precise, given the massive dissemination of the debates and live coverage from domestic and international media, can be argued. However, as a source of information on contemporary issues and prevalent political viewpoints in the U.S., the debates can provide the researcher with more or less unfiltered information on the presidential candidates' stance on any theme they might have touched upon during the debates.

1.2 Are the Televised Debates Concerned with Voter Issues?

Given that the choice fell on the televised debates as the foundation for the thesis, the importance of the televised debates as a representation of voter concerns should be addressed. Two prominent studies have considered this issue and are thus referred to in this discussion.

The televised presidential debates have been criticized for ignoring the voters' concerns (see Benoit and Hansen 2001 & McKinney 2005). Especially Benoit and Hansen (2001), who analyzed the question topics in almost every debate from 1960 to 2000, have suggested that there is a limited correlation between voter concerns and questions asked. McKinney (2005) conducted a more limited study, contrasting the town hall debate of 1992 to that in 2004. In 1992, there was a notable relationship between voter concerns and the themes covered by the questions in the debate. However, in 2004, when the moderator handpicked the questions, there was no correlation between the two. The methods of both studies, however, can be criticized. Benoit and Hansen (2001) compared the number of questions asked on a particular topic to the percentage that topic polled on public opinion polls. So, for instance, in the year 2000, the economy was polled to be the most critical issue by 18% of the voters. According to their approach, 18 per cent of the total questions should then be concerned with the economy. Furthermore, as they based their study on *the* most important issue, they were left with a small

sample size of themes, compared to the debates, which usually covers a series of themes across several debates. For instance, the debates in 1972 included 32 themes compared to only a handful of themes deemed important to the voters by Banoit and Hansens (2001) approach.

Benoit and Hansen (2001) also excluded the townhall debates of 1992 and 1996, which further poised their data to conclude that there was little correlation between the questions and voter interests. Although Benoit and Hansen (2001) did not leave their raw data, this thesis draws an entirely different conclusion based on the available data. Where Benoit and Hansen (2001, 135) conclude that there is a negative correlation between voter interests and the debate questions in 2000 (-0.14), the data also showcase that every single one of the issues the voters held as most important was addressed through one or more questions in the debates. This suggests that although the issues were covered to varying degrees, every important voter issue was touched upon during the debates.

McKinney (2005) conducts a more thorough examination, using the number of words under each theme as a benchmark and contrasting it to public opinion polls. Nevertheless, the same issue arises; for instance, in 1992, health care and the budget deficit were polled by 59% of the voters to be the most important issues, with health care polled at 30% and budget deficit at 29% (McKinney 2005, 207). A debate where 59% of the time was spent on these two issues would be anything but representative of voter interest. That entails that the person who has chosen an issue to be the most important *only* cares about that issue. To further expand on this point, Gallup polls showed during the height of the financial crisis in 2009 that 86% of Americans had economic issues as the most important problem. Given the approach of Benoit & Hansen and, to a lesser extent, McKinney, the debates should almost exclusively cover this issue, or they would be ignoring voter interests.

Instead, the available pieces of their data show that the most important voter issues are, to a large extent, touched upon. For instance, in the town hall debate of 2004, education was not brought up as a question despite being polled as the most important issue by 6% of voters. Both candidates, however, brought up the issue out of context, including an important voter issue in the debate. Although both the articles mentioned above found no correlation between the time spent on a topic and voter concern for that topic, they also show that important issues are, to a large extent, brought up in one or more questions to the candidates. Although the distribution of questions and the time spent on each issue might not correspond to the number of voters who hold the issue as the most important, questions on a topic might imply public interest in

the issue. Both McKinney (2005) and Benoit and Hansen (2001) have displayed that important voter issues are largely covered by questions in the debates, albeit the time spent on the issue is usually not proportional to the percentage of voters being concerned with the issue. Therefore, the researcher's position is that the debates, especially when examined as affiliated groups within an election year, usually cover the most polled voter issues either through direct questions or through the candidates bringing up the issue outside of context.

1.3 Environment and Climate – How to Interpret the Terms

Both the terms environment and climate can be found in the corpus assembled for the presidential debates.[2] As the terms might be interpreted differently depending on the reader's background or sentiment, it is necessary to define the two terms clearly and how they are used in this thesis. Considering the U.S. televised presidential debates, the *environment* can be interpreted as the surroundings of, or influences on, a particular item of interest. Most references to the *environment* are concerned with the relationship between humans and their physical environment. Thus, the use of *environment* in the presidential debates is mostly within what one would consider ecology[3]. This is exemplified, for instance, in how environmentalists in the U.S. during the 1970s tended to focus on the sanctity of a national park, a stretch of river or local pollution from utility companies (Lifset 2014. 36). The term *environment* was mostly used until 2004[4] . It was also almost used exclusively when discussing local issues such as soil erosion, deforestation, water pollution issues, and localized air pollution. This interpretation of *environment* is, however, not in any sense a standardized definition of the term. However, as is hinted at by Lifset (2014, 36), environmentalism and environmental concerns tended to focus on local or at least geographically limited issues, such as pollution in a river, harbour, or national park. Using the same term as the presidential candidates and not "translating" the term might make the discussion more transparent and better adapted to the presidential narratives.

The U.S. witnessed a spike in concern for the environment already in the 1970s (see Lifset 2014 and Wellum 2017). It is, therefore, natural that the term *environment* would be exclusively related to localized issues until the focus of scientists, politicians, and media start to turn towards global and grander consequences of human activities and pollution. From 2000 until 2020, three references to *environment* can be interpreted to fall within a global or wide-ranging interpretation of the issue. For instance, Al Gore, which used the term *environment* extensively,

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[2] The assembled corpus for this study will be addressed as CTPD (Corpus of Televised Presidential Debates) to separate between corpus or corpora in general and the corpus assembled for this study.
[3] Note that the term *ecology* and different version and conjugations of the word does not appear in the corpus.
[4] See Figure 1.

also brought up global warming for the first time in televised U.S. presidential debates.[5] Republican candidate John McCain also brought up the term *environment* while talking about climate change as a global issue, as did Democratic candidate Joe Biden once in 2020.[6] However, all of these examples seem to distinguish between global issues and the *environment*. For instance, Joe Biden called *climate change* an *"existential threat to humanity"* while suggesting that he would *"clean up"* the *environment*.[7]

Thus, it seems like the Presidential candidates use the term *environment* when talking about local concerns. At the same time, *climate* and then especially *climate change* have been introduced in later years as a term for global or larger-than-local issues. The term is only exclusively used when talking about non-local concerns, which suggests a distinction between whether the candidates talk about local degradation and destruction of nature or the same issue on a global or at least non-local scale. Therefore, this thesis will keep to the same terminology as that used in the presidential debates, which entails that the term *environment* will be used for localized issues related to nature and pollution. On the other hand*, climate* will be interpreted as weather patterns, which are not necessarily connected to a single geographical location.[8] For the development of the use of the two terms *environment* and *climate* in the assembled corpus, named the Corpus of Televised Presidential Debates (Henceforth the CTPD), see Figure 1 below:
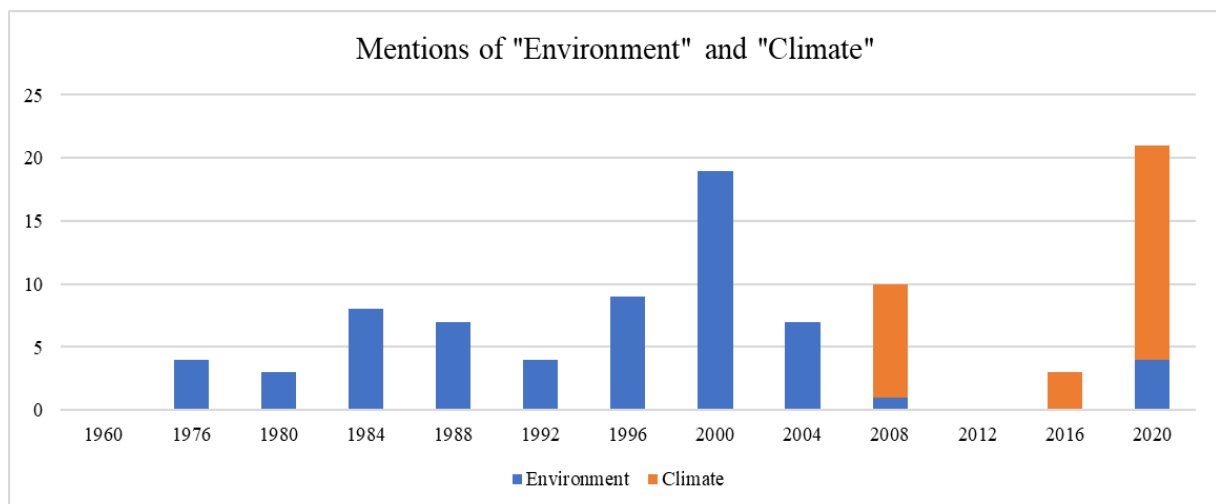
Figure 1: Displaying the number of mentions of the terms *environment*(blue) and *climate*(orange) from 1960 until 2020. Note that only appropriate examples which fit the theme are selected. Thus, the total frequency and dispersion of both words will be different in the CTPD.

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[5] See D-2000-8. (In Appendix C, see the Appendix for how to read the notations).

[6] See R-2008-5 & D-2020-7. (In Appendix C, see the Appendix for how to read the notations).

[7] See D-2020-7. (In Appendix C, see the Appendix for how to read the notations).

[8] It would be natural to include human impact in the interpretation of the word. However, as U.S. politicians has previously and are still contesting human impact on climate change, it was excluded from the interpretation of the term in this thesis as it is not necessarily evident that the use of the term in the debates includes a human element.

1.4 The Televised Debates and Prominent Actors

When John F. Kennedy and Richard Nixon agreed to participate in the first televised presidential debates in 1960, the media moved from referent to participant in the political discourse in the U.S. It took 16 years between the first debate between Kennedy and Nixon before two presidential nominees again took the stage in a televised debate together. It took several election cycles before the debates became internalized and expected by the media, the candidates, and the voters (Notaker, 105, 2020). Nevertheless, it stands as a fact that televised presidential debates have been held every election year since 1976 with both Republican and Democratic candidates and two instances of candidates participating as independents. In its essence, the televised debates consist of the elected candidates from both major parties.

1.4.1 Different Formats of the Televised Debates

Although the televised presidential debates have been held every fourth year since 1976 and in 1960, the format and number of debates have changed over time. In the early years of the presidential debates, the most common form was a panel of journalists who took turns asking questions to the candidates. When the tow-hall format was first introduced in 1992, it allowed "real people", specifically undecided voters, to ask questions (Field, 32, 2019). This format has since been a regular part of the presidential debates except in 2020 when the town-hall debates were cancelled due to the candidates not agreeing on a virtual debate platform amid concerns for Covid-19.

The number of debates during a given year have also been changing over time. 1960 is the first and only time four debates have been held between the presidential candidates. 1976 and 1992 saw three debates between the presidential candidates, which has been the case every year since 2000. The remaining three election years, 1980, 1984 and 1996, only included two televised presidential debates. As is evident, there has been some divergencies in the form of the presidential debates. It is, however, the case that all the debates follow the basic idea that the candidates are to answer unprepared questions related to any given issue, either domestic or foreign, and that they get to answer more or less the same questions. Thus, the presidential debates allow the researcher to examine similar events reoccurring over a large time span. For further details on the individual debates, their format and content, refer to appendix A, where a synopsis of all debates from 1960 to 2020 can be found.

1.4.2. The League of Women Voters

The League of Women Voters sponsored the presidential debates when they re-emerged in 1976 until the CDP took over the task in 1988. The League is one of the oldest voter-outreach groups in the United States that is also nonpartisan. The League, however, had many critics. As the public began to expect the debates to be a permanent feature of the elections, concerns were voiced over whether the League could ensure the long terms stability of the debates (Minow & Lamay, 2008, 61). The choice fell on institutionalizing the debates and taking them away from the League of Women Voters prior to the 1988 debates.

1.4.3 The Commission on Presidential Debates (CDP)

The Commission on Presidential Debates was established in 1987 as a private, nonpartisan organization eligible under federal law to serve as a debate sponsor and has sponsored general election presidential debates in every election since 1988. The establishment of CDP came after the debates in 1976, 1980 and 1984, which were hastily arranged and dragged out with their negotiations. Following the 1984 election campaign, the Georgetown Center for Strategic and International Studies and the Harvard University Institute of Politics conducted detailed studies on the presidential election progress. Both studies found that the debates should be regularized and recommended that a mechanism be established to ensure that the presidential debates became a regular feature of the election process (Minow & Lamay, 2008, 62).

1.4.4 The Political Parties

In the timespan covered by this thesis, the current large political parties, the Republican party and the Democratic party, has been the two dominant actors in U.S. politics. Although independent candidates have participated in the televised debates on two occasions, the debates have mostly been centred on the two dominant parties and their candidates. Today, the spectrum of political opinion is mainly channelled through the duopoly of Democrats and Republicans, which lodges political power more or less exclusively into these two actors.

1.4.4.1 The Democratic and Republican Party

The two major parties in the contemporary U.S. constitute the two parts of the duopoly power in politics. Although politics and party platforms display ebbs and flows and constant changes, broad generalizations can be utilized to compare the modern versions of the two parties. The Democratic party occupies a socially liberal position and a more left-leaning stance on economic ideas, such as more government regulation, more progressive taxation, and more investments into social security. The Republicans have traditionally been recognized as more

socially conservative while also supporting a de-regularization of the market, lower taxes and less government regulation and intervention in personal life.

1.4.4.2 Third-Party Candidates and Independents

Through the system of single-member districts and plurality electoral systems, there is a systematic discouragement of third-party candidate participation in the U.S. electoral system. However, third-party and independent candidates are still participating in the election process. Presidential elections have seen significant backing of third-party or independent candidates, with Ross Perot in 1992 as the prime example winning 18,9% of the popular vote. However, to this date, George Wallace remains the only third-party candidate since 1948 to win a state, which attests to the institutional barriers to third-party candidates. Ross Perot (1992) and John Anderson (1980) have participated independently in the televised debates. However, with the introduction of the CDP, the threshold for third-party and independent candidates to participate in the debates was heightened. Parameters such as a 15% polling threshold (Ryan 2020) to participate have effectively locked the presidential debates to the democratic and republican candidates. Although other studies on presidential debates have mostly disregarded third-party candidates in their analyses, this thesis will consider independent candidates among Republican and Democratic candidates in the two election years they appear in the debates.

1.5 Thesis Structure

This thesis consists of five chapters. The first chapter provides a brief introduction to the study's context and the data utilized in the study. Section 1.2 covers the issue of whether the debates are concerned with voter issues. Following this discussion, the terms environment and climate are established in section 1.3 before the chapter covers the structure of the televised debates and prominent actors within that structure in section 1.4. The chapter also includes the research questions and sub-questions, which the thesis aims to answer in section 1.6.

Chapter 2 includes the literature review, which is separated into three main parts. The first part, section 2.1, includes a review of the general literature on U.S. presidential debates. Chapter 2.2 is concerned with Climate and Environment as a general field of research, while section 2.3 revise the literature which has touched upon climate and environment in the debates themselves. The chapter ends with a summary in section 2.4.

Chapter 3 covers and discusses the methodological and theoretical framework of the thesis and the process of compiling the CTPD, finding a research topic, and further exploring the corpus. Section 3.1 covers the theoretical background of a corpus-based study and considerations for corpus-based studies. Chapter 3.2 discusses the exploration of the CTPD, categorization of themes, and initial data from which the environmental and climate theme was established as a research topic. It also includes a section on the concordance tool AntConc. Section 3.3 discusses the further process of examining the CTPT in debt, while section 3.4 summarises the chapter.

Following the methodology chapter is the analysis of the data in Chapter 4. The chapter is roughly separated into three parts, where section 4.1 is concerned with the quantitative results, and section 4.2 examines the qualitative results. Section 4.3 is dedicated to the research project's main findings, while a summary is provided in section 4.4.

Following the data chapter is Chapter 5. Section 5.1 contains a discussion of the results based on the main thesis question and the sub-questions. Chapter 5.3 is concerned with the limitations of the study, while Chapter 5.2 suggests further research trajectories. Chapter 5.4 provides a brief conclusion to the thesis based on the results and discussion. Chapter 6 includes the bibliography, while the appendices can be found in Chapter 7.

NB. Note that the thesis consists of several appendices. They can be helpful to understand both the context and content of individual debates, as well as individual quotes. They are assembled to provide greater transparency on the gathered data and perhaps be of further use to others.

1.6 Research Questions and Hypotheses

Given that a limited amount of research has been conducted on the role of climate narratives in U.S. presidential debates, this thesis aims to uncover the development of climate and environmental narratives from American presidential candidates. The main research question of the thesis is:

- *How do narratives on climate and the environment manifest in the U.S. televised presidential debates from 1960 until 2020?*

To further elaborate and shine a light on the main research question, the following sub-questions have also been examined when working with the data material:

1. *Is climate and environment a prominent theme in U.S. presidential debates, and how notable is the topic compared to other themes?*

2. *Has concerns for the environment and climate developed and changed over time?*

    2a. Have there been changes in how different candidates frame the issue compared to other representatives of their own party?

    2b. Have there been changes in how much of the debates the candidates spend on the climate and environmental theme?

    2c. Have the moderators brought up the environmental and climate theme in the debates, and if so, what impact might that have had on the debates?

3. *Is there a discrepancy between how Democratic and Republican presidential candidates frame the environmental and climate theme?*

4. *Is there a discrepancy between Democratic and Republican presidential candidates in how much they talk about the environment and climate theme?*

5. *Given that human impact on the climate has been, and is still argued over by some groups and individuals, two questions arise that might be interesting to pursue:*

    5a. Is there a marked space in time where acknowledgement of human impact on the climate and environment can be found?

    5b. Is there a discrepancy between Democratic and Republican candidates when it comes to acknowledging the human impact on the environment and climate?

2. Literature Review

The literature review seeks to position this thesis within the academic context of presidential debates. This thesis finds itself amongst an enormous body of literature concerned with the form and function of televised presidential debates in the U.S. Crossing between the media world, politics, and linguistics, while also touching upon almost every imaginable topic, the televised presidential debates have been studied ever since their beginning in 1960.

The debates serve as a stage for the presidential candidates to outline their positions and stances on a broad range of issues directly to the electorate. Ideally, the debates offer the most unbiased form of political content because third parties do not edit the debates, at least not during their transmission. They also allow the candidates to address questions posed to them under similar circumstances, with the same amount of time allotted to them and the same sets of rules (Trouw 2005, 4). During the debates, the candidates aim to promote their policy stances and ideas without the support of campaign handlers and advisers. Thus, the candidates also make their case directly to the electorate, which is not the case during other campaign events. The candidates vie for the power and status of the presidency, which also draws international attention as the debates are seen and commented upon worldwide (Epwene 2017, 27). Thus, the candidates' ideas, policies, principles, philosophies, and priorities draw enormous media attention domestically and internationally.

Miller & Krosnick (2000, 313-314) advocate that voters are more likely to define that topic or issue as important if a presidential candidate emphasises an issue during a debate. Similarly, this thesis follows the same premise: candidates who focus on a specific issue or topic and are genuinely concerned about the issue will elevate the concern in a noticeable manner. Thus, if the candidates are concerned about environmental degradation, it should be raised and highlighted substantively given that the thesis works with such an important forum as the presidential debates. Debates, therefore, offers ample opportunity and context to investigate candidates' environmental and climate concerns over a large timespan. The televised debates are also, arguably, one of the world's most significant political scenes. Given the importance of linguistic research on climate and the environment and on political actors, few scenes lend themselves to analyzing climate narratives to the extent of the televised presidential debates.

2.1 Literature on U.S. Presidential Debates

Due to its central position in U.S. presidential elections, the televised presidential debates have received plentiful scholarly consideration. Drawing attention from several different fields of research, scientist focusing on politics, rhetoric, linguistics, theatrics, media, and various other elements have delved into the televised presidential debates.

Several studies have focused on content analysis of the presidential debates and the candidates' strategies to gain an advantage over their opponents. Benoit & Hartcock (1999) studied the Kennedy – Nixon debates of the 1960s, focusing on how the candidates followed one of the three strategies; attack, defend or acclaim. The suggestion is that attacking the oppositions addresses their undesirability or the undesirability of their policies. By defending their position, the candidates attempt to restore or prevent additional damage. A similar approach to political discourse was suggested by Boydstun, Glazier and Phillips (2013), which found that candidates tend to draw and redraw lines of conflict to strengthen their positions and weaken that of their opponent. This insight follows the three aforementioned categories of Benoit and Hartcock (1999), but it also adds the dimension of avoidance to their analysis. It is also interesting to mention an article by Michael Lempert (2011), who focuses on how candidates avoid issues or is perceived to be avoiding issues. His article displays how explicit content and lack of content or ambiguity can have a function in and of itself. For instance, if all utterances are read through the lens of addressivity, every misstep, inconsistency or ambiguity is recognized in terms of weighted attributes of the candidate (Lempert 2011, 198). Combined with the fact that each candidate has issues that should be avoided (Lempert 2011, 201) and that the opponents and the media might blow up missteps, this might cause the candidates to display more restrain on not polled and tested issues. Furthermore, these findings also suggest that candidates who avoid issues might do so intentionally, as they might perceive their case to be weaker than their opponents. Whether the topic is favourable or not, candidates seek to control the agenda to choose how to frame each topic favourably for themselves (Boydstun, Glazier & Philips (2013, 869). Some issues, however, are not deemed significant enough for the candidates or their electorate, or they are just not a winning topic for the candidates, resulting in the choice being omission of the topic rather than discussion.

Studies pertaining to how presidential candidates act during the debates have been conducted by Gong and Bucy (2016), which focused on nonverbal behaviour, Watson (2006), who analysed the debates as a form of theatrics, while Albalat-Mascarell & Carrió-Pastor (2019) looked at self-mentions in the 2016 presidential and vice-presidential debates. Blumberg

(2017) focused on a selection of rhetorical strategies in a selection of debates. He mainly concerned himself with how the naming of the opponent, audience, voters, and other actors can serve different functions. Jacobsen (2019) did, in a similar fashion, look at interruptions and co-constructions between Donald J. Trump and Hillary Clinton in their first debate during the 2016 election campaign. The complicated web of strategies utilized by the candidates and different elements affecting both the presidential candidates and the viewers of the debates are covered by many articles and books attesting to the vast opportunities for research the televised debates constitute.

A second category of literature on presidential debates is concerned with how presidential debates affect voter behaviour and whether it can shift the voter preferences of the public. Within this strain of research, most researchers and agree that the presidential debates rarely change election outcomes (see The Economist (2020); Jarman (2005, 232); and Munro et al. (2002)). The vast majority of research suggests that the debates serve as a reinforcer of the voters' already intrinsic values and opinions (Munro et al. 2002, 15). The debates thus strengthen rather than changes voter preferences and patterns. This phenomenon is also strongly related to party adherence, as voters tend to trust the candidate they support. This is important to note, as it entails that the issues the candidates focus on and their positions on any matter of contention can be directly related to how the populace and voters position themselves related to said issue. Combined with the number of voters that watch the debates and the media attention the debates receive, the potential field of impact is colossal. However, the complexity of the debates and their impact on voters are also affected by several other factors and partakers. Fein et al. (2007) found that the debates are greatly affected by contextual features such as live polls and commentators, which we know have a powerful impact on voter perception of a debate (Fein et al. (2007, 166) and Kaid (2001, 2370). Thus, several factors contribute to shaping voter perceptions. However, as already mentioned, the way presidential candidates frame issues as well as the apparatus surrounding the presidential debates play a pivotal role in shaping the attitude towards said issue by the population in the U.S and abroad.

Houston et al. (2013) and Jennings et al. (2017) booth looked at how Twitter has changed the presidential debates. Houston et al. (2013) looked at several effects of live-tweeting during the 2012 presidential debates. They found that tweeting during the debate resulted in a higher degree of knowledge gain from the debate and a higher degree of engagement with the content of the debate (Houston et al., 2013, 558). Jennings et al. (2017) expanded on the aforementioned findings by looking at the content of the tweets and frequency. They found that

issue tweeting, represented through the further elaboration of a message or item in the debate, enhanced knowledge acquisition from the debates (Jennings et al., 2013 465). The viewers' attained knowledge through the debates and the elaboration of political messages might also cause further polarization through biased processing of a given message or candidate. Following up on this, concerns have been raised over increasing polarization in the U.S. and how its increasingly divided media landscape can serve as a partisan or self-reinforcement mechanism for voters (Robertson et al. 2019, 107). Research indicates that partisans seek information from like-minded sources. Thus, individuals who watch the debates through pre-determined lenses have their preconceptions reinforced rather than having their viewpoints challenged (Robertson et al. 2019, 107). The relatively new phenomenon that is social media might thus increase polarization while creating echo chambers and reinforcing divisiveness among the viewers of the debates. Thus, it is no less important to explore how important issues are being framed in the televised debates, especially in the light of the effect social media might have on polarizing voters.

Political debates are built around question matters as the questions constrain the candidates' topics. Take, for instance, the first question the candidates were asked about in the second debate of the 2020 election; *How would you lead the country during this next stage of the coronavirus crisis?* This question clearly limits the candidates to the covid-19 theme and other sub-themes, but there is an evident thematic constraint. Nevertheless, candidates will often use part of their allotted time to touch upon a different topic than what is suggested by the question. Bill Clinton even suggested a topic to the moderator Jim Lehrer during the first debate of the 1996 campaign; *"I hope we'll have a chance to discuss drugs later [...]"* (Benoit 2013, 34).

Debates are also sometimes more of a struggle between the questioner(s) and the candidates for control over topics (Benoit 2013, 34), with the most notable example being the first debate of the 2020 campaign where Chris Wallace struggled to keep Donald J. Trump and Joe Biden under control. There are also examples where the candidates ignore the question at hand to revert to the previous question or address a comment by their opponent. Although candidates most often keep within the topic, they might shift towards another message they want to extend to the voters (Benoit 2013, 37). What is shared with all of these strategies is that the candidate who adheres to a given theme or reverts to a different theme does so to draw attention to the issue, idea, or topic.

The sheer amount of research on the televised presidential debates showcases their importance and standing in the presidential campaign in the U.S. However, the literature on presidential debates lacks in debt regarding the climate and environmental topic. Even though some studies on presidential debates have touched upon the climate and environmental theme[9], most of the research is conducted on other areas, and only a few of those works touch upon the cløimate and environmental theme. Thus, the presidential debates as a framework for exploring different thematic issues and hypotheses are well established, but the environment and climate have not been explored thoroughly.

2.2 Climate and Environment as a Broader Field of Research

Climate and the Environment as a field of research are by no means lacking in interest. The same can be said with research on how U.S. politics, politicians, media and other societal groups frame climate and the environment. Although the televised debates have not been covered extensively by climate and environmental scientists, several studies provide insight into the issue that is transferable to the presidential debates. Thus, this subchapter will concern itself with climate and environmental research on similar events and stages, providing helpful insight into this thesis's relevant theme.

Brown and Sovacool (2017) presented a study on the political discourse of climate change in the U.S., where four candidates of the 2016 presidential primary race in the U.S. were analysed based on how they framed climate change. The four candidates[10] were analysed through 561 different sources such as speeches, debates and press releases which were gathered from the primary election period before each party had nominated its presidential candidate (Brown & Sovacool 2017, 135). Their analysis assumed that an increase in frequency in climate-related content corresponded to the degree to which they perceived the issue to be a source of political revenue (Brown & Sovacool 2017, 135). They argue further that frequency reflects the candidates' confidence in the climate change narrative to gather votes and that it functions as a means of controlling the campaign narrative (Brown & Sovacool 2017, 135). This strategy works two ways, though, both through an increased frequency of mentions related to the issue or by diminishing the time spent focusing on the matter by the candidates that considered it less important or a losing cause. They found that Republican candidates used their lack of communication on climate-related issues to control the narrative. Democrats, on the other hand,

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[9] See chapter 2.3 Climate and Environment in the Presidential Debates.
[10] Ted Cruz, Donald Trump, Hillary Clinton, and Bernie Sanders.

use increased communication and a broad approach towards climate not only as a scientific and theoretical issue but also as a national security concern (Brown & Sovacool 2017, 135).

There is also a large amount of research on climate and environmental policy and climate issues as a part of U.S. political discourse, albeit not the televised presidential debates in and of themselves. Oels (2012) looks at the degree to which climate change is perceived to be a security issue in a broad range of nations, including the U.S. She found that climate change is rendered governable through the perception of climate change as a security issue, which entails a "climatization" of the security field of politics (Oels 2012, 201). Oels (2012, 202) suggests that by addressing climate change as a security issue, actors can try to mobilize political attention and resources towards coping with climate change. By framing climate change as a security issue, the candidates take control of the narrative and seek to create a favourable attitude towards climate action by framing it as a pressing issue in the security field. It is interesting to note that the necessity to frame climate change away from an ecology issue might suggest that ecological degradation might not be pressing enough for climate change to be a winning issue for the presidential candidates. Framing climate change as a security issue might not be unproblematic, though, as viewing climate change as a threat to national security might open of for legitimizing violent actions and other problematic repercussions against those who are perceived to be working against such policies (Oels 2012, 202). It contradicts the position in some circles of questioning the legitimacy of climate change. By doing so, framing climate change as a security issue also plays a role in legitimizing the issue.

Kirilenko et al. (2015) focused on how climate change and global warming is depicted in mass media and Twitter in the U.S. to measure the degree to which the populace pays attention to the issue. The study poised towards temperature anomalies and extreme weather conditions as the basis for public and media interest in the issue. They did find that especially mass media coverage related to specific climate anomalies controls public interest on the topic. Media coverage showed a clear correlation with public recognition of climate anomalies and climate change (Kirilenko et al. 2015, 99). A similar study was also conducted by Brulle et al. (2012), where they looked at how various factors such as extreme weather events, scientific information, mass media coverage, media advocacy, and elite cues impacted public opinion on climate change in the U.S. Their findings were especially interesting in light of this thesis, as their results implied that three major factors stood for the majority of the shifts in public opinion on climate change (Brulle et al., 2012, 185). The first of these is media coverage of climate change, where the greater the quantity of media coverage on the issue, the greater the level of

public concern. The second is the number of competing issues, such as wars or economic prosperity, which competes within a limited "issue space" for attention (Brulle et al., 2012, 185). The last, and most important factor, however, is the elite partisan battle over the issue. When elites are in consensus over an issue, the public tends to follow, and the issue then becomes mainstream (Brulle et al. 2012, 185). However, when the elites disagree, it results in polarization and other factors and indicators such as political affiliation and source credibility increases in importance. Therefore, their results imply that how the media frames different issues impacts how the populace views them. As the presidential debates incorporate the media category and the elite partisan battle, the framing of different contentious issues across the debates should be highly relevant for how the populace views the matter.

Trumbo (1996) brought attention to newspapers in his article on how climate change is framed in the U.S. Like with several other studies focusing on climate discourse in the U.S., Trumbo (1996) also relies on the notion of framing. By looking at 252 news stories on climate change from five selected newspapers, he found that 93 per cent of the stories between 1985 and 1995 fell within one of four categories. These categories were *(1) the impacts of climate change, (2) evidence as to the reality of climate change, (3) action statements and (4) specific information on the implementation of solutions* (Trumbo 1996, 272-273). These frames were then put into an issue-attention cycle that suggests five stages of an issue. These stages are *(1) pre-problem, (2) alarming discovery, (3) realizing the cost, (4) gradual decline of interest and (5) post-problem* (Trumbo 1996, 274). With this framework, he finds that 1985-1988 constituted the first phase, while the period until 1992 follows the second phase of *alarming* discovery. The third and last phase in his model is realizing the cost, which he found to be the phase from 1992 until 1995. Trumbo (1996, 269) comments that even though climate change related to these frames was evident in most of his timeframe, climate-related issues fell in prominence towards the end of his timeframe and almost completely disappeared as a public issue in the mid-1990s.

Mazur and Lee (1993, 681) utilized the same approach as Trumbo (1996) to examine the American concerns over the environment and climate. They follow the notion that there was a spike in concern for the environment and climate during the 1980s and especially the latter part of the decade (Mazur and Lee (1993, 681). Thus, they take the same position as Trumbo (1996). Mazur and Lee (1993, 707) claim that the rise in interest for the issue is a merger of the separate problems of the rainforest, greenhouse gases, the ozone layer and mass extinction. They suggest, however, contrary to Trumbo (1996), that the coverage of climate and environmental concerns declined as early as 1990 and not in the later 1990s. This period is also interesting as

it witnessed a shift from primarily local or regional issues such as acid rain, waste disposal and smog, towards more worldwide issues such as degradation of the ozone layer and mass destruction of species (Mazur and Lee 1993, 681). Similarly, Ungar (1992, 495) supported the claim that there was a shift in this period. He pointed out that the greenhouse effect was brought into the public eye in 1988, and climate as a global concern also emerged during this period. Although the latter articles conclude somewhat differently than Trumbo (1996), all three suggest that there were climate concerns as early as the 1980s. Furthermore, all three articles point towards a downturn in interest in the environment between the early 1990 and mid-1990.

Another research project on the theme was conducted by Krosnick et al. (2000), which examined the impact of the Clinton administration's campaign to build public support for the Kyoto treaty in 1997. Through analysis of media and scientific coverage of climate change, they found that the fall of 1997 saw a dramatic surge in attention and towards climate change and that much of this coverage was consistent with the message the Clinton administration sought to communicate, that global warming was a legitimate threat (Krosnick et al. 2000, 242). They also found evidence of the politicization of climate change, where Democrats and Republicans took opposing sides on the necessity of mitigation policies to fight climate change and even the existence of climate change (Krosnick et al. 2000, 253 - 254). They also found evidence for cross-cutting attitudes in opposite directions stemming from the respondents' taking cues from the elites they trusted (Krosnick et al. 2000, 254). Based on this observation, Krosnick et al. (2000) reach the same conclusion as Miller and Krosnick (2000), namely that the presidential candidates and political elites have the power to sway voter attitudes on different political issues. The study also connects the aforementioned studies by Ungar (1992), Mazur and Lee (1993) and Trumbo (1996) into a somewhat coherent phase from the 1980s until the turn of the century. Based on their results, there should be some interest in the issue in the late 1980s (the 1988 debate) and a downturn during the early to mid-1990s (the 1992 and 1996 debates) followed by an increase in the latter part of the decade towards the turn of the century (the 2000 debate).

It is interesting to notice that Krosnick et al. (2000, 241) found that scientists, government, and industry and, to a large extent, the media acknowledged global warming in 1997. Around a decade later, however, the trend is pointing towards a decrease in scientific prominence in the debate surrounding climate change. Hoffmann (2011, 20) found this in his study on climate discourse in U.S. newspaper editorials contrasted against the world's largest yearly climate denial conference, the International Conference on Climate Change, in 2010. He describes the

schism between the two camps to be so severe that they might not be resolvable through open debate. The schism is enforced through linguistic and value differences, which moves the parties to exclusive, rigid, restricted, and inelastic (Hoffmann 2011, 9). This kind of development, in turn, leads to a contest in which the opposing parties only seeks information to support their claim and refute the opposing side (Lord, Ross & Lepper 1979, 2099). Such a situation creates an environment where there is no room for common ground while also entrenching resistance against the opposing side and negating the option of concessions and negotiations. In a climate of increasing polarization on a range of issues, it is also possible that the trust in the science of climate change and science, in general, is threatened by polarization. This issue might have already started to manifest itself, as a Gallup poll in 2021 found that the percentage of Republicans who expressed quite a lot or a great deal of confidence in science has collapsed from 73% in 1971 to 45% in 2021 (Boot 2021).

2.3 Climate and Environment in Presidential Debates

Given the prominence of the climate and environmental theme in U.S. political discourse and the attention it has gathered by researchers, is it striking that no major research project has been conducted on the role of climate discourse in presidential debates. Environmental and climate discourse has not been the focus of any major works on the presidential debates. The theme is only briefly mentioned in a few articles that focus on other elements of the debates. Therefore, this section will touch upon the previous research on the presidential debates, which have brought up environmental and climate issues as part of, or byproduct of, their research.

For instance, Jarman (2005, 238) mentions that George W. Bush scored low with democratic voters when he defended his environmental record in the second debate of the 2004 presidential campaign. Likewise, the Democratic candidate, John Kerry, displayed strong appeal towards democratic voters when he attacked the state of environmental policy in the U.S. and the Bush administration environmental policy (Jarman 2005, 237). Although only briefly mentioned, Jarman (2005, 237-238) suggests through his data that the environmental theme of the debate was better received by the democratic voters than republicans.

Brewer's (2012) article is mainly centred around the polarisation in the U.S. based on the theme of climate change. Focusing on the Obama era, he found that Republican candidate John McCain to a large extend, echoed Obama's statement that he believed in climate change during the 2008 presidential debates. According to Brewer (2012, 10), this was a break with the Republican norm of challenging the human role in accelerating climate change. McCain also

broke with previous republican positions, which suggest that the effects of climate change are exaggerated. He also broke with the Republican party's general scepticism on whether climate change has begun (Brewer 2012, 11). When Obama defeated McCain in 2008, however, the public debate and the Republican party quickly returned to its previous stance of polarized debate. However, as Brewer's (2012) research is concerned with public debate and public opinion as larger phenomena, it is not limited to the presidential debates and thus only briefly touches upon the debates in light of the climate question. Brewer (2012) finds, like Jarman (2005), that environmental issues are more heavily emphasized by Democrats than Republicans. However, the article is limited in scope as it only touches upon the televised presidential debates in light of the 2008 election campaign.

Another mention should be made towards McKinney (2005), who found that during the 1992 Townhall debate, the only issue the voters had rated among the top 5 most important issues of the year that was not touched upon by the debate was environmental concerns (McKinney 2005, 207). By 2004, however, the environment was brought up as one of the 14 issues the candidates touched upon during the debate, while it had listed some of its prominences in the eyes of the public when compared to the 1992 election year.

One of the more extensive works that focus on the debates' content is a dissertation on a selection of presidential debates from 1960 until 2012 by Beatrice N. Epwene from Indiana University of Pennsylvania (Epwene 2017). Her dissertation looked at presidential transcripts from 1960 until 2012 to examine and measure the extent to which the candidate's proposals and stances and the broader discussions in the debate reflect aspirations of posterity. Her dissertation followed a mixed approach to examine the debate transcript, where she combined qualitative and quantitative elements in her analysis and interpretation of data. The vast majority of research on the presidential debates is of a smaller scale, primarily concerned with a single debate or a single election year. Epwene's (2017) extensive work on a larger mass of debates is essential as it is one of the few studies that has looked at thematic distribution over an extensive period. By doing so, Epwene (2017) provides an insight into the most prominent thematic categories of the debates, which is a significant step towards introducing the televised debates to researchers as an approach to U.S politics. She uncovered nine major categories, each containing between five and twelve sub-categories (Epwene 2017, 126-130). Her categories were as follows:

Main Categories (Epwene, 2017)		
Peace	**Politics**	**Science, Technology and Infrastructure**
Sub Categories		
Foreign and international affairs	Freedom, democracy and human rights	Computers and innovative technologies
Military matters	Constitutional matters	Modern roads and bridges
War and conflict intervention	Government, adiminstration	Newer and cheaper means of transportation
Terrorism and new threaths	Political authority, corrpution	Newer and user-friendly buildings
Modern warfare and modern weaponry	Laws, order and legal matters	Genetics
	Policy issues and legislation	American Reconstruction Act
Main Categories (Epwene, 2017)		
Economy	**Environment**	**Social and Welfare Policies**
Sub Categories		
Free market/enterprise and prtectionism	Natural resources and management	Social justice and prisons
Regulations	Sustainability and use of resources	Social welfare
Economic policies and planning	Energy and alternative energy sources	Social securit
Corporations and non-profits	Global warming and ozone depletion	Unemployment
Production and factors of production	Population numbers and control	Fabric of society and national way of life
Nationalization	Genetics and genetic engineering	Marriage, family and alternative life styles
Debt crisis	Resource management	Multiculturalism and diversity
Taxes and taxation issues	Energy and alternative energy sources	Poverty eradication, resource distribution
Trade	Resources such as water, air and parks	Immigration and border issues
Energy-cost	Population numbers and control	Care of veterans and military families
Employment and unemployment issues	Food	
Information	Genetics and genetic engineering	
	Natural disasters	
Main Categories (Epwene, 2017)		
Health	**Education**	
Sub Categories		
Health care policies	Education policies	
The Affordable Care Act	Schools at all levels	
Healthcare regulations	Regulations	
Modernizing the healthcare system	Global competitiveness	
Bio threaths	Innovations in teaching and learning	

Table 1: Main themes in the televised U.S. presidential debates from 1960 until 2012 (Epwene 2017, 126-130).

However, the sub-categories of Epwene's (2017) environmental theme include a broad range of themes and issues. They include themes such as food, genetics, natural disasters, population, energy conservation, and everything energy-related. She, therefore, takes a broad approach to the term environment, one which this thesis does not share. Although Epwene's (2017) broad categorization of the environment includes items that this thesis does not consider relevant to the theme, she also uncovered elements that are undoubtedly in line with the issue this thesis is exploring. Sub-categories such as sustainable use of resources, sustainable development, alternative sources of energy, global warming, ozone depletion, climate change and natural resource management might suggest that there is evidence for the knowledge of the human impact on the environment from the data Epwene (2017) examined. However, as Epwene (2017) focused on posterity in her dissertation, only minor remarks and raw data hint towards the presence of the climate and environmental theme in the debates.

2.4 Wrapping up the Literature Review

Both U.S. political discourse and U.S. presidential debates have been thoroughly researched from a myriad of angles and over a considerable timeframe. The same can be said about the environmental and climate theme, which has been covered extensively. However, there is a lack of research on climate and environmental discourse in U.S. presidential debates. This is especially the case when considering more extensive studies covering several debates or multiple election years. There have been minor studies touching upon climate and the environment. However, these have either been relatively limited in scope or mainly concerned with other elements and thus slumping upon or just barely touching upon the environmental and climate theme and a grander sense.

One of the features of the debates is that they can be used as a window of the past, where the most pressing issues at any given time are debated in various manners by the two presidential candidates. The prominence of a given theme, how the theme is framed and how the frames change over time are all interesting questions to examine. The elevated position of the presidential debates in U.S. political discourse and the importance of the debates as a window to the voters suggests that a vast number of themes can be examined through the debates. The interconnectivity between the debates and the climate and environmental theme has only been examined sparingly. Therefore, a broader study on this topic would contribute to both the research on presidential debates as well as the climate and environmental narratives in U.S. political discourse.

However, the research on the topic suggests that the environmental and climate theme should be a promising prospect to uncover based on the presidential debates. There are suggestions of environmental and climate narratives from at least as early as the 1980s and research indicating that the theme is saturated by partisanship and divisiveness. Both of these examples suggest that the lack of interest in environmental and climate narratives in the presidential debates is unwarranted and thus an alluring prospect for further examination

Chapter 2 have also discussed how the televised presidential debates are complicated events to analyze. Elements such as changing formats, topics, the historical timeline, question matters, traditional and social media and the individual engagement of the candidates all play a role in the complex order of televised presidential debates.

3. Research Design and Methodology

The following chapter aims to illustrate and discuss the methodological approach and rationale behind this project. As the thesis is corpus-based and uses corpus linguistics techniques, the chapter is initiated by discussing corpus linguistics as a general phenomenon. The methods utilise empirical data gathered from the Commission on Presidential Debates, analysed through a mixed approach. Compiling the CTPD, frequency analyses, and the initial explorational approach to the corpus follow the introduction to corpus linguistics under section 3.1.

The methodology chapter then moves to the explorational phase under section 3.2. The approach selected to examine the CTPD for a research topic and the data behind the process is discussed. As this process found the environmental and climate theme promising, the rest of the chapter is concerned with the methodological approach taken to delve further into the CTPD to conduct a thorough explorational study. Thus, the chapter is split into three main parts. The first part (3.1) considers the theoretical background of corpus linguistics. The second part (3.2) then outlies the explorational approach taken to find a theme. Section 3.2 also includes a discussion on the concordance tool, AntConc, which was used to analyse the CTPD. The final part (3.3) focuses on the methodological approach to delve further into the material.

This thesis follows a mixed approach to examine the transcripts of all the televised presidential debates from 1960 until 2020. A mixed methodology combines both quantitative and qualitative research approaches in a single study. It applies pieces of both methods in the project design, sampling, data collection and analysis, and the presentation and interpretation of the results (Creswell 2003 & Berger 2000). Qualitative methodologies in corpus linguistics often employ close analyses of texts, which can support theories about language tested against hypotheses or through induction (Lindquist & Levin 2018, 25). Quantitative methods in corpus linguistics, on the other hand, usually apply frequencies and percentages to describe language and to formulate theories and hypotheses (Lindquist & Levin 2018, 25). Cresswell (2003, 4) states that contemporary research practices are more and more about the continuum between the two methods rather than a contest between them. For instance, quantification might be impossible in some cases or impractical in others. Quantitative approaches might, on the other hand, be able to uncover minor quantities which can be of great interest to the researcher (Epwene 2017, 57).

Adhering to this line of argumentation, a mixed approach was the most applicable for examining and exploring the presidential debates. Exploration of corpora is usually based not

on testing hypotheses. Instead, it aims to detect structures in the data that the researcher must interpret (Gries 2020, 67). Therefore, it is advantageous to gather both raw and normalised frequency counts and examine wherein the corpus, different features are grouped (Gries 2020, 67). A combination of a qualitative and quantitative approach thus minimizes the limitations of each method while at the same time amplifying the strengths of each of them through mutual support and verification of results, theories and hypotheses (Epwene 2017, 57).

3.1 Corpus Linguistics:

Corpus linguistics is, broadly speaking, an approach to researching language that facilitates empirical analysis of language use. Corpus linguistics' distinctive characteristics are based on a claim that one can represent a sphere of language use through a collection of texts. Another characteristic is the assertion that one can empirically describe linguistic patterns of use by analysing the collection of texts (Biber & Reppen 2020, 1).

Although corpus linguistics is thus more of an umbrella term than a theoretical discipline in and of itself, corpus linguistic studies do share certain research goals and analytical characteristics (Biber, Conrad, & Reppen 1998, 4):

- They are empirical, analysing the actual patterns of use in natural texts;

- They are based on analysis of an extensive and principled collection of natural texts, known as a "corpus"; the corpus is evaluated for the extent to which it represents a target domain of language use;

- They make extensive use of computers for analysis, employing both automatic and interactive techniques;

- They depend on both quantitative and qualitative analytical methods.

The consensus is that any corpus linguistics based research question relating to linguistic variation and use can be approached through the aforementioned methodological framework. Despite this being the general accord, it should be noted that the view on corpus linguistics, which emphasises the methodological strengths of corpus linguistics, has been challenged by some researchers. One example is Stubbs (1993, 23-24), who argues that corpus linguistics is an important linguistic theoretical concept rather than a base for linguistic research. However, this is a minority view, as most scholars focus on the methodological advantages of corpus linguistics rather than viewing it as a theoretical subdiscipline within linguistics (Biber & Reppen 2020, 2). Lindquist and Levin (2018, 1) strengthen this orthodox viewpoint by

suggesting that corpus linguistics is not a single branch in linguistics as it does not describe what is studied. It rather entails that a particular methodology is applied for research purposes and not that corpus linguistics is a theoretical perspective on its own.

The analytical innovativeness allowed by corpus linguistics has opened a whole new strain of research questions being asked. This is especially the case when it comes to the view that language variation follows systematic patterns and can be analysed using empirical quantitative methods (Biber & Reppen 2020, 2). Corpora can thus answer questions ranging from the quantity and quality of words to intonation and how linguistic features work together in discourse. The same goes for how language use varies over time or in different situational contexts (Reppen 2010, 31). Corpora are also helpful when determining a research focus when working with discourses associated with specific communities, institutions or other conventionalised linguistic arenas (Sarfo-Kantankah 2018, 398).

3.1.1 Different Classes of Corpora

Corpora are usually separated into different classes, all of which comes with relative advantages and disadvantages. Davies (2020, 11) distinguishes between six general categories of corpora. The first three classes are comprised of small, moderately sized, and large corpora, where small corpora are everything below 5 million words. At the same time, he holds the 100-million-word British National Corpus as an example of a medium-sized corpus. The larger corpora, such as the Corpus of Contemporary American English (COCA), generally tend to move in the direction of several hundred million words (Davies 2020, 11). However, it should be noted that there is no definitive threshold that separates a small corpus from a medium-sized one. The second corpora categories consist of extensive text archives, such as Lexis-Nexis, ProQuest, newspapers, or other types of archives. These corpora are, as mentioned, in the dozens of million-words class.

Davies (2020, 11) also considers text archives of extreme sizes, such as Google Books, as a distinctive type of corpus. His notion is supported by Michel et al. (2011), who display how Google Books, due to its sheer size, compiling almost 5,2 million digitised books in 2011 and over 500 billion words, can be used to analyse cultural trends over a larger historical timeline. The last category is using the Web as a corpus exemplified by approaches such as Google-based searches (Davies 2020, 11). Another way to distinguish between corpus types is by separating corpora for academic research and those that are not. This is an essential point as even though a corpus is large, it may be of limited value for scholarly research if it is not

annotated[11] for different parts of speech. Thus, one should not just assume that a large corpus is better than a smaller one. Another hindrance might be if the corpus is based on a weak interface that does not open for different linguistic queries (Davies 2020, 18). Both issues can be circumvented by compiling a corpus manually.

Although the general approach to distinguishing between corpora is broadly accepted, there is no standard definition of the term corpus nor how to distinguish between different corpus types. Stefanowitsch (2020, 22-23), for instance, defines a corpus as a collection of language samples that follows three properties: the language used is *authentic, representative* and is part of a *large* collection. Authenticity in this regard is related to the notion of genuine communication, which entails that language production is not done for scientific resources (Stefanowitsch 2020, 24). On the other hand, representation entails that the language sample gathered in the corpus must be identical to the distribution in the language as a whole, at least when it comes to the linguistic phenomena one seeks to investigate (Stefanowitsch 2020, 28). Representativeness, however, is also relative, as it varies between different corpora and is never absolute (Lindquist and Levin 2018, 43). This also entails that when discussing and evaluating results based on corpora, it is necessary to consider the extent to which the results can be generalised to the language as a whole or a specific genre or text type (Lindquist and Levin 2018, 43).

As we have already mentioned, there is no general answer for how large a corpus must be when it comes to size. There is, however, some guidelines one should adhere to when it comes to comprising a corpus for research. The corpus must be large enough to contain a sample of instances one wishes to investigate that, at a minimum, is numerous enough to be sufficient for meaningful analysis (Stefanowitsch 2020, 38). Ideally, however, it should be bigger than the bare minimum necessary for analysis. The overall goal should be that the corpus is large enough to contain statistically relevant samples of the phenomena the researcher is looking for. This might result in larger corpora being the favourable choice as larger corpora generally increase the probability that the results are to a larger degree representable.

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[11] See section 3.1.5 Annotation.

3.1.2 Smaller Corpora

Due to the advantages of large corpora, there has been an overriding historical assumption among corpus scientists that a more extensive corpus is always better. This assumption has been challenged since the 1990s, when increasing attention was brought to corpus exploitation rather than corpus exploration (Nelson 2010, 54-55). Smaller corpora can be suitable for many purposes, as long as they can offer a balanced and representative picture of the area to be researched. Smaller corpora are also often easier to work with, and the researcher should gain a more intrinsic knowledge of the corpus' content. A smaller corpus can also be more focused, which can be of great value if the research question is aimed toward a specific phenomenon or theme, such as U.S. presidential debates. Smaller corpora are also simpler to manage and interpret and easier to reconstruct if the researcher wishes to partition the corpus to compare different parts (Aston 1997). Corpus linguistics-based studies based on small corpora should also provide ample opportunity to isolate each instance of different features, which can be used to generate quantitative results (Vaughan and Clancy 2013, 72). Background knowledge of the data and the context in which the data is situated is also more readily available to researchers using small corpora (Vaughan and Clancy 2013, 73). As Koester (2010, 74) puts it, there is a close link between language and context. Small corpora can reveal insights into the context of use and thus brings signature uses of language in a given context into clear focus.

Another advantage of a small corpus is that the corpus's limitations are often more evident than the case with large corpora. If one wishes to compile a corpus from scratch, a smaller corpus is also easier to put together. It does not necessarily need a large group of researchers (Aston 1997) or powerful computation tools to assemble. When working with large corpora, high-frequency results may become unmanageable. In small corpora, on the other hand, all occurrences, and not just a random sample of high-frequency items, can be examined (Koester 2010, 66). This shows that one cannot just consider the size when compiling a corpus, as there are several other factors in play than gathering as large as possible a corpus. Lindquist and Levin (2018, 22) suggest that the key item when evaluating the size of the corpus is choosing the right size for the specific research purpose. This is often difficult to know in advance, but the less attractive option is to adjust the research question to the available corpora (Lindquist and Levin 2018, 22).

3.1.3 Compiling the CTPD

When starting a research project based on corpus linguistics, the first step is to either find a suitable corpus or corpora for the research project or compile one yourself. As a complete corpus of U.S. televised presidential debates undoubtedly has been gathered earlier, the researcher initially started the process of retrieving one. However, this attempt was abandoned as those found was lacking in size (Such as the 2016-SCHEMES Corpus). Other corpora were found to include more than just the debates (such as the Corpus on Presidential Speeches (CoPS). Other research projects left only bits of their corpora or did not allow for third parties to access their corpora. Thus, the effort to find an acceptable corpus for research purposes was abandoned. Compiling different corpora into a larger one was deemed too unpredictable due to what different researchers might include and exclude; a single data source was preferable.

It was therefore decided to compile the corpus by hand. As the televised debates have been transcribed and made digitally available, the necessary data could be gathered from the web. The transcripts are available from several different sources, from individual years, individual debates, or individual presidential candidates. However, it was decided to utilise one of the pages that offered transcripts from all the debates to make the compilation straightforward while also providing the advantage of a single source of information. The site chosen for the transcripts was the Commission on Presidential Debated (CDP) homepage, which has sponsored the debates since 1988. Researchers conducting similar projects, such as El-Falaky (2015), Doerfel & Connaughton (2009) and Romero et al. (2015), have all utilized The Commission on Presidential Debates as the source of their research.

The transcripts from the Commission on Presidential Debates can be accessed through their homepage (https://www.debates.org/voter-education/debate-transcripts/) or via the Library of Congress, which has made their archives available for educational and research purposes (https://www.loc.gov/item/lcwaN0011502/). The Library of Congress lists the source as having no access conditions, as long as the data is gathered in accordance with fair use under U.S. copyright law. However, to ensure that no data gathering caused copyright issues, permission to use the transcripts was applied for and accordingly approved by the CDP. Note that the approval was without restrictions as long as the data was used for research or educational purposes. As the data is openly available from the two listed sources in this paragraph, the raw data will not be published separately related to this thesis.

As the choice fell on the CDP, the transcripts of the individual debates were retrieved from their homepage. At the time, only the transcripts from 1960 to 2016 were available as the 2020 debates had not yet been held. The transcripts from 2020, however, were gathered shortly after the debates were held in September and October of 2020. As the CDP webpage does not offer a single downloadable file containing all the debate transcripts, the individual debates must be downloaded separately and converted into readable .txt files for AntConc, as explained in section 3.2.1. Although it takes some manual work to download and compile the files into a corpus, this also allowed the researcher to sort the debates individually so that they can be analysed separately as well as in bulk. However, it should be noted that there were slight differences between the transcripts as some of the debates were transcribed using a slightly different approach. Some of the debates, such as the 2000 debates between George W Bush and Al Gore, includes vocal sounds, such as [*applause*] in brackets. Other debates, like the 1992 debates between Bill Clinton, Ross Perot, and George Bush Senior, has a short mention of the topic before each new question by the panellists. A third concern is related to how the debates have evolved in the two recent presidential campaigns. For instance, during the final debate of the 2016 campaign between Hillary Clinton and Donald J. Trump, several segments are marked with *[crosstalk]* and small pieces of sentences such as;

 "*He says…*", "*Secretary Clinton, it's…*" and *"and the high rankings [crosstalk]."*

Due to the nature of the recent debates, especially where Donald J. Trump has participated, the dialogue consists of many single words or incomplete utterances. This, however, is a feature of the debates themselves, and it was therefore decided to leave this feature unaltered. The brackets with information, like [*crosstalk*] and [*applause*], were removed, even though it was considered to have a minuscule, if any, impact on the results' validity. Other items such as name listings, theme listings and every other item that were not part of the actual utterances by the presidential candidates were also removed due to the possible effect it might have on the validity of the results.

One caveat in the transcripts was discovered during the quality control, where a random sample of debate transcripts was controlled for irregularities against transcripts from a secondary source (The American Presidency Project). When checking for irregularities, a small number of errors were discovered, such as spelling errors. However, similar errors were also found in the control transcript, which did not occur in the original one. As these two sources are mainly used for gathering transcripts in similar studies, neither one was considered a better choice than

the other. A third debate CDP transcript was then checked against the recording of the debate where no errors were found. As neither was perceived to be of higher quality, the CDP was chosen due to its interconnectivity with the debates themselves. However, as the transcripts are unofficial, it should be noted that there might be some deviations in the transcripts from what has was uttered in the televised debates themselves.

3.1.4 Sampling and Representativeness

This sub-chapter will be considering the sampling and representativeness of the corpus that were gathered. As the choice of which samples go into the corpus and the representativeness of the data is of great importance, it is also necessary to address the topic. Representativeness is one of the key factors when compiling a corpus. Nelson (2010, 56) holds that, in order to achieve a respectable level of representativeness, the researcher must also consider sample size and balance as vital factors. The sample that was chosen for this corpus is based on all televised debates between presidential candidates since 1960. As the televised debates had a clear starting point in 1960, it was decided that it would be the most natural place to start. As has been the case with some studies, it is not uncommon to start with the 1976 debates, as there has been an unbroken line of televised debates since that year.

Nevertheless, an exclusion of the 1960 debates would skip the single election year, which has included televised debates, and thus there would be no significant difference in workload. Including the 1960 debates also allows the researcher to glimpse a historical era markedly earlier than researchers that start with 1976 as their point of departure. However, the transition from 1960 until 1976 might be more complicated to address than that of the 4-year periods which the rest of the CTPD is made up of. Excluding 1960, on the other hand, makes it impossible to address such potential changes. Thus, it was decided to include the 1960 debates in the corpus.

A second consideration was whether to include the vice-presidential debates as part of the research. The vice-presidential debates are, first of all, a much smaller phenomenon that usually attracts far less attention than the presidential debates (Koblin 2020). The vice-presidential debates also came into being for the first time in 1984. Thus, including the vice-presidential debates raises the question of how to incorporate a new phenomenon that occurs three election periods into the start of the corpus. Furthermore, if the vice-presidential debates were to be included as a separate phenomenon to be analysed, the data would only consist of 10 debates which is a relatively small sample compared to the 35 debates between presidential candidates.

Due to the nature of the debates themselves, where individual debates are often connected to a specific theme, the candidates often get the chance to delve into specific issues underneath a larger thematic umbrella. This is not necessarily the case with the vice-presidential debates, as they are only held once during an election year and thus are thematically compressed. The vice-presidential debates are also, to a larger extent than the presidential debates, concerned with the personal capabilities of the candidates, as they are usually younger, less known, and more inexperienced than the presidential candidates. The common position is that the vice-presidential debates are more related to whether the candidates are suitable for the office than to the candidates' policy stances (see Mondschein 2020, Pierce 2020, Cassidy 2016, and Cillizza 2020). Due to the aforementioned considerations, it was decided to exclude the vice-presidential debates from the CTPD.

3.1.5 Annotation

It is worth noticing that this corpus is not annotated, as it was created from scratch. Annotation suggests, in this case, a corpus where words or parts of speech are tagged, usually stating the word class of the target item (Lindquist and Levin 2018, 44). The annotation can also add other linguistic information such as lemmatisation and information specific to speech and prosodic information such as and loudness or rhythm (Kirk and Andersen 2016, 292). The task of manually tagging parts of speech is an arduous undertaking and was not deemed to be worth the time it takes compared to the benefits it might provide. Although automatic taggers have some merit and are boasting of up to a 97-98% success rate, a lot of it is due to the 100% success rate of common words like *the* and *a* (Lindquist and Levin 2018, 48). This means that the error frequency is higher with the less frequent words when using automatic taggers. This, in turn, necessitates post-editing or accepting quite a few wrongly tagged items in the corpus.

With approximately 470 000[12] words in the CTPD, a 3% error rate would result in 14 100 wrongly tagged words. However, Lindquist and Levin (2018, 48) hold that a more common error rate, especially when it comes to more complex items, is between 5-15%. Such a high degree of probable errors would necessitate manual quality control, which would be a huge undertaking. It is also the case that annotation tools do not necessarily provide efficient ways of dealing with ambiguous or other kinds of problematic data points (Gries and Berez 2017, 403). Issues can occur on seemingly simple items such as multi-word units, where the process of tokenization might complicate retrieval with some concordance tools (Gries and Berez 2017,

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[12] 471 065 Words to be precise.

404). There is also a need for further development of corpus exploration tools. This is especially the case with tools that can balance exploration and facilitating in annotated corpora (Gries and Berez 2017, 405).

What is lost through not annotating the corpus is mainly related to flexibility and usefulness in specific circumstances. An annotated corpus can, for instance, allow the researcher to conduct searches based on parts of speech, a task that would otherwise have to be done manually. Annotation can also be helpful when looking at grammatical mistakes, but this is to a lesser extent relevant when working with an oral-based corpus that does not necessarily register such mistakes. Therefore, a corpus that is not annotated might limit the extent of the research question and impede some kinds of data examination that annotation helps with, such as parts of speech or pragmatic features (Kirk and Andersen 2016. 292). As the transcript does not consider pronunciation, nor grammatical "errors" in any reliable way, the data itself would not benefit significantly from annotation. Thus it was left, as it were, without annotation.

3.2 Exploring the CTPD

The transcripts of the presidential debates were gathered in a corpus (the CTDP) to explore the data to uncover themes and topics for further examination. The following discussion is concerned with the process of exploring the CTPD to expose such themes and topics. The chapter will discuss the exploration of themes and the path towards deciding on a topic to explore, and the procedure towards further exploration of the theme. As the presidential debates were unfamiliar to the researcher at the start of the research project, the explorational phase is the first opportunity to assess the data. Unfamiliar data can also be an asset in and of itself when conducting a corpus-based study.

When the researcher is not familiar with the content of the data gathered, it allows for a more unbiased exploration of the corpus. By not being affected by previous knowledge and expectations related to the content of the corpus, the researcher might rely more on data to uncover interesting themes and angles for further exploration. As the researcher had no previous knowledge of the U.S. presidential debates, the thesis followed a relatively standard approach to corpus research, starting with frequency analysis. Frequency analysis is one of the most basic and often one of the first corpus techniques to be utilised as a part of a corpus-based project (Evison 2010, 123). This is done with software that searches through every item in the corpus to establish a list of tokens (in its simplest form, a word and token are the same) (Evison 2010, 124). The most common frequency is the raw frequencies, which give a number of

occurrences for a given token in the corpus (Gries 2020, 52). Raw frequencies like these are the easiest to interpret and most commonly used when working with a single corpus. It has become common to use one or several software tools to list the frequency of a corpus in recent times. The program AntConc was chosen as the preferred platform to conduct the exploration of the CTPD. For a detailed overview of AntConc, see chapter 3.4.

The relatively small size of the CTPD allows for some degree of manual exploration. To explore the CTPD for possible thematic angles, a mixed method of frequency generation through AntConc, combined with a manual categorisation of the most common words in the CTDP that pointed towards a specific theme (information-carrying words), was utilized. This entails that high-frequency words like *the, of, in, a, it, he, she* was excluded from the results. The words that were included were those that contained more specific information about the content of the debates, such as *Cuba, Russia, Military, Police, Violence, Drugs, Oil,* etc. The choice of excluding, for instance, personal pronouns might impact the types of results we can expect from the gathered data and thus needs to be briefly discussed. The gathered data does not necessarily allow for a representation of grammatical constructions without extensive manual effort. The choice of only including information-carrying words on the initial exploration might also exclude some topics, such as interruptions and confrontations, which were undertaken by Jacobsen (2019). Lastly, the approach might also limit exploration into condensed or limited themes that might not be discovered through a generalized frequency listing. Thus, there are some clear disadvantages to only including information-carrying words.

There are, however, also advantages to using said approach when examining corpora for the first time. The first advantage is that the researcher can find clear indications of the prevailing themes in the corpus. This is further exacerbated by the nature of the CTPD, as it is compiled of debates, which suggests that the data will include multiple themes. It also allows the researcher to gain insight into which themes or topics might be missing or infrequent in the corpus. Thus, gathering and exploring information-carrying words might give the researcher indications of what the corpus consists of regarding subject matters that might be further explored. It should also be noted that the process, as mentioned earlier, is rather rapidly conducted, which makes it a versatile tool in initial corpus exploration. As the data is, of course, nothing more than an indication and relatively simple to gather, it can also be disregarded if it does not provide any interesting results.

3.2.1 AntConc

After a short period of consideration about which tools were the most applicable for this study, the choice fell on Laurence Antony's AntConc. AntConc is a free to use concordance tool which has been utilized in similar studies covering the presidential debates as well as other political or linguistic phenomena (see Froehlich 2020, Alberts-Franco 2015 and Weisser 2016). The choice was based on a trial of tools utilised by similar research projects such as *WordSmith Tools* and *SketchEngine.* A small sample corpus was gathered and analysed using the different tools to check their applicability. Simply put, the choice fell on the tool, which proved itself to be the most practical and covered the study's needs. Although especially *Wordsmith Tools* was promising, noticeably due to the sheer number of functions it offered, *AntConc* proved to be more user-friendly and also generated results much faster. Especially this latter point was one of the primary considerations when the choice not to use *Wordsmith Tools* were taken. An initial test revealed that data could be processed in seconds by *AntConc,* which took several minutes with *WordSmith Tools.*

AntConc also comes with the advantage of free access, although this is also the case with several other concordance tools. However, the free access does not come with artificial limitations to the size of the corpus, which other concordance tools might have. Furthermore, *AntConc* allows the researcher to examine the text data in its original form while quickly moving to concordance views or frequency lists in seconds. *AntConc* also allows the researcher to examine individual files or mixed sets of files without creating a new sub-corpus, which cannot be done in *SketchEngine.* Therefore, after a period of consideration, it was decided to move forward with *AntConc* as the applied tool for this thesis. It should also be mentioned that AntConc is highlighted as a suitable choice for analysing corpora compiled from the web by Lindquist and Levin (2018, 211).

As the choice then fell on AntConc, we will move on to a brief discussion on the functionality of *AntConc* and some issues that were faced when processing data in the software. AntConc is a versatile concordance and frequency tool that is available for free. The tool is available for Mac, Windows and Linux and can be downloaded from https://www.laurenceanthony.net/software/antconc/. The tool is used by several researchers, especially as a concordance program (see Froehlich 2020, Alberts-Franco 2015 and Weisser 2016), although it also has broader applicability. AntConc opens for comparisons of different corpora to a reference corpus or to analyse bulks of data without any references. This allows the researcher to analyse separate parts of the corpus as long as it is divided into different parts

beforehand. One can also separate the different concordance or keywords by where in the corpus the hits occurred. As one can see from Screenshot 1, an initial search provides a word list from the corpus, where the words and frequency are listed. The software also allows for sorting by frequency, alphabetically or by the last letter in the word. One can also invert the order of the list and search for terms and individual letters.
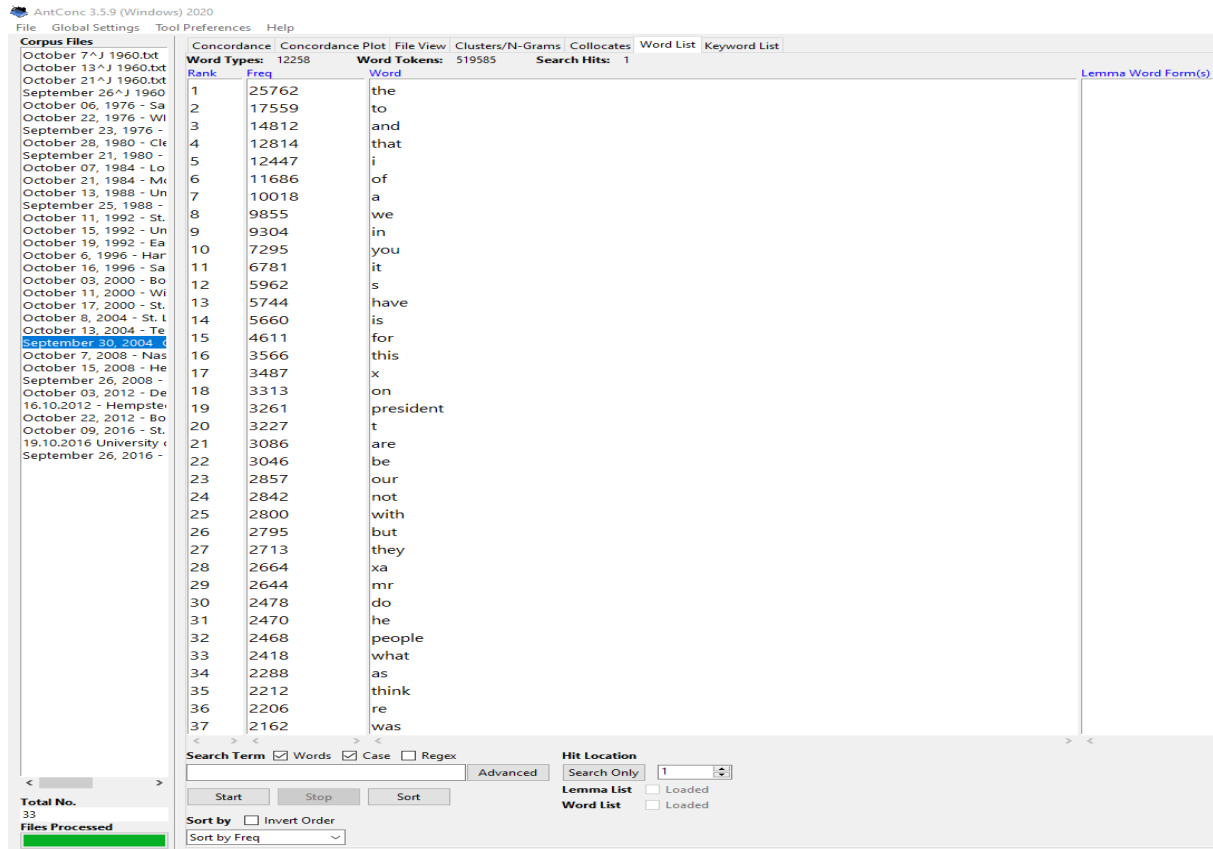
Screenshot 1: Initial display of the word list in AntConc from the CTPD. See appendix G for full-size versions of figures, table and screenshots.

AntConc also allows for concordance, where one can regulate the number of words on each side of the target item, with a maximum of three words highlighted. The specific file sorts the concordance lines it occurred in, while also plotting the item in a concordance plot based on where it occurred in the given text (see Screenshot 3). As we can see in Screenshot 2, the concordance hits are displayed in a list and sored by the file the hit occurred in, the words on either side of the target item are colour-coded, sorted alphabetically, and grouped together. The advanced setting also allows the researcher to expand on the context horizon of the target word. The context horizon can be short, with only a couple of words, but it can also be expanded to include ten, twenty, or more words on each side of the target item. Only three of these will be highlighted, as shown in screenshot 2, but the program still allows the researcher to expand the number of words surrounding the target item.
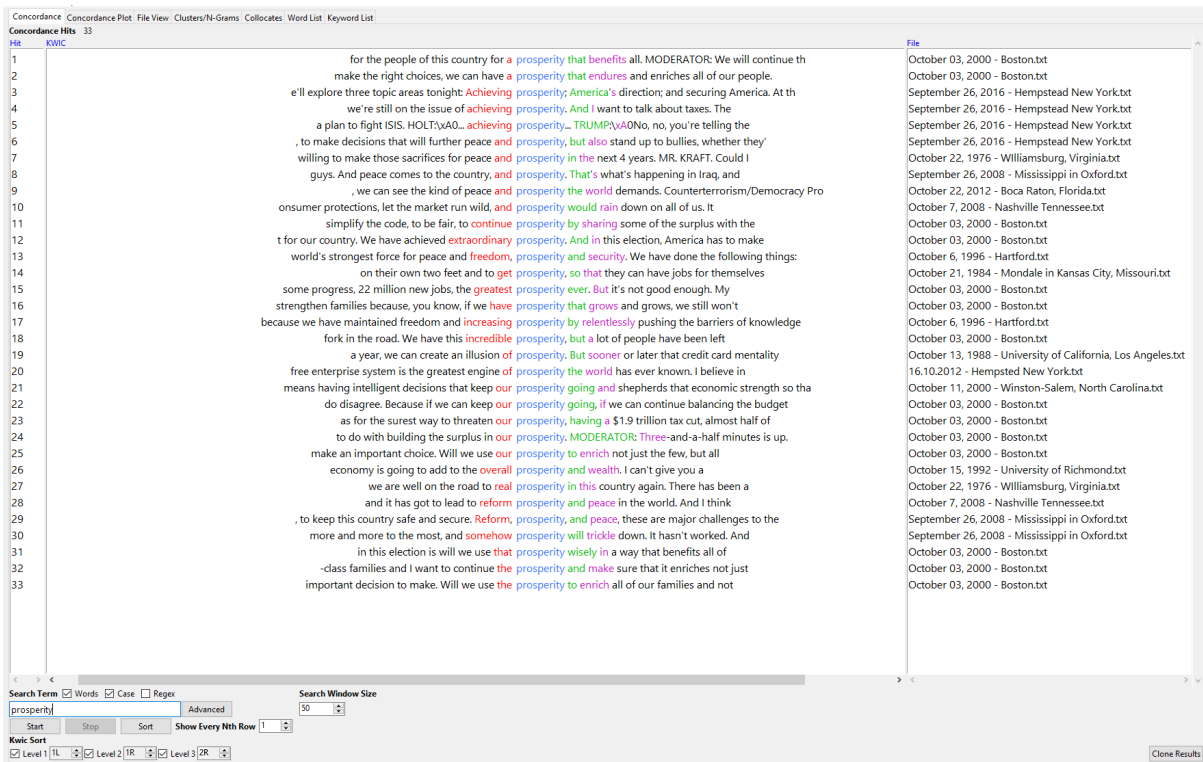
Screenshot 2: Display of the concordance list and results for the keyword *prosperity* (marked in blue); in this example, one word to the left of the keyword is marked, and to words to the right of the target item. We can also see that the individual debates the keyword occurred in are listed on the right-hand side.

The concordance list can also be displayed via a concordance plot, where the hits from the different files are marked with wherein the file the hits occurred. This tool allows the researcher to look for clusters while also displaying the number of characters in the given file, making it easy to determine whether the number of hits might be grouped or spread across the corpus. Screenshot 3 shows how one can use the concordance plot to look for clusters. For instance, can we see from the screenshot that the debate on October 3rd, 2000, has 14 of the 33 hits on the word prosperity and that the hits are clustered in four hits initially, five towards the end and three at the end of the debate. The tool also allows the user to investigate the file itself and find the keywords in the text.
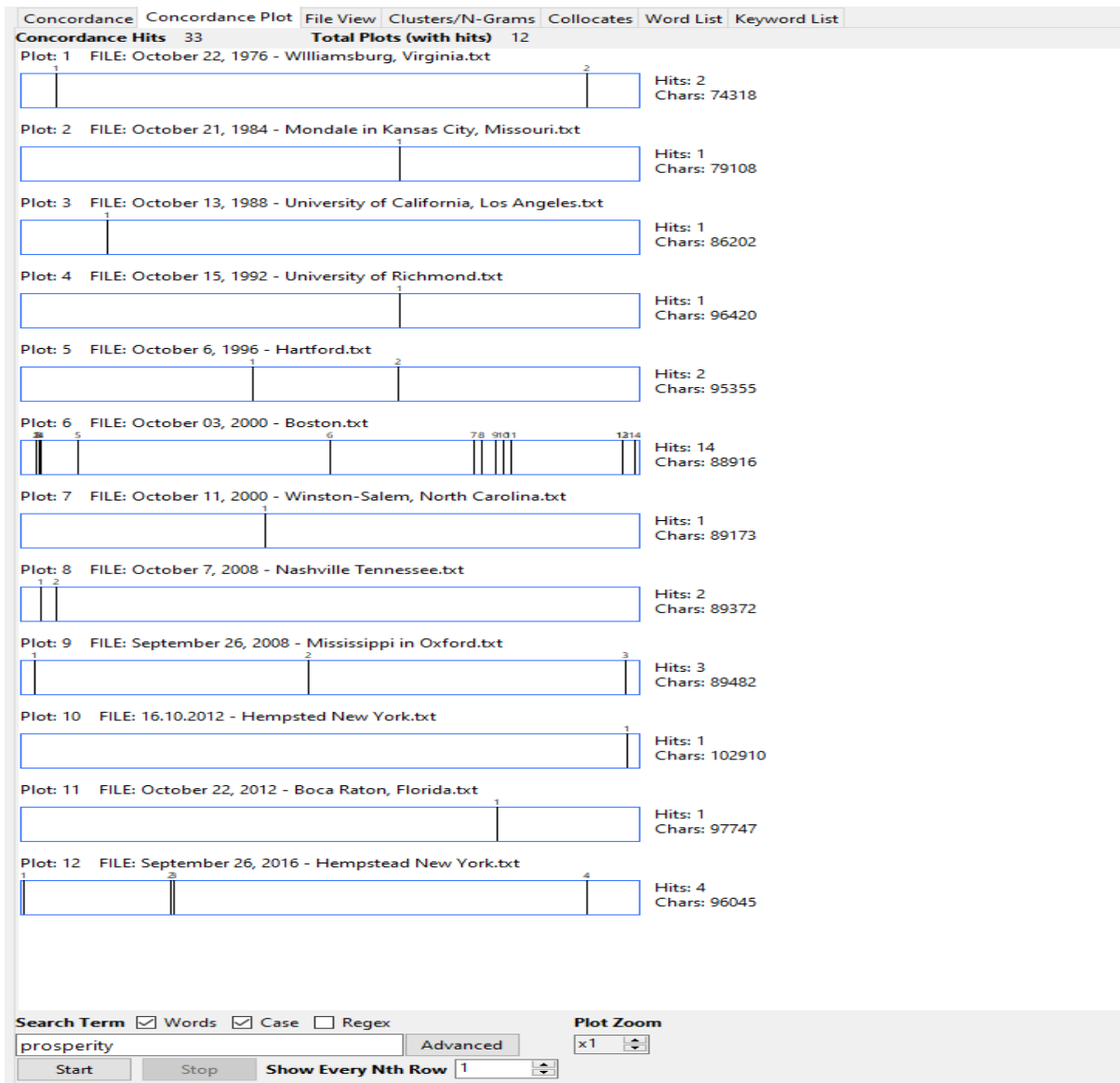
Screenshot 3. This screenshot shows how the results from the word *prosperity* are spread through the CTPD.

Although the tool has several advantages and allows for extensive exploration of the corpus, it does come with some disadvantages. AntConc does seem to have some issues with processing some symbols, such as a hyphen (-), which is processed as *\x97*. It also seems to have problems with a colon (:) followed by an empty space, which in turn is processed as \xA0. Due to the nature of the CTPD, where pause and interruptions are marked in different ways, such as with three dots, or a long dash, these markers are relatively frequent, especially in debates where there is a lot of interruptions. A sentence from Hillary Clinton during the September 26th, 2016, debate in Hempstead, New York, illustrates the issue. During the debate, she reacted to a claim from her opponent by saying:

That can't-that can't be left to stand.

AntConc displays this hit as:

\xA0 That can't \x97 can't be left to stand.

This results in some strange frequency hits, such as the letter *x* being one of the most frequent letters in the CTPD (17th most frequent). Although it is not optimal, it is considered to be a minor issue that does not affect the results in any meaningful way. The main reason is the fact that the markers do not interact with other individual words. Thus they are considered individual words by AntConc. If the marker were implemented with the surrounding words in some way, say, for instance, that it created a "new" word; *\x97Yes*, it would distort the frequency results to some degree. Of the 661 hits in the CTPD on a search for *\x97*, no results provided hits where it was merged with another word. The same was the case with all other representations of unrecognised items in the CTPD. This leads to the conclusion that the unrecognised items do not distort other tokens in any way other than the unrecognised tokens themselves and the ranking of words. For instance, the "word" *xa* is ranked as the 28th most reoccurring in the CTPD while the 29th most frequent word; *mr*, should, in theory, be the 28th most frequent. This is, however, considered to be a trivial error as it does not cause any issues to arise which might distort the results of the study.

These issues are, however, more of a nuance than a real issue. But they should not be dismissed out of hand, as it is crucial to be aware of the possible limitations and problems related to the tool one is using. For instance, an unknowledgeable user could be tricked by some of the results of these issues, such as the letter *x* being much more prominent in CTPD than what is likely the case. However, considering the approach taken by this study, the tool is considered practical and reliable, especially when aware of the possible issues the software might create.

3.2.2 Categorizing Raw Data

To start off, a raw list of word tokens from the CTPD was generated. This list consisted of 12 258 individual words with a varying frequency between 1 and 25 762. This part of the project aimed to categorise the most common themes of U.S. presidential debates but also to discover which themes might be lacking. The words were listed and broadly sorted by category. All in all, 131 information-carrying words were picked out of the 1000 most recurring words in the CTPD. These 131 words made up 20 859 hits in the corpus altogether. The most frequent of these words were ranked the 93rd most occurring in the CTPD and was the word *"tax"* and was mentioned 906 times. The least frequent word included, *"Cuba"*, was ranked as the 996th most frequent word and was mentioned 49 times.

The words were then categorised, so for instance, the word *"tax"* was labelled with the category, *economy*. However, this approach has its limitations, mainly because such broad categorisations will result in some hits being recorded in a not entirely precise category. For instance, within the *tax* tokens, some hits are related to tax cuts for certain industries, while other hits are related to taxing the wealthy or tax cuts for education, to mention some. Another example is the word *"abortion"*, which occurred 72 times in the CTPD. It can be argued that *"abortion"* could be categorised within the health strain and in the religion category, as abortion in the U.S. is also based on a religious perspective on life. Creating categories and placing words within them will also always be prone to some degree of bias and is therefore not necessarily definite. One should also keep in mind that some categories such as terrorism[13] might be more prevailing in certain parts of the corpus, while categories such as education, the economy, foreign affairs, and the military would occur more frequently over the whole timeframe of this study. Another issue to be aware of is that the use of different terms is also not a static phenomenon as the use of some words might change over time. Some words tend to go in and out of fashion, while others decline or increase in use across different timespans. Thus, a word or token might be frequently used in one part of the CTPD while being irrelevant or replaced in another.

When it comes to categorisation, different approaches can be taken. McKinney (2005), for instance, split up the economic category into more specific items, such as the budget deficit, infrastructure, and taxes (McKinney 2005, 207-208). Contrary to the classification in this thesis, McKinney also distinguished between foreign policy issues related to specific countries, which included country-specific mentions into the foreign policy category. Where this categorisation merged items such as crime, social security, and police into the security category, crime and social security were split up in her study. How one chooses to categorize different items is thus individual and prone to biases. But the advantage of such a categorization, especially when it is a part of a more in-depth approach, was considered to be outweighing the disadvantages. Epwene (2017, 66 & 126-130) classified different topics based on the candidates' utterances in what she dubbed the familiarization and identification phase.

As all of the debates were included, it was impractical to categorize every single of the 12 258 unique words, and thus, a cut off parameter at the 1000 most prominent words was chosen. It should be noted that the cut-off parameter of the 1000 most frequent items will exclude words

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[13] Due to the terrorist attack in New York on the 11th of September 2001, for instance.

that are occurring somewhat frequent. There is also a diminishing difference in frequency lower on the list, as exemplified with the 1000th most frequent word occurring 49 times and the 1200th most frequent word occurring 39 times. Thus, a cut-off will often be somewhat arbitrary. The disadvantage with mixing very frequent items with infrequent items is that one can mix generalised phenomena with phenomena that are often extremely localised (Culpeper and Demmen 2020, 97). Therefore, the parameter was set at 1000, but it should be noted that a parameter downwards on the list would probably increase the frequency of some of the minor categories somewhat relative to the larger ones. Although the results cannot be taken as clear evidence of representability, especially when it comes to the categories with few hits, like religion, the environment and race, they can be used to find interesting themes for further examination.

Figure 2 displays the results from the categorisation of the frequency results from the selection of 131 thematic words from the 1000 most frequent words in the CTPD. These results align with other studies looking at issue agendas in U.S. presidential debates, such as McKinney (2005), who found the Economic and Foreign Affairs (Iraq) to be the most common themes in the 2004 town hall debate. Education was also one of the most important issues in the 1992 and 2004 debates, while the 1992 debate had Health(care) as the most important issue. Of the seven major themes in presidential debates found by Epwene (2017, 126-130), six of her categories overlap with the six largest categories of this thesis. This is due to how Epwene includes items such as energy, natural disasters, food, and population issues in her Environment categorization. The last category, which Epwene (2017, 128) dubbed *"science, technology and infrastructure.", w*ere broadly covered by the categories Economy and Jobs in this thesis. Similar results have also been found by other researchers such as Benoit and Hansen (2001). This suggests that the 1000 keyword threshold can most likely reproduce a list of the most prominent themes in the presidential debates. It is also a way of gaining insight into the most prominent themes and contentious issues in the debates, which can be explored further through more detailed approaches.
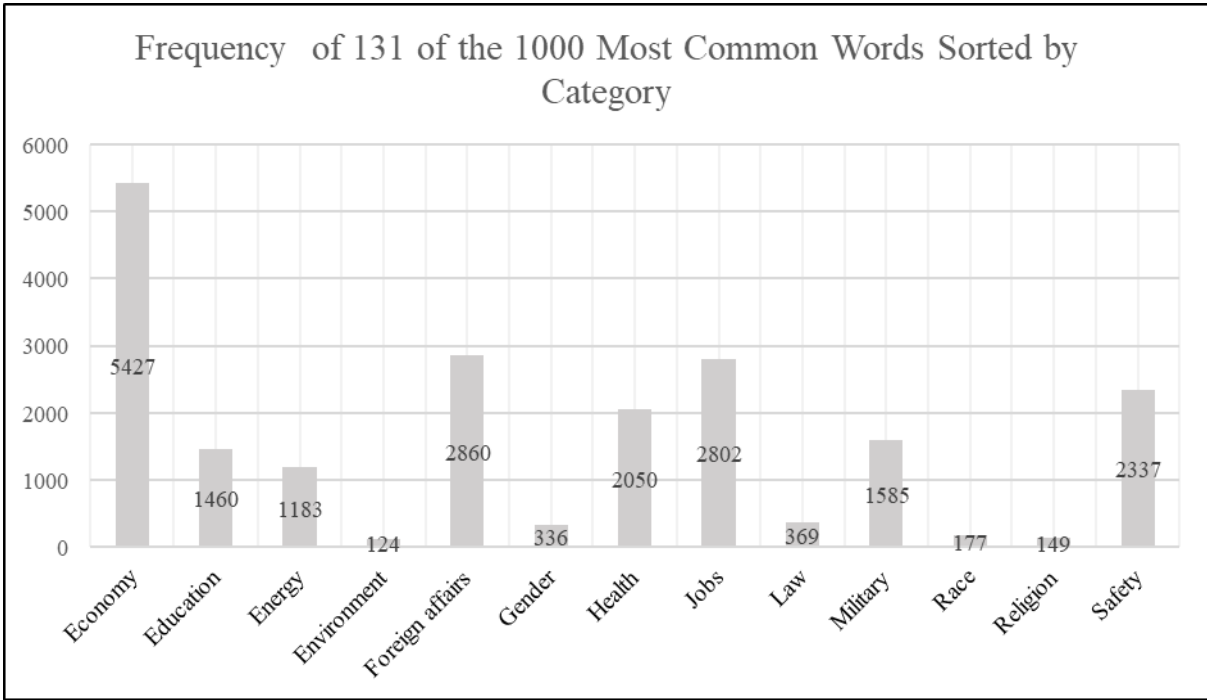
Figure 2: Frequency of words sorted into 13 categories. The number of hits in each category is listed in the table.

3.2.3 Finding a Research Topic

As can be seen from Figure 2, the most prominent theme is the economy, which includes keywords such as tax, money, economy, economic, trade, and inflation. This category is followed by four categories that all measure above 2000 hits, namely foreign affairs, health, jobs, and safety. The third grouping contains the themes; military, education, and energy. However, just as interesting is the fact that categories such as race, religion, gender, law, and the environment scored relatively low on the frequency selection. All of these categories have been at least mentioned in other research which has been conducted on the thematic distribution of the presidential debates.

Epwene (2017) listed the environment as one of the major themes in her analysis of presidential debates. Although her categorization of the environment took a much broader approach than this thesis (see literature review), it is striking that an item that had been singled out as an important issue by other researchers gained such a low score in my own results. The same can be said about Benoit and Hansen (2001) and McKinney (2005), which found the environment to be frequent amongst the most important issues for voters and also brought up in debates between 1992 and 2004. The U.S., UK, Germany, and France also saw exponential growth in articles on climate from 2005 to 2007 (Grundmann and Krishnamurthy 2010, 199). Given that the U.S. dwarfed the three other countries in articles published on the issue in this timeframe

(Grundmann and Krishnamurthy 2010, 200), one would expect the theme to be more prevalent in the assembled corpus.

However, it should be noted that Epwene (2017) included energy-related discussions in her environmental category. Given that energy was given a category of its own when approaching the data, it is possible that discussions on energy that has nothing to do with environmental or climate concerns might have elevated the environmental theme in other studies. To uncover whether or not this was the case, further exploration of the environmental theme was conducted. Given that the environmental and energy categories were likely interconnected, both categories were examined in the thematic exploration.

3.2.4 Examination of the Environmental and Climate Theme

It was decided to move on with a simple initial analysis to examine the apparent lack of interest in the environment and climate in U.S. presidential debates. The first task was to look at the single keyword *environment* and its dispersion in the CTPD. This is important as a dispersion tool allows the researcher to see whether the given keywords are located within a single or a few texts or are dispersed more evenly over the corpus (Culpeper and Demmen 2020, 94). If the keywords are dispersed unevenly, it makes interpretation of the importance of the word harder as it might be due to chance or a spike resulting from a single source. However, the concordance plot from AntConc showed some promising results as the hits were spread among all election years from 1976 until 2012, with the only missing years being 2016 and 1960.[14]
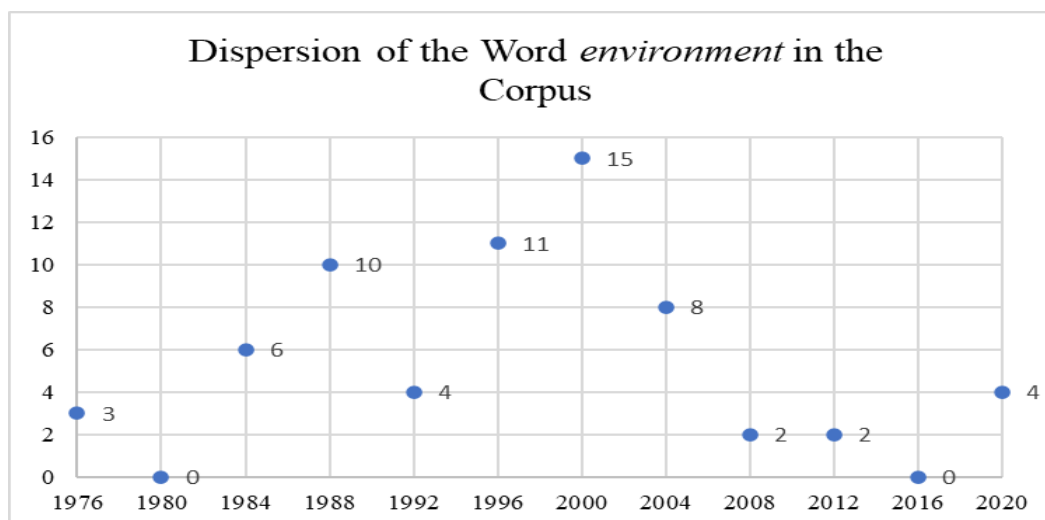
Figure 3: Dispersion of the word *environment* in the CTPD. Note that 1960 had no hits and that the debates of 2020 were not yet held at the time. The data shows that although the number of hits diverges from year to year, there are hits in most election years. The data is transferred from AntConc to Excel for the sake of readability.

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[14] Note that at this point the 2020 presidential debates had not been held and was therefore not part of the preliminary thematic exploration. They are, however, included in the graphs to make them conform to the graphs made after the 2020 transcriptions came available.

Although this initial result was promising, one keyword is not enough to establish the validity of the result, especially not that the theme was prominent enough to move on with. To expand on the preliminary search, a list of keywords that have been prominent in climate- and environmental-based research projects were compiled (see Harnisch, Uther and Boettcher 2015, Fløttum and Gjerstad 2017, Abrahams, 2019, Fletcher, 2009, Grundmann and Krishnamurthy, 2010, and Dayrell 2019). In corpus linguistics, keywords have a quantitative basis as they are characteristic of certain types of texts or themes in a text (Culpeper and Demmen 2020, 90). The advantages of using keywords are twofold. On one side, it removes some of the researcher's vagaries and subjective judgements as the researcher do not select items they find interesting and then establish their importance. This approach might also reveal items that the researcher did not consider important (Culpeper and Demmen 2020, 90). The final list of keywords resulted in 30 words after some were removed as they were not present in the CTPD. These keywords can be found in Appendix B – Keywords utilized in frequency search.

It should be noted that all of these keywords were based on more or less contemporary research, which might impact the results of the frequency screening. Due to changes in how different terms are being applied over time, there is a chance that using keywords that are more or less based on contemporary research might exclude terms that were used in environmental and climate discourse prior to the time the articles used in this thesis were written. However, as this initial phase of the study sought to examine the theme to verify whether there was any basis for further examination of the environmental and climate category, the possible downsides of the use of the keywords mentioned above were ignored.

The keywords were then examined to verify if they were used in the presidential debates in a manner that might suggest a reference to the climate and environment theme through concordance searches in AntConc. Concordances, are simply put, a list of occurrences related to a specific search item within a corpus and presented in the context in which they occur in the corpus. Concordance lines usually present the search word or item in the middle of the screen with the context to one or both sides of the target item. Concordance searches can be used to examine large quantities of texts and can collect and display recurring patterns of words surrounding a word or item stipulated by the researcher (Partington and Marchi 2020, 217). Every single item was gone through and examined manually after first being identified by AntConc.

Multiple items were removed from the results in this process as they were not related to the theme. For instance, a word like *green* showed up in connection to themes such as immigration (*green card*) and debate technicalities (*green light*), as well as related to the given theme (*green energy* and *green jobs*). This process resulted in a total of 1008 tokens. The tokens were then counted and categorised based on election year, frequency, and target word via Microsoft Excel. As it is often easier to display statistical results visually, the results from the findings are presented in a scatter plot (Figure 4):
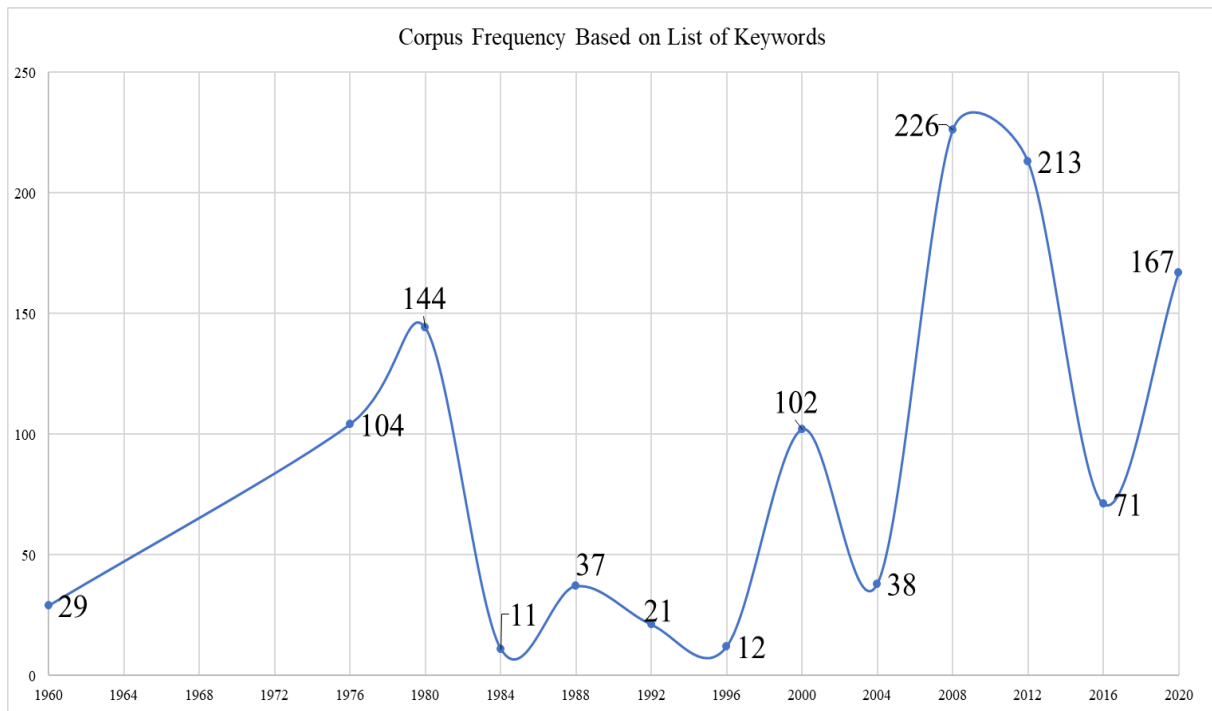
Figure 4: Displays the result from the keyword frequency list on a scatter plot. The horizontal axis follows the years, while the vertical axis displays the number of hits in each year.

The first item of interest is that the number of hits utilizing common keywords from articles on the environment and climate is much larger than the 124 hits in the environment category in the initial screening. As the whole environment category is smaller than the number of hits in 1980 alone, four possibilities occurred. The first possibility was that the initial search did not cover the environmental and climate theme precisely and thus underscored the issue's importance. Contrary to this position is the possibility that the keywords used from contemporary research on climate and the environment also resulted in other issues being singled out as belonging to this theme, thus bolstering the hits in each election year. Although both of these were deemed possible, the third option, a combination of these two, was presumed to be the most likely.

A fourth option is that another issue occurred in either one or both of the results were corrupted through an error on behalf of the researcher or from the calculations. This option was ruled out after a thorough review of the numbers, data, and calculations, which sought to rule out human errors. It was decided to examine the environmental and climate path further, leaving the two contradicting prospects or anything between them as a possibility. The first possibility that there is little to no interest in climate and the environment in U.S. presidential debates would run in contrast to other research on the debates. On the other hand, results such as those advocated by the initial keyword search (see Figure 4) suggest that there has been an interest in the theme from as early as the 1960s and that the issue saw an interest spike as early as 1980. Even though neither was deemed to be probable, it was decided to move on further with the climate and environmental category.

As is evident from the scatter plot, there has been substantial upturns and downturns in the frequency of environment- and climate-related keywords across the years. The first peak, as we can see, is in 1980, with 144 hits. Then follows a period from 1984 until 1996 where there was a substantial drop in the prominence of these tokens. The 2000 presidential election then showed a marked increase, bringing the numbers almost up to 1976-levels before dropping off again in 2004. However, the 2008 and 2012 presidential campaigns saw the largest amount of hits of all election years, with a significant increase from the low 2004 campaign. The 2016 campaign, interestingly enough, displays a marked reduction in tokens, falling back to 1988 levels.

These numbers, however, are greatly enhanced by two words, *energy,* and *oil*, as they are responsible for 222 and 234 hits, respectively. With 456 hits, these two words correspond to 45,24% of the total hits. As this is a significant portion of the aggregated hits, they may greatly impact the scatter plot results. To investigate this possibility, the words *energy* and *oil* were removed from the data. Another scatter plot was created to investigate if the rest of the data was distributed differently across the CTPD than the two most dominant words. As is clearly evident from Figure 4, the scatter plot displays the same trend as Figure 5, suggesting that the effect of *energy* and *oil* enforced rather than distorts the general trend. This is evident in Figure 6, which shows the trend of these two words on their own. However, it is interesting to note that although the trend from Figure 4 is mostly the same in Figure 5, the absolute numbers are not as affected in the "low" period between 1984 and 1996 as they are in the other election years. Although the other years diverges from a 45% reduction of tokens to a 32% reduction from the removal of *energy* and *oil*, the hits from 1984 and 1992 are only down one and two

tokens, while 1996 showed no reduction in tokens at all. It is, however, perfectly evident from the number of tokens related to the words *"energy"* and *"oil"* that they had a great impact on inflating the total number of tokens that were initially regarded as being potentially under the climate and environmental theme.[15]
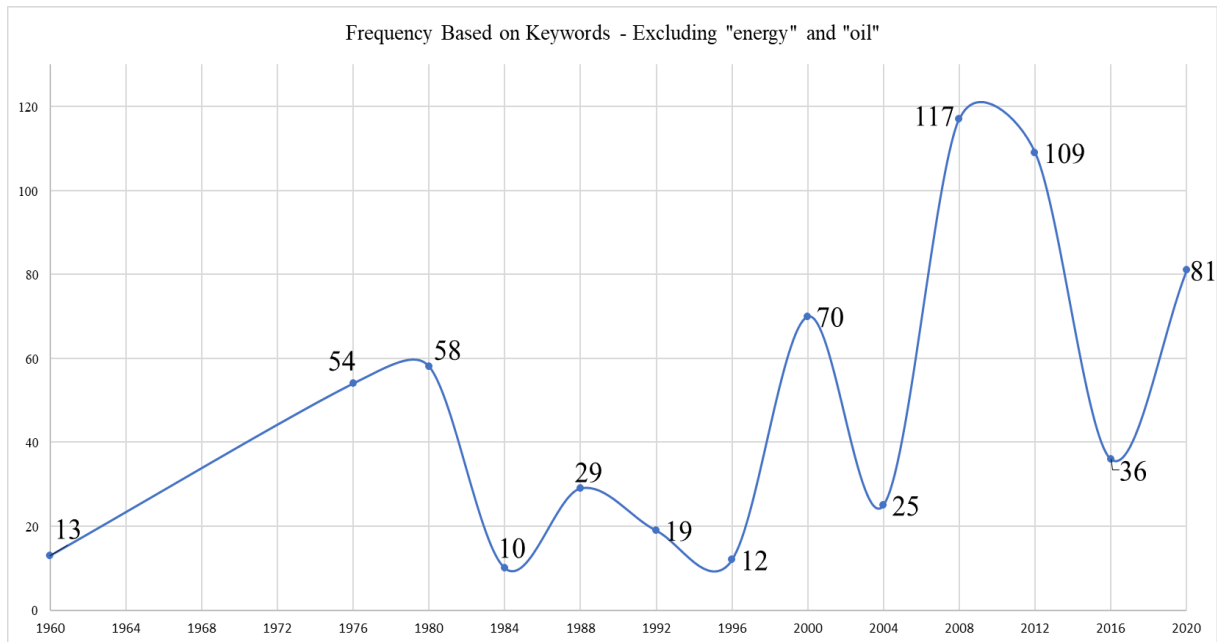
Figure 5: The second scatter plot that displays the frequency and distribution of the keywords when excluding the two most dominant words, *energy*, and *oil* from the results.
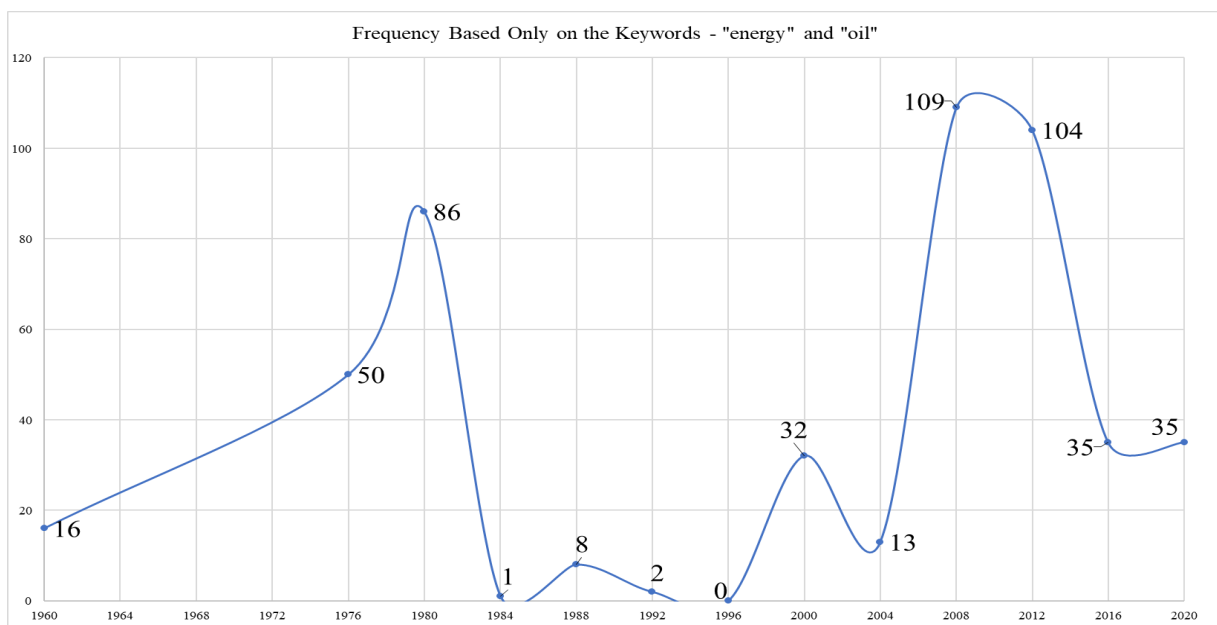
Figure 6: Scatter plot that displays the distribution of the keywords; *energy* and *oil* across the CTPD.

Figure 6, as expected, also display the same broad pattern as Figure 4 and 5. It does, however, suggest that the 2000 presidential debates were not based as much on *oil* and *energy* as most

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[15] For further discussions on Energy and Oil, see Sub-chapter 3.2.5.

other peaks. Interestingly enough, the same can be said in regard to the 1984, 1992 and 1996 debates as these keywords are almost non-existent in these election years. Within this cluster, we also find that while the keywords are somewhat more prominent in the 1988 debate. The three figures, Figures 4, 5 and 6, also suggests that the energy category in the initial search (Figure 2) might be hard to disentangle from the climate and environmental discourse in U.S. presidential debates through a frequency analysis alone. It also raises the question of whether the energy theme is overshadowing the climate and environmental strand, thus leaning towards the option that energy, rather than climate and the environment, inflates the number of hits. The separation of these two words also suggests that the debates in 1976 and 1980 most likely were concerned with these two items, thus hinting towards energy as a broader theme of these election years. Why that is, is touched upon in chapter 3.2.5. Before considering this issue, however, the potential for the uneven size of the corpora that make up each debate year to distort the results must be considered and tested.

3.2.5 Normalisation

A common methodological approach in corpus linguistics is to compare two or more corpora with another. A reference corpus can be used to compare the results with other sources. It is also possible to compare a part of a corpus with another. In situations like the one we have, where different parts of the corpus constitute individual parts in the analysis, the relative frequencies might be different from the actual frequencies. Unless the parts of the corpus are exactly the same size or more or less the same, the frequency tables might be misleading as they don't reflect the relative frequencies in each corpus. In order to compare the results from each election year in the corpora, it is necessary to also look at the normalised results. The aim of normalisation is to express a frequency relative to another value as a proportion of the total sum (Gries 2020, 52). In this case, it can be exemplified, for instance, with the debates in 1980 where two debates were held, and a total of 25 744 tokens were recorded. In 1960, however, there were four debates with a total of 45 719 tokens. Say that both debates had 1000 references to a word; in the 1980 debates, that would make up 3,88% of the total words, while it would only make up 2,14% of the total words in the 1960 debates. Raw frequencies can therefore be misleading when comparing corpora of different sizes and should be normalized.

Although the normalised results are important when comparing corpora of different sizes, it should also be mentioned that in this case, raw frequencies are also of interest. As the individual samples from each election year are rather small, looking at raw frequencies can be an important first step in determining whether the theme is prominent in a given year. However,

as the samples from each campaign range between 25 000 words to over 55 000, the raw frequencies might be misleading when looking at how prominent the theme has been in a given year or how it has fluctuated over time. Therefore, the raw frequencies were normalised to check if the debate's size difference impacted the results. As shown in Figure 7, the normalised results display the same general pattern as the raw frequencies.
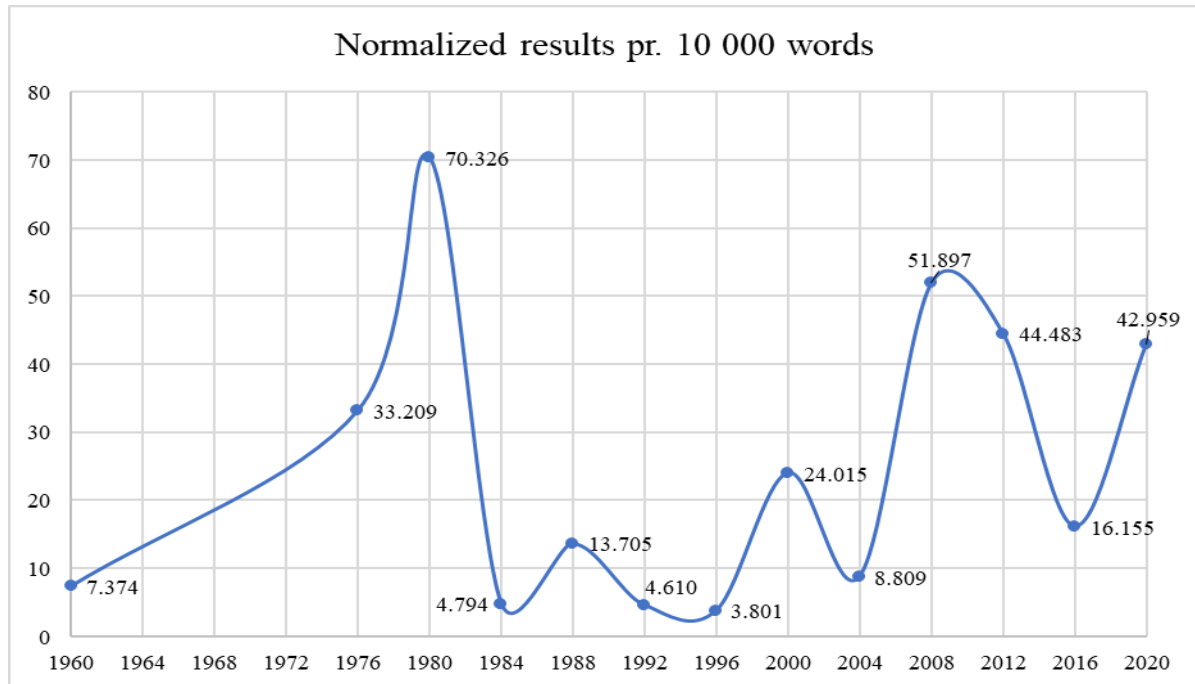
Figure 7: Normalised results pr. ten thousand words in each televised presidential campaign.

The normalised results are given with the formula;

$$F_n = F_o(10^4)/C$$

where F_n is the normalised frequency, given in Figure 7 at each interval. F_0 is the observed frequency, as found in Figure 4, while C is the corpus size, which in this case is the number of words in the transcriptions from each presidential campaign considered in the CTPD. As there have been various formats, amounts and length of debates over the timespan, the different transcripts do vary considerably in size. It is, therefore, interesting to note that the pattern is more or less the same as we have seen with the raw frequencies. The most noticeable difference between Figure 4 and Figure 7 is how the normalisation has displayed that the tokens were relatively more frequent in the 1980 debates than what the raw frequencies showed. The 1988 debates are also given a somewhat higher score than what the raw frequencies suggested initially. However, as mentioned, the trends that were evident from the raw frequencies are also more or less duplicated in the normalised results. Nevertheless, that the presidential debates of the year 1980 were the most concerned with environmental or climate issues is somewhat

dubious, and the normalisation, therefore further strengthens the suspicion that energy rather than the environment, is the main driver for the tokens in the quantitative data.

Another interesting moment is as we can see from Figures 4 and 7, is that the trend is generally moving upwards from 1980 until 2020. This suggests that the theme has become more prominent in U.S. presidential debates over time, given that the keywords cover it. This is to be expected, as the recent decades have seen an increase in attention towards climate, energy solutions and the environment (see Collins 2016, 294, Grundmann & Krishnamurthy 2010, 119 and Fløttum & Gjerstad 2017, 1). It is, however, interesting to notice that the curve from the tokens examined in the CTPD is far from stable and displays noticeable upturns and dips over the relevant timeframe. The trendline is also not as sharp as one might expect given the growing interest in the issue, especially since the mid-2000s (Fløttum & Espeland 2014, 2). When looking at the scatter plot as a whole, it is interesting to note that although there was a marked increase in tokens from 2000 to 2012, there were also two noticeable dips, one in 2004 and one in 2016 as well. In light of these preliminary results, it was considered interesting to pursue the question of whether the ebbs and flows are down to the tokens used or how the debates differentiate from year to year, or if the climate and environmental discourse are constantly shifting in prominence.

3.2.6 U.S. Energy Crisis and the Energy Theme

As is often the fallacy of quantitative results, it tends not to provide evidence of the context of a given phenomenon. In the 1970s, the U.S. found itself in an energy crisis where there was a triple shortage of oil, natural gas, and electrical energy through the decade (Lifset, 2014). One of the major issues of the 1970s in the U.S. was related to several separate energy crises. It should explain much of the references to the prominent keywords in modern climate discourse. As the keywords were based on other climate- and environmental studies and often include terms within the energy frame, we should expect a high amount of hits during the energy crisis years. However, as Lifset (2014, 35) and Wellum (2017, 723) point out, the 1970s witnessed the rise of the environmental movement in the U.S. Therefore, an interesting line to pursue is whether the energy crisis in the 1970s might have ushered in early examples of environmental concerns in the presidential debates. The quantitative data, however, is not enough to answer this question in a satisfying manner. It is, therefore, necessary to move towards a mixed-method, where the quantitative data can be used as a basis for conducting qualitative research to answer the questions that can pursue the question of whether the 1970s energy crisis is the cause of the massive spike in tokens in 1976 and 1980. If this is the case, it is also interesting

to pursue the question of whether energy concerns are the sole reason for the frequency results or whether climate and environmental concerns are prominent in the debates. Moreover, if the high amount of hits is caused by the energy crisis and focus on energy in 1976 and 1980, are the other debates also overshadowed with energy concerns rather than environmental and climatic concerns.

The issue that was encountered here also clearly display how quantitative data can be misleading without closer examination. Although the quantitative data, which was utilized to uncover thematic categories in the CTPD, allows for some insight into the data material, it also showcases the limitations of a quantitative approach to corpus exploration without extensive qualitative backing. Although the data were inconclusive, it can serve as a bridge towards further examination of the corpus. By complementing the quantitative data with a qualitative approach, the CTPD can be explored in-depth and thus allowing a more precise assessment of the environmental and climate theme in the presidential debates.

3.3 Further Examination of the CTPD

A mixed approach to corpus examination usually involves back-and-forth processes, and utilization of both qualitative and quantitative approaches, the further examination of the CTPD was based on both methods. Therefore, the following sub-chapter will discuss the inclusion of a more in-debt qualitative approach and the continuation of quantitative data gathering and compilation. The following sub-chapter will primarily examine qualitative considerations except section 3.3.7, which briefly lays out the corpus structure to facilitate further quantitative examination.

3.3.1 Complementing Quantitative with the Qualitative

Quantitative and qualitative methods complement each other beneficially in corpus studies of political discourse (Ädel 2010, 595). Following a quantitative analysis, a possible approach is to move increasingly towards a qualitative approach but with a great deal of movement between the quantitative results and the qualitative analysis. The link between a single word and the co-text (broader discourse patterns and concordance lines) is important to emphasise, as in most cases, the context, especially in political messages, carries the significance (Wilson 2003, 409). Although the point of departure is the single word or the concordance line, the ultimate interest is often in broader topics such as discourse or argumentative patterns (Ädel 2010, 596). One of the most common approaches when studying political discourse, for instance, is to examine *"how X is talked about"* (Ädel 2010, 596). The *X* in this manner does not necessarily need to

be a word or token; it can also be a theme, although it necessitates a much broader approach and is also more time-consuming than research based on a single item. Secondly, most corpus studies look at what is behind the figures and thus, does not stop with frequency tables or quantitative listings of data (Lindquist and Levin 2018, 26).

3.3.2 Political Identities and Frames

Themes and categories might be represented and interpreted differently depending on the context; this is also the case with climate change (Fløttum & Gjerstad 2017, 2). The notion of representation and interpretation of issues touches upon the notion of framing, which entails that all messages must come in some sort of packaging. These messages are a part of a strategic selection, either conscious or unconscious, of language features to achieve a particular purpose (Fløttum & Gjerstad 2017, 2). Kudo and Mino (2020, 8) focus on framing through the way which one particular topic is explained; this entails an explanation of why it is important, who is responsible and what measures should be taken when approaching the topic.

Frame analysis has been utilised, especially in the social sciences, to study different subjects. It has been commonly used to study news frames within the political arena (Epwene, 2017 48), but it stems originally from discourse theory (Fletcher 2009, 802). Frame analysis, in particular, has proven itself useful when it comes to analysing the interplay between language, actors and policy (Fletcher 2009, 803). However, such insight is only possible within an orientation that is taking language as a fluid construct where there is no stable link between an object and a word (Fletcher 2009, 803). Hence, multiple frames originating from different sources are bound to exist; this applies to all types of topics and issues, as well as sustainability and environmental narratives (Kudo and Mino 2020, 9).

In his discussion on framing analysis, Nisbet (2009, 45) points out that researchers must be aware of and respect the uncertainty inherent in any work related to assessing the meaning of an utterance or narrative. Originating from the same issue is the issue that there are several strands and approaches to framing, which in Nisbets (2009, 46) own words, makes the approach *"frustratingly subjective"*.

To be able to utilise frame analysis to its full extent, it is necessary to lean on a series of assumptions. The first is that the political debates are argumentative in function and that the goal is to convince the audience, either physically or through media channels. It is in discursive activities, such as debates, that people display their political identities (van Dijk 2010, 40). One must also assume that aims or goals usually steer political activities. This is especially the case

when it comes to prominent activities such as the presidential debates, where the candidates are briefed and prepared long beforehand. Therefore, the aim of the candidates is to win voters confidence in the different cases that are touched upon during the debate. This can be done through various strategies, depending on what is perceived to be the most effective. A candidate can, for instance, omit a question or theme if the theme is perceived to be a losing one for the candidate. The candidate can also attack the opponent's policy or history related to a theme or defend one's own approach. Even though the opportunities for different approaches are manifold, the aim is always to win voter confidence. The frames that the candidates chose is an important part of these goals, as they represent the approach a candidate, that again represents the party, has towards a given theme. As it is a common understanding that Republican candidates are less inclined to approach climate-related issues than their democratic counterparts (Brown and Sovacool 2017, 135), we should expect that this is also the case from a historical perspective.

3.3.3 Framing Analysis (FA)

Having completed the initial quantitative collection of tokens, the second part of the initial procedure was to manually examine the CTPD wider context of environmental and climate discourse. The chosen approach was to examine the corpus through the lens of framing. Framing analysis or FA is an analysis that intends to show how a message's communicator uses discursive elements to enclose, or frame, an idea or topic in a certain way. As the presidential debates are the basis for this study, the FA is also combined with the notion of political discourse as a tool for achieving power and control (Ädel 2010, 591). The packaging of the political message or idea is then framed in a certain way so that the recipients will view it in that manner. The power of frames lies in how they induce the receiver to filter their perceptions of the world in a certain way and makes certain elements in a message more salient than others (Kuypers 2010, 300). As attention is highly selective, this process is often not noticeable, as people tend to rely on the information that is most easily accessible. Framing is thus the process where communication constructs a particular viewpoint that encourages that a situation is viewed in a particular manner (Kuypers 2010, 300). When a communicator highlights a certain part of an issue or theme over others, frames serve the function of defining problems while also diagnosing causes; it serves to pass moral judgements and define remedies. Frames can be detected by looking at the properties of any given narrative; this could be keywords, metaphors, symbols, or visual images, as well as concepts and naming of persons, actions, ideas, theories, etc. (Kuypers 2010, 301). According to Ryan (1992, 59), Frames also always define an issue,

the responsible actors while also suggesting possible solutions. This message is again conveyed using images, anecdotes, and stereotypes.

3.3.4 Choosing Frames

Following Kuypers (2010, 302-305) example of a rhetorical framing study, the initial step is to look at the themes that are the subject of the study. As the themes have already been laid out through the quantitative approach, the thesis will examine the climate and environmental theme in the presidential debates. The frame, of course, is, in this case, how this theme is interpreted and narrated by the orator.[16] Since the debates are spread over a considerable timeframe (80 years), the approach also allows for an examination of how these themes and their corresponding frames have developed over time.

Studies that utilize framing as an approach must determine whether they want to approach the examination using preestablished themes and frames. Following the quantitative analysis, this study has already circled out the energy and environmental theme. The advantage of an initial exploration is that the quantitative data allows for some certainty that the theme is worth examining and also that the theme is more or less present in the CTPD. The most prominent disadvantage lies in how the path is already laid out, and thus there are restrictions on how far out one can move out of the thematic framework already present. This inhibits some of the opportunities an explorational textual reading might provide. However, an exploration without some sort of quantitative base is more prone to the personal inclinations and biases of the researcher. The data will also often be anecdotal in nature and thus more prone to errors and harder to verify.

Whether the researcher decides to move forward with a given theme or proceeds with a thematic exploration, the approach towards frames must also be considered. As with themes, frames can also be approached with a pre-determined set of frames or through an explorational approach. Kuypers (2010, 302) displays how an explorational approach can be used to determine which frames the material offers, rather than examining the material with a fixed set of frames. The same method is used by Epwene (2017, 66), where she approached the material in an explorational manner and assigned frames to questions based on her interpretation. This approach allows for some freedom when determining which frames to base the study on and how to categorize the material. Another way to address frames is through already pre-determined frames. A researcher might want to use frames from other studies which have been

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[16] The orator being the participating presidential candidates in each election year.

systematized and which can have an advantage in that the results might be more comparable to projects which use the same frames. Utilizing standardized or pre-determined frames runs the risk of being a poor fit for the corpus as the frames established in previous studies might not be applicable for later studies. Therefore, it was decided to move on with an exploration of frames within the already-determined theme.

3.3.5 Exposition of Frames

Researchers who have used frames for their analysis have also seen the need for a systematic exposition of the frame content and results (Johnston, 2002, 73). Charlotte Ryan (1992) focuses on media framing in her dissertation on media strategies for grassroots organizing. Her study utilizes a systematic listing of key frame elements through charts in her frame analysis. Mario Fuks (1998) used the same approach as Ryan (1992) when exploring environmental conflict in Rio de Janeiro. He also used an adapted version of the same approach in a later study of discursive themes related to the environmental conflict in Rio de Janeiro from 2001 (Fuks 2001, 58). Although Fuks's (2001) model contains more elements than that proposed by Ryan (1992), it does lack one of Ryan's (1992) key elements, namely the solution to the issue. Solving issues, or at least prescribing courses of action, is one of the core elements of political discourse (Fletcher 2009, 801). Assessing courses of action allows a systematic examination of whether a proposed solution is presented to the issues at hand or ignored, both of which are interesting. Whether or not a political actor proposes a solution to an issue can also be telling, as a solution might suggest that the actor assess the issue as important or pressing.

In her discussion of narratives in reports about climate change, Fløttum (2013, 280) holds that there are five main components of the narrative structure in these reports. Her structure incorporates several of the same aspects as Fuks (1998, 2001) and Ryan (1992). Fløttum (2013, 280) also suggests that there might be additional moral components added to the narrative, or evaluations, for instance, of who is to blame. When working with climate narratives, the complication is often climate change itself. However, it could also give rise to new complications, which entails that it is essential also to consider how this issue is framed and presented related to other complications (Fløttum 2013, 281).

Both Fløttum (2013), Fuks (1998, 2001) and Ryan (1992) utilize frame schemes that includes a broad range of elements. Their interpretations of narratives are also apparently best adapted to larger or longer pieces of information that include a broad range of elements within the same narratives. Fuks (2001), for instance, examined longer stretches of text pertaining to

environmental discussions, which might be a more applicable situation to use a large scheme to examine narratives and frames. In the presidential debates, however, several utterances are relatively brief, and the candidates might touch upon a variety of themes during a monologue which makes it impractical to use a standardised scheme to analyse each frame. This is especially the case if the researcher relies on a scheme that is not explicitly adapted to the theme and issue the researcher is assessing.

Nisbet (2009, 52) points out that frames need to be identified which resonate with and exists in relation to a specific policy or thematic debate. In his research on climate change, he circled out six frames which he identified to cover the contemporary climate narratives in the U.S. These frames also corresponded with frames that constantly appear across science policy debates (Nisbet 2009, 52), and were thus embedded in a generalizable typology of frames, while still being issue-specific. The frames which Nisbet (2009, 53-59) highlighted in his research were as follows:

1. Uncertainty and Economic Burden
2. An Economic Opportunity Rather than a Burden
3. A Religious or Moral Call to Action
4. Pandora's Box of Looming Disaster
5. Public Accountability and "A War on Science"
6. Issue Specific Frames

There are intrinsic advantages in adhering to drawing on previous work as a framing strategy. When scholars try to "reinvent the wheel" in identifying and labelling frames, it can lead to significant differences in measuring trends and observing influences. By at least adhering somewhat to the generalizable typology which one often can find in relation to most major issues or events, the researcher would contribute towards a more consistent set of results that is easier to explain and compare specific communication dynamics (Nisbet 2009, 46). This thesis will, following Nisbet's line of argument, explore the six frames which were laid out by Nisbet (2009). However, as the six frames might not necessarily cover all the relevant frames in the CTPD, this thesis allowed for another section called discovered frames, which allows the researcher to categorize elements that did not fit the 6-frame system proposed by Nisbet (2009). Note that a description of the pre-determined frames and those discovered can be found in Appendix F.

3.3.6 Searching for Frames

The approach taken to find and highlight the relevant frames is based on a mix of the approach taken by Epwene (2017) and relies on further exploration of the quantitative data previously gathered. The initial data gathering was based on the concordance plots from AntConc, where all the 1175 tokens from all the debates were used as a starting point for the analysis. All these items were examined with the corresponding context surrounding the discussion to determine whether the utterances were related to the environmental and climate theme. However, one cannot be sure that the 1175 tokens covered the total width of discourse on the theme as the tokens were only results based on the keywords in the initial phase of the study (see Appendix B for a list of keywords). Keywords that displayed a lower frequency than 49 were excluded from this search due to the 1000th-word cut-off. This might have resulted in items that occurred 48 times not being accounted for, and thus it was necessary to combine the quantitative approach with a thorough examination of the whole corpus data.

The next step was to follow the same approach as Epwene (2017), who conducted a close reading of the entirety of the data to uncover any missing references from the engine searches. While conducting the close reading, notes were taken in the margin and on separate sheets to provide double verification of points of interest. All of the data that referred to the environmental- and climate theme were then gathered in its original form and with surrounding context to a separate document and then examined individually. Although the frame schemes used by Fuks (2001), Fløttum (2013) and Ryan (1998) were not used in this study, their assessment of different kinds of narratives and ways of framing issues were crucial for assessing some of the data points in the CTPD. A close reading of the data was chosen as a relevant approach as it had been done in previous studies on the same theme and also seemed to be a promising path towards structuring the data and gathering comparable pieces of narratives across the timespan of the televised presidential debates. Combining the exploration approach with Nisbet's (2009) frames made a broad examination of the corpus possible.

One issue with the approach was that several items and references to environmental concerns were minimalist and under-developed. As some references to climate or the environment in the debates vary between a few words to several paragraphs of monologue, there is much emphasis on the researcher interpretation of the data when examining smaller bits of information. The qualitative approach promises to discover how prominent this theme has been at a given time and how it has been interpreted and expressed by the different political factions represented by their presidential candidate during any given place in time. These data points can then be

utilized to assess whether there have been any developments over time and how they have materialized themselves.

3.3.7 Facilitating for a Comprehensive Quantitative Examination

To facilitate the ongoing exploration of data through quantitative approaches, the CTPD was further modified to address different types of questions. It can be advantageous to compile the corpus in different ways to check for distribution in the corpus and normalised and raw frequencies. As the CTPD is not annotated, for instance, for whether a candidate from a given party speaks, two separate corpora were assembled. The first corpora included the dialogue from both the candidates, while a second corpora were created with four sub-corpora, one including only democratic candidates, one for Republican candidates and two more containing the two examples of independent candidates. The corpora were also created in a manner where the individual debates and election years were open for exploration in combination with other parts or in and of themselves. It can be interesting to compare corpora or parts of corpora to examine, for instance, the difference in language use between distinct groups or variations over time. A clear distinction between these was thought to be advantageous.

Alongside the aforementioned corpora, a separate corpus was kept, which included all of the dialogue from the moderator(s) and questioners and one where the candidates are marked as speakers to more easily identify which candidate is speaking. The corpus, which included the questions and dialogue conjointly with the candidates, also allows for contextual and thematic cues as well as a structure to the debates themselves.

3.4 Chapter 3 Summary

This chapter has presented the methodological approach of this thesis and the use of the concordance tool AntConc. As mentioned initially in the chapter, the discussion on the methodological approach also considers the explorational part of the thesis. Thus, it outlined how the corpus was approached, which considerations were made during the explorational phase, and the process of finding data and how to analyse it.

The CTPD was first examined through a quantitative approach. The first data and primary results suggested that the environmental and climate strain could be interesting to follow, first due to how there seemed to be little interest in the theme. When closer examining the theme using a set of keywords from other studies, the quantitative data seemed to drastically overstate the prevalence of environmental and climate concerns and the theme as an issue in the debates. Most prominent were the debates in 1976 and 1980, during the energy crisis, that showed especially high frequencies. We, therefore, asked the question if the energy crisis stood for the results in these two election periods rather than attention to the environment or climate. Furthermore, suppose energy issues have the capacity to distort the quantitative data to in 1976 and 1980. In that case, it also raises the question of whether energy or similar themes also affected the data in the other election years.

It follows from this that the ebbs and flows over time might also not be representative of the climate and energy strand. To examine these questions, it was decided to move to a qualitative approach where the data points and CTPD as a whole can be explored more in detail. As the quantitative approach alone does not allow for comprehensive, in-depth information gathering, a qualitative examination of how the presidential candidates are framing the theme of climate and environment is also included. However, this does not entail that the thesis only concerns itself with qualitative data. Instead, a mixed method of qualitative and quantitative data to provide joint methodological support and thus minimize the issues both methods have when utilized individually.

4. Data Analysis

The present chapter considers the quantitative and qualitative analysis of the dataset after a further examination of the corpus data was conducted. Section 4.1 will discuss the different quantitative data gathered, while section 4.2 considers the qualitative data. However, it should be noted that since the qualitative and quantitative data merge into each other at several conjunctions, these are rough separations as the qualitative data has been used to assess the quantitative and vice versa. Based on the quantitative data, frames, questions, and argumentative positions, main- and minor findings are presented and discussed in section 4.3. Section 4.4 summarizes the data and results.

4.1 Quantitative Overview

In terms of quantitative analysis, the data were addressed to uncover how *often* and in what *form* presidential candidates address environmental and climate issues. This also includes data on how much time[17] the candidates spend on the topic and how much of the debates is committed to discussions on the environmental and climate theme. A total of 126 utterances were deemed to fall within the environmental and climate topic, all of which can be found in Appendix C. These utterances serves as the foundation for the discussion that follows in this chapter.

4.1.1 Frequency- and Length of Climate and Environmental Mentions

The 126 utterances vary greatly in length, ranging from nine to several hundred words.[18] Several of these utterances were smaller mentions, which were considered anything from one word to 49 words in this thesis. Democratic candidate Jimmy Carter can serve as an example of such an utterance during the third debate of the 1976 campaign;

"Well, I might say I think the League of Conservation Voters is absolutely right. This administration's record of environment is very bad."[19]

However, the most typical utterance is between 50 and 149 words and contains one or several elements within the environmental and climate theme. One example of such an utterance can be seen from Republican candidate Donald J. Trump during the first debate of the 2020 campaign.

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[17] Measured in the amount of words.
[18] See Appendix C.
[19] See D-1976-3.

"I want crystal clean water and air. I want beautiful clean air. We have now the lowest carbon. If you look at our numbers right now, we are doing phenomenally. But I haven't destroyed our businesses. Our businesses aren't put out of commission. If you look at the Paris Accord, it was a disaster from our standpoint. And people are actually very happy about what's going on because our businesses are doing well. As far as the fires are concerned, you need forest management. In addition to everything else, the forest floors are loaded up with trees, dead trees that are years old and they're like tinder and leaves and everything else. You drop a cigarette in there the whole forest burns down. You've got to have forest management."[20]

All cohesive utterances over 149 words were categorized as *large,* and they are less common than smaller ones, although the 2020 debates saw six such utterances. By distinguishing between different-size utterances by the candidates, it is possible to examine whether the given year might have seen an extended and in-depth discussion on the theme. On the other hand, it can also display whether the candidates in a given year prefer smaller mentions of the issue instead of larger discussions. This might be due to preference or the way the debates are structured. The total number of utterances also indicates how many times the issue has been brought up, thus indicating the candidates' willingness to address the issue.

As we can see from Figure 8, there are large divergencies both in how often the presidential candidates discuss the environment/climate theme and the length of each utterance. Two years emerges as especially prominent, 2000 and 2020. Interestingly, both of these years also display great variety in the length of the utterances by both the Republican and Democratic sides, which suggests that the debates in these years went into some debt on the topic. In comparison, the 1996 debate only had utterances from the Democratic candidate Bill Clinton, and 11 of the 12 utterances were under 50 words, suggesting that these statements were brief mentions rather than in-debt discussions on the theme. In some instances, brief mentions might be part of minor deviations, or the candidate might want to bring up an issue, such as climate change or environmental degradation, out of context.

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[20] See R-2020-1.

Statements Concerning Climate / Environment by Number and Length
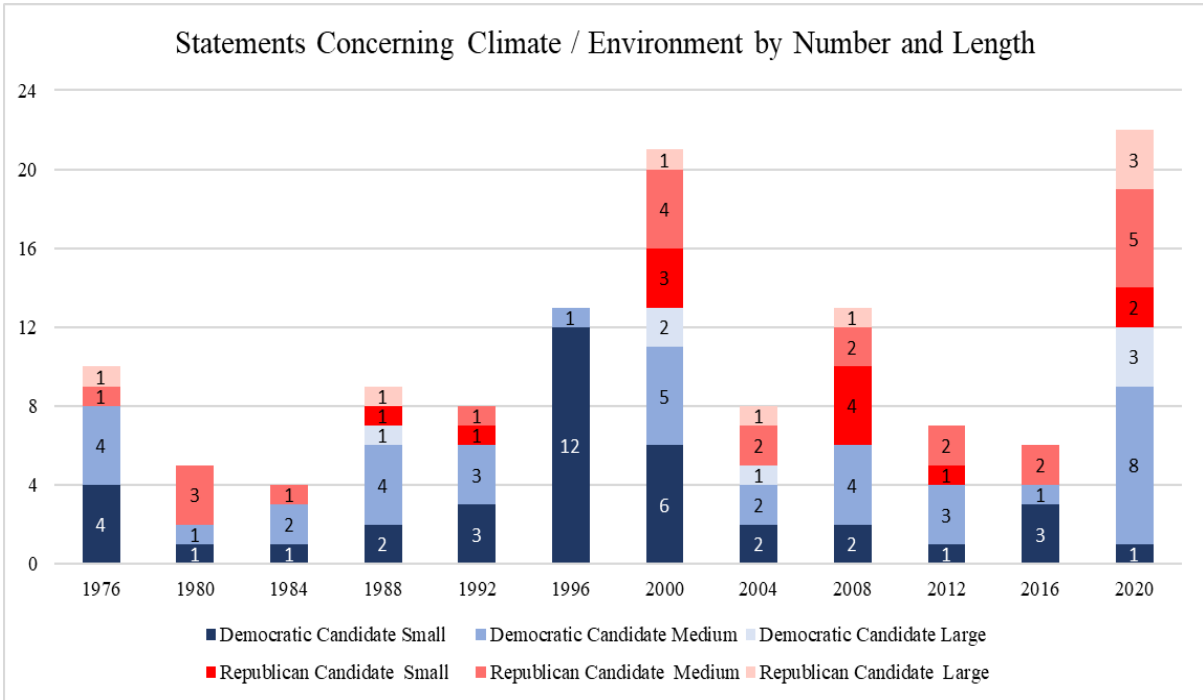
Figure 8: The figure displays the number of statements by each candidate and the total amount of statements by year. Through colour coding, it also showcases whether the statements were large (150+ words), medium-length (50-149 words) or small (1-49 words).

Out of the 126 utterances, 83 were attributed to Democratic candidates, while the remaining 43 were attributed to Republican candidates.[21] The dispersion between small, medium, and large utterances shows that Democratic candidates include brief mentions on the environment or climate (38 small statements) over three times as often as Republicans (12 small mentions). The smaller mentions might suggest that Democrats tend to bring up the theme regularly and has done so over time. Those statements recorded to be medium in length also display a clear tendency to be more popular with Democratic candidates with 38 medium length statements compared to 24 by Republicans. Finally, the large statements, those over 150 words, are utilized most by Republican candidates, with a margin of one (eight large statements by Republicans versus seven large statements by Democrats). Large mentions, on the other hand, might entail that the debates brought up the theme and thus forced the candidates to address the issue in question to some extent.

The numerical values for every year can be seen in Table 2:

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[21] One single mention was also recorded by Ross Perot in 1992 (see Appendix C: I-1992-1).

	Democratic Candidate				Republican Candidate				Single Year
	Small	*Medium*	*Large*	*Sum*	*Small*	*Medium*	*Large*	*Sum*	
1976	4	4	0	8	0	1	1	2	10
1980	1	1	0	2	0	3	0	3	5
1984	1	2	0	3	0	1	0	1	4
1988	2	4	1	7	1	0	1	2	9
1992	3	3	0	6	1	1	0	2	8
1996	12	1	0	13	0	0	0	0	13
2000	6	5	2	13	3	4	1	8	21
2004	2	2	1	5	0	2	1	3	8
2008	2	4	0	6	4	2	1	7	13
2012	1	3	0	4	1	2	0	3	7
2016	3	1	0	4	0	2	0	2	6
2020	1	8	3	12	2	5	3	10	22
SUM	38	38	7	83	12	23	8	43	126

Table 2: Numerical values for each election year sorted by Democratic and Republican candidates and small, medium, and large utterances.

However, such a table might be misleading as it allocates the same value to a statement that consists of 50 words as one, which is 149 words. This is also the case with statements that are 150 words long and a 500-word long monologue. A previously tested method from McKinney (2005, 205) is a word count of the dialogue that is devoted to the discussion of specific issues within the corpus. There is one major difference between the approach taken in this study compared to McKinney's (2005) approach. Where McKinney (2005) counted the words that were spoken after the moderator opened a new theme, this thesis does not. Rather, it was decided to close the word count when the candidates diverged from the theme, either through their own initiative or through a change in topic. Through this approach, it is possible to include mentions and discussions of the theme that were brought up out of context or through the natural development of the discussion on a topic that did not originate with the environment or climate as the main issue. Although McKinney's (2005) approach is based on town-hall debates, which show a significant relationship between questions asked and the candidates' responses, her approach is not suitable for larger studies, as the word count would display the extent of the discussion following each new topic but not the degree to which the candidates discussed the issue.

4.1.2 Number of Words on Environment and Climate in the CTPD

The choice of what should be reckoned as within the environmental and climate strand is in no way obvious. It necessitates both knowledge on the historical context of the debates and the discussion surrounding the relevant statement. There is no definite answer to which elements should be included and which to exclude even with contextual knowledge. Thus, other researchers would most likely come up with different numbers through varying choices on

where to start and end an utterance as well as which utterances to include and exclude. However, the advantage of choosing where to start and end an utterance is that the researcher might be able to better pinpoint the elements that belong to a particular topic rather than addressing how much a candidate speaks after a question. Thus, all of the utterances addressed in section 4.1.1 were counted and normalized to assess their prominence in the CTPD. The raw and normalized numbers are presented in Table 3, while the normalized data is presented in Figure 9 in a scatter chart.
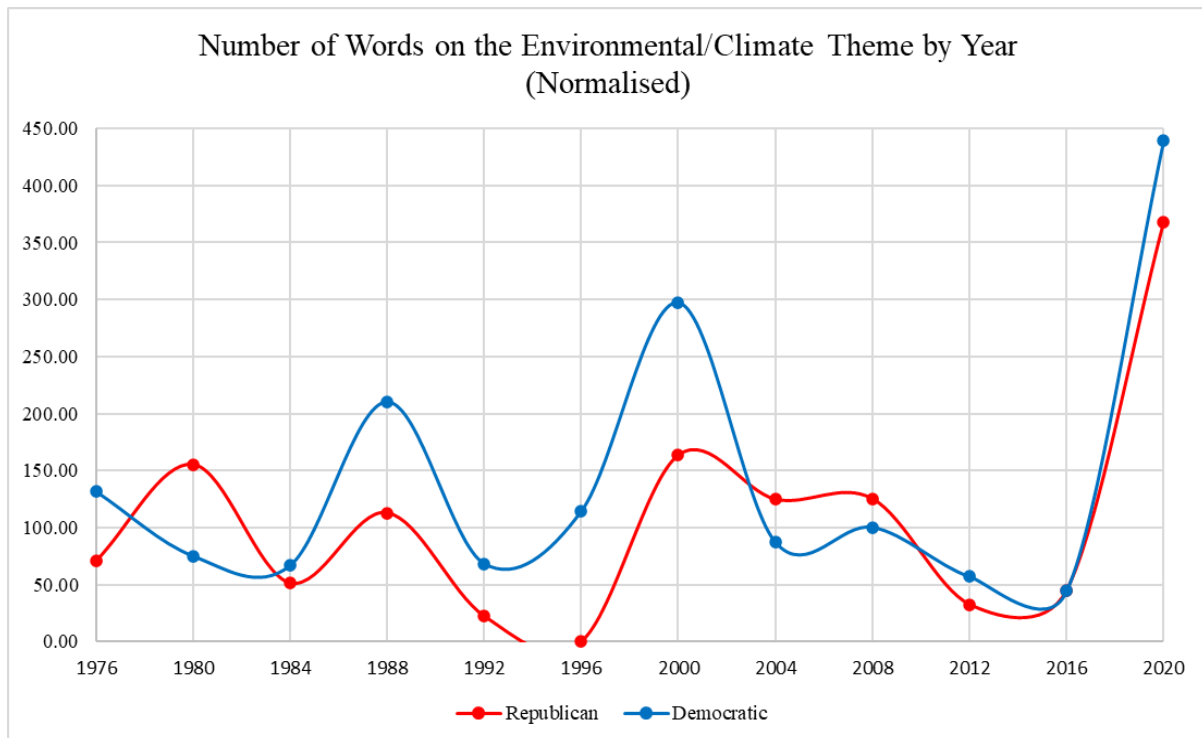
Figure 9: The number of words on the Environmental and Climate theme by Year. The line showcases the republican (red) and democratic candidates (blue).

Year	Democratic (Raw)	Democratic (Normalised)	Republican (Raw)	Republican (Normalised)
1976	413	131.88	221	70.57
1980	154	75.21	318	155.30
1984	153	66.68	118	51.43
1988	568	210.39	305	112.97
1992	312	68.50	102	22.39
1996	361	114.35	0	0.00
2000	1263	297.37	694	163.40
2004	376	87.16	538	124.71
2008	437	100.35	545	125.15
2012	273	57.01	156	32.58
2016	195	44.37	199	45.28
2020	1400	439.00	1173	367.82
SUM	5905	1692.25	4369	1271.60
Average	492.08	141.02	364.08	105.97

Table 3: The number of spoken words on climate and the environment arranged by election year and party. Note that the data is presented both in its war form and normalized for sub-corpora size.

Just as table 2 and figure 8, table 3 and figure 9 suggest that the campaigns of 2000 and 2020 stand out as the debates with the most attention being allocated to the environment and climate

theme. Thus, the initial results from the frequency search, which suggested a large interest in the issue during the 1970s and early 1980s, were, as expected, invalid as far as them being amongst the years being most concerned with the theme. When comparing these results with Figure 7, it shows that the normalized frequency results for the initial research heavily skewed the results by creating two false peaks in 1976-1980 and 2008-2012. However, three minor peaks from Figure 7 correspond to the three peaks in Figure 9, namely 1988, 2000 and 2020. This suggests that discussions on the environmental and climate theme have manifested itself quantitatively in these debates. However, it also shows that the issue is overshadowed, especially by references to energy, but that it can be prominent enough to make a minor impression on broader examinations on the energy theme in presidential debates in the U.S.

4.1.3 Percentage of Discussion on the Environment or Climate in the CTPD
Both 1976 and 1980 display a marked interest in the issue, where the two years make up the median in the dataset with 2.02% and 2.31% of the uttered words in the debates being concerned with the environment. This positions the two debates just below average in attention being diverted towards the environment or climate in the CTPD. It does, however, entail that some attention is being diverted to the environment, already at an early stage of the presidential debates. It also shows how including all things energy-related as a frame within environmental and climate narratives, as Epwene (2017) did, may alter the results. Across all debates, the average percentage of words spoken on the environmental and climate theme was 2.50%[22]. However, the average is heavily skewed by the outliers 2020 and 2000 with 8.13% and 4.61% of the total words during the debates, being related to the environment and climate theme.

The percentage numbers for each debate can be found in Figure 10 below.

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[22] This number excludes the 1960 debates where 0 recordings were made. With the 1960 debates included the average percentage is 2.30%.
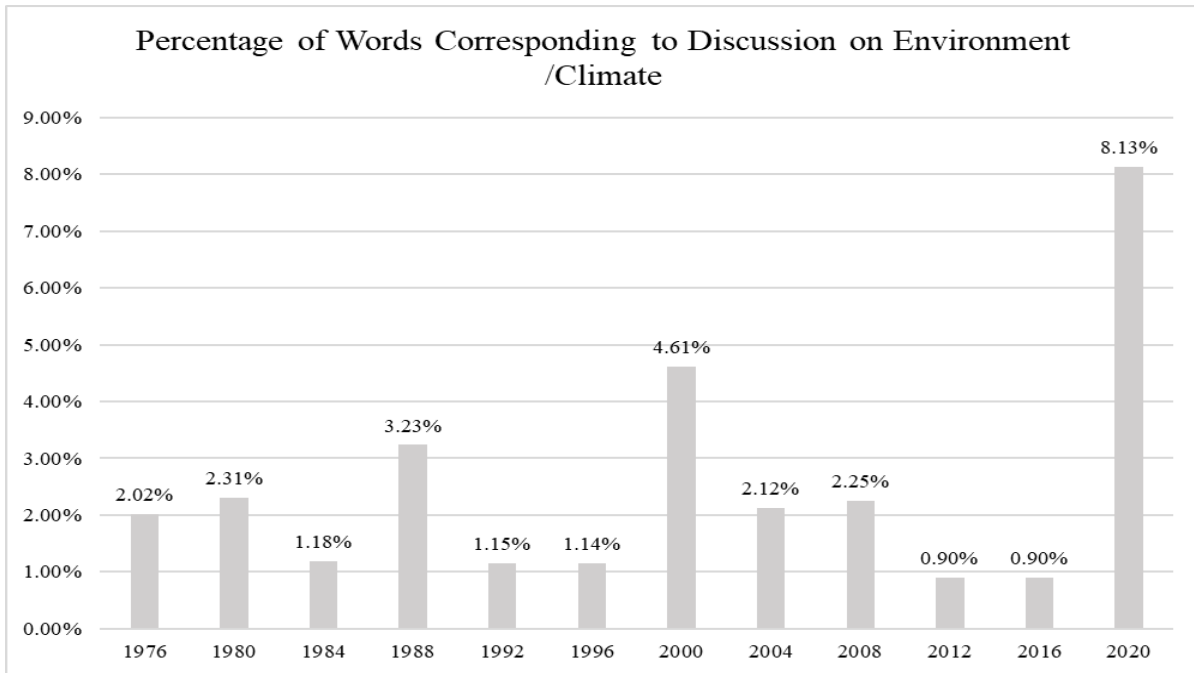
Figure 10:[23] Percentage of the words in each election year focusing on the Climate and Environmental theme by year.

In the initial search, a spike which was not evident from Figures 4, 5, 6 & 7, was the 1988 debates, which records the third most attention being diverted towards the environment and climate theme. 1988 display a more or less average amount of statements (see Figure 8 and Table 2), but both Republican candidate George Bush Sr. and his Democratic opponent Michael Dukakis brought up the theme through statements that were considerable in size.

From 1988 until 2004, it is also noticeable that the Democratic candidates spoke considerably more on the theme than their Republican counterparts. From 2004 until 2016, the issue was more evenly discussed, but with Republican candidates speaking somewhat more on the issue than the Democratic candidates in 2004 and 2008. The issue was also covered with more words by the Republican candidate in 1980, while the Democratic candidates in 1976 and 1984 spent slightly more words on the issue than their opponents. Although the data does not show how the candidates frame the issue, Table 3 shows that the Democratic candidates touched upon the environment and climate theme more often than their opponents in every election year except 1980, 2008 and 2020. Moreover, the margin of Republican mentions has never been more than one more than their Democratic counterparts in any given year. Surprisingly, 2012 and 2016 were the two debates with the least attention being paid to the climate and environmental theme, thus contrasting the notion that the increasingly global and national interest in the issue would result in a similar thematic spike in the presidential debates.

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[23] Note that this table includes the one mention by independent candidate Ross Perot in 1992, which slightly elevates the percentage points and column of the 1992 record compared to Table 2.

Using data from two research projects which examined U.S. presidential debate topics (see Epwene 2017 and McKinney 2005), an overview of the prominence of different topics in the debate can be assembled. The discussion's frequency counts and proportions attributed to various thematic categories constitute between 30.93% of the total discussion to 4.28% at the lower end of the scale. As no research project has categorized the thematic distribution of all the televised presidential debates, only a limited sample is available for comparison. McKinney (2005) allows for a comparison with one debate from 1992 and one from 2004. Epwene (2017) allows for a comparison with two debates from 1960, one from 1976, one from 1988, one from 2000 and one from 2008. Thus, a sample of seven debates has a recorded distribution of thematic discussion, which can be compared to the environmental and climate discussions addressed in this thesis. These is not completely comparable but can nevertheless serve as an indication of the environmental and climate themes shows any prominence in the debates.

Themes	Epwene (2017)	Themes	McKinney (2005) - 2004	Themes	McKinney (2005) - 1992
Economy	30.93%	Terrorism/homeland security	15.69%	Education	17.93%
		Iraq	13.14%	Health Care	16.82%
Peace	23.20%	Health care	11.08%	Budget deficit	13.34%
		Candidate character	10.59%	Jubs/unemployment	11.33%
Politics	19.88%	Environment	6.69%	Crime	10.89%
		Foreing policy	6.58%	Tone of campaign	8.95%
Social	14.36%	Draft	6.19%	Social security	8.09%
		Abortion	5.59%	Physical infrastructure	6.79%
Health	4.41%	Stem cell research	5.39%	Term limits	5.86%
		Economy/jobs	5.24%		
Environment	3.86%	Taxes	4.83%		
		Deficit	4.71%		
Education/Science and Technology	3.56%	Supreme Court	4.28%		

Table 4: Displaying the prominence of different themes in the televised presidential debates. McKinney (2005) has data from two debates, while Epwene (2017) merges data from 6 different debates.

The average attention to the environment and climate found by this research question is noticeable lower than the 3.86% covering that was found by Epwene (2017). However, as Epwene included energy frames in her environmental category, it should naturally elevate her numbers as the preliminary research in this thesis suggested that energy frames were one of the more prominent categories in the presidential debates.[24] Although the sample for comparison is rather small and not necessarily suitable for direct comparison, it is noticeable that only the 2020 debates and the 2000 debates have brought attention to the environmental and climate theme to an extent that warrants attention compared to other themes. Minor themes and

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[24] See Table 2 and Figure 6.

categories are usually covered by somewhere between 4% to 5% of the discourse in the debates based on Epwene (2017) and McKinney's (2005) research. Only two of the debates have reached similar numbers based on the research gathered in this project.

4.2 Qualitative Data

This section of chapter 4 is concerned with the second part of the mixed method, namely the qualitative data. The section will adhere to the following format: The first part of the section will discuss the question matter of the debates in section 4.2.1. Then, Nisbets (2009) frames and discovered frames in the CTPD will be addressed before a section that considers each candidate's main arguments is presented. Note that the references to the candidate's quotes are found in Appendix C. A simple explanation of how to read the references is also included in the Appendix.

4.2.1 Questions Matters

The environment and climate theme were brought through questions in nine debates between 1976 and 2020, while the topic was not brought up by the moderator(s) in 1992, 1996 and 2012. The omittance of the issue as a theme in the three debates might have had an impact on the degree to which the environment and climate were touched upon in these debates, as topic questions are usually followed by a statement from each candidate, and open discussion, or a combination of the two. As shown in table 3 and figure 9 & 10, the three years without questions pertaining to the environment and climate theme (1992, 1996 and 2012) are also three of the five election years least concerned with the issue. Note that ll of the questions can be found in Appendix D.

In 1992, the issue was brought up sporadically across all the debates but somewhat more concentrated in the third debate. In 1996, the Republican candidate Bob Dole did not touch upon the environment or climate theme and thus handed over the control of the issue to Democrat Bill Clinton, which brought it up 13 times, mostly briefly. In 2012, the last year which did not bring up environmental or climate policy as a specific issue also displayed a minuscule interest in the topic. Democratic candidate Barack Obama brought up the issue in light of energy as an overarching theme. At the same time, Mitt Romney of the Republican party attacked Obama's policy and promoted de-regulation during the first debate.[25] All three

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[25] See: D-2012-1,2,3&4 & R-2012-1,2&3.

debates that did not include question topics on climate or the environment thus brought up the issue outside of the topic.

As all other debates included one or more questions within the environmental or climate strand, it is interesting to examine how the questions frame the topic. In 1976; the question incorporates several different elements, such as strip-mining, pollution in the Atlantic and auto emissions. Thus, the question in 1976 frames the environment as land, water, and air quality. The two questions of the 1980 campaign also frame the theme more or less in the same manner by juxtaposing *water*, *air* and *land*, to *essential resources* together with energy. However, the questions in 1980 suggest that contemporary energy policy might not be sustainable (1980, first debate) while also questioning if it is possible to move forwards without environmental damage (1980, second debate). In 1984, the question covered several topics, one of which was the environment, where the candidates were asked about the Federal government's role. Finally, the 1988 debates reverted to some of the previous issues which characterized the 1976 and 1980 debates, namely pollution and water quality. The question also included dangerous chemicals and toxic waste within the environmental theme.

When the issue once again emerged in 2000, it framed environmental issues as a global concern for the first time referring to a quote by Al Gore which urged action to *save the planet*. The term *global warming* was also introduced in a follow-up question as well as the role of the Federal government. In 2004, however, the question reverted to a frame more in touch with that of the 1970s and 1980s by coupling environmentalism with action on air and water quality in the U.S. In 2008, climate change was again on the agenda as the questions were framed through the global lens of climate change as well as through green jobs, suggesting that climate change might be a job-creating opportunity. In the third debate of the 2008 campaign, climate change was introduced as an additional element in a question pertaining to foreign oil imports and energy. Following more or less the same line, the 2016 campaign challenged the candidates to elaborate on how they would remain environmentally friendly while minimizing job loss for fossil-based powerplant workers.

When it comes to the questions, however, 2020 stands out as an outlier. The initial and follow-up questions frame climate change as forest fires, human displacement, and global warming. It takes an unequivocal stance on the issue as having real consequences and as being present at the moment. The questions then move towards balancing environmental and economic concerns and the potential of combating climate change and supporting job growth.

The questions thus follow a pattern where environmental issues are framed as local pollution and concerns over water quality, land degradation and air quality. This holds until 2000, where the environment is framed as a local concern and a global one. Although two questions after 2000 do not frame environment in a larger sense (2004 and 2016), it is interesting to note that a global frame was introduced from the turn of the millennia, which culminated in the 2020 debates who framed the theme as not only a global concern, but also as a pressing issue.

4.2.2 Nisbet's Frame Typology and the Presidential Debates

Nisbet's (2009) frames were utilized as a point of departure for the frame analysis in the study. The frames which he proposed for his own work were all applicable in this study which suggests that the candidates who participate in the U.S. televised presidential debates practice several of the same narratives as other participants in U.S. political discourse do. This is especially the case with the two large economic frame categories. The data from the frames suggests that only Republican candidates consider environmental and climate policy to be an economic burden. Democratic candidates, on the other hand, consider such policies to be a job-creating opportunity, as did John McCain in 2008 as the sole Republican representative to take this position. The other pre-determined frames were rather trivial in their results, except the issue-specific frames. Neither the looming disaster frame nor the religious and moral call to action frames was utilized to any noticeable extent.
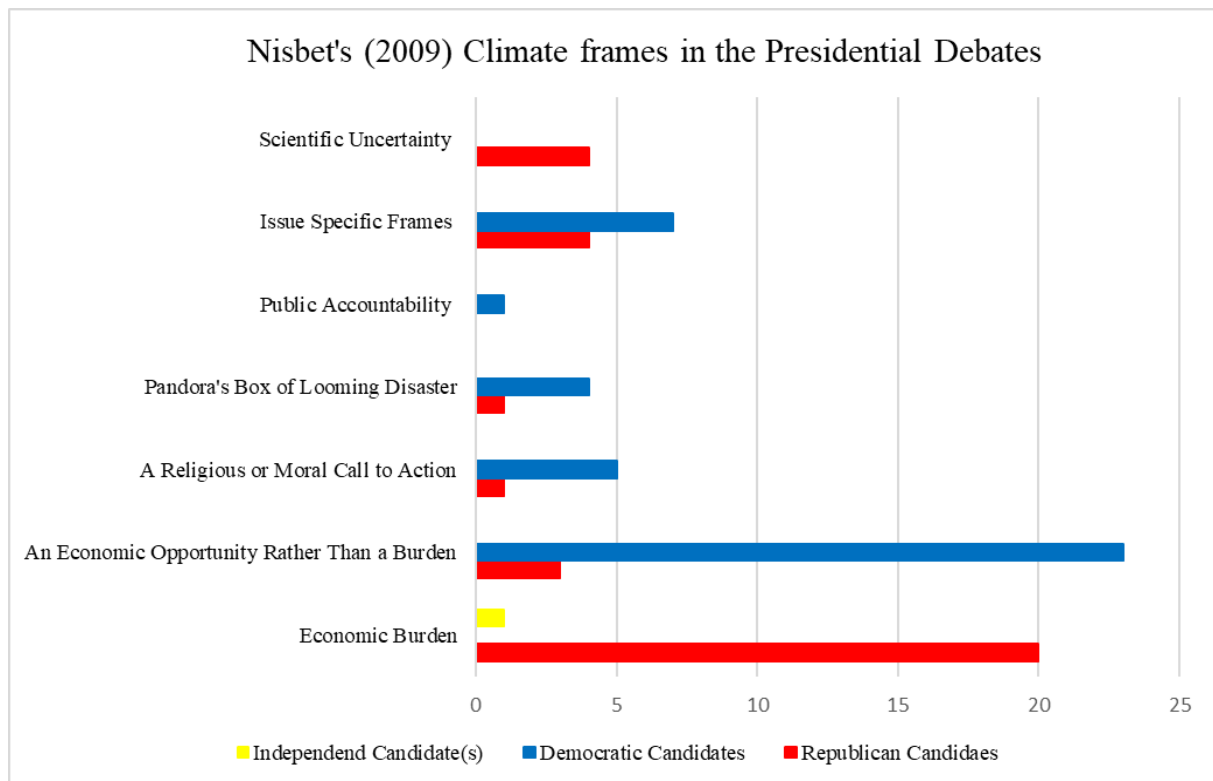
Figure 11: Recordings of Nisbet's (2009) Climate frames based on the CTPD.

As was discussed in chapter 3.3.4, utilizing pre-determined frames might exclude certain elements. This is especially the case if the researcher's frames are a poor fit or do not adequately cover the narratives in the examined data. It is therefore advantageous to leave open the opportunity of including new, discovered frames. Doing so proved to be a worthwhile choice as several frames from the presidential debates were not necessarily a fit for the six frames proposed by Nisbet (2009). However, most of the discovered frames fell within Nisbets (2009, 52) suggested frames that consistently appear across science policy debates.
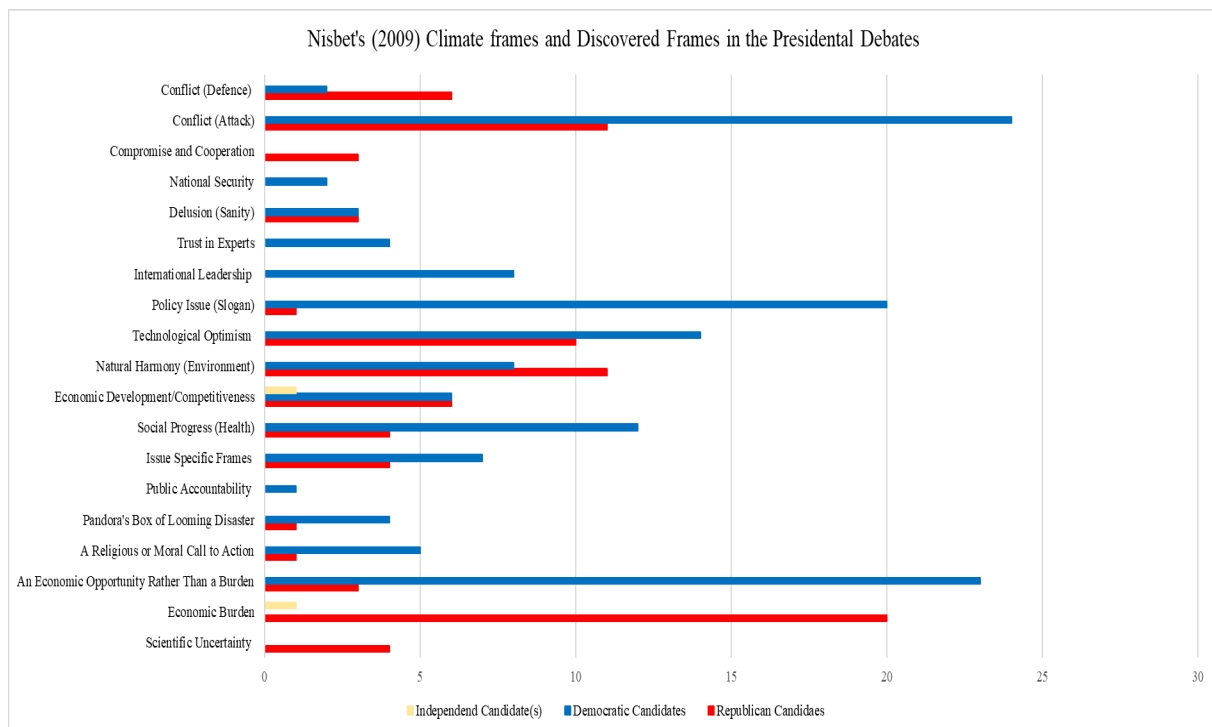
Figure 12: Showing Nisbet's (2009) Climate frames and discovered frames in the CTPD. Note that the only independent candidate recorded were Ross Perot during the debates in 1992. Note that a larger version of the figure can be found in Appendix G

Adding the discovered frames from the CTPD displays a broad range of frames originating from the Presidential Debates. Of the minor frames, Democratic candidates have touched upon the public accountability and national security frames and explicitly framed their narratives in light of expert support. The only element of cooperation and compromise across political clefts were recorded from Republican candidate John McCain in 2008. As figure 12 shows, only the uncertainty, the economic burden, and the natural harmony (environment) frames have more Republican hits than Democratic. Within the economic competitiveness frame, Republicans and Democrats score equal amounts of mentions. However, where Democrats frame climate and environmental regulation and stimulation of new climate or environmentally friendly technologies as a competitive advantage, Republicans usually frames it as a competitive disadvantage. Republicans, however, also show some inclination towards technological

optimism, but this position is also combined with scepticism towards the scientific basis or the reality of climate change.

Democratic candidates are alone in framing environmental and climate discourse through international leadership. They dominate the economic opportunity frame as well as the health concern frame. They also have the only mention of climate change as a national security threat while also dominating the looming disaster frame. Thus, as predicted, the frames suggest that the Democratic candidates are inclined to frame climate change as a threat and an economic opportunity and in terms of international competitiveness and relations. While Republicans mainly frame climate change as an economic burden or through scepticism. When it comes to environmental discourse, the two parties show some similarities through their frames of natural protection and health issues.

The analysis also looks at attack and defence utterances. It allows for a view of whether the candidates have a defensive or offensive entry into the environmental and climate narratives in the presidential debates. 68.57% of the attacks were from Democratic candidates towards their Republican peers. This suggests, building on Benoit & Hartcock (1999), that Democrats, to a larger extent tries to frame Republican environmental and climate records in negative terms while Republicans are often left to defend their position or record. Republicans stand for 75% of the recorded defences, suggesting that they are more interested in preventing damage and undesirability from being attached to their policies than Democrats are. This might suggest that Republicans, to a larger extent than Democrats, might perceive their position on the issue to be weaker. The defensive stance has noticeably shifted in the latter years. Starting in 2000, and gaining momentum since 2008, Republicans have sought to attacks as parts of their narratives to an increasing degree. This again, might suggest that the Republicans have an increasing confidence in their position which has grown since the turn of the millennia.

4.2.3 Candidates' Main Arguments

The following section is concerned with the main argumentative stances of the candidates on the environmental and climate theme. The section follows a historical timeline, starting in 1976[26] and moving towards 2020. Each year starts with the Democratic candidate first and then moves on to the Republican candidate of the same year. Note that Appendix E contains a bullet-point list of the main argumentative stances from the candidates, while Appendix C contains the relevant quotes from which the positions are retrieved. Addressing the narratives and the

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[26] This is due to there being no relevant mentions in any of the 1960 debates.

way the candidates argue on the frames allows for a deeper understanding of the context of the frames and how each candidate addressed them.

4.2.3.1 1976 – Jimmy Carter and Gerald R. Ford

The Democratic candidate Jimmy Carter focused his narrative on increased efforts to make coal-burning be cleaner, especially related to sulfur. Carter also framed his environmental policy in terms of land protection, both from strip mining and setting aside land for recreational use. Lastly, Carter framed environmental policy as concerns for land and air degradation and concerns for ocean pollution. While Carter primarily addressed his own policy positions on the environment, he also criticized his opponent's record on environmental protection. The Ford administration was criticized for not being concerned with air pollution, land protection and water pollution standards, as well as having an overall lousy record on the environment.

The Republican candidate Gerald R. Ford was less concerned with the environmental theme than his counterpart. Ford only brought up the theme twice. Like Jimmy Carter, Ford also saw the necessity for coal burning to be clean and thus accepted air pollution as an environmental frame. Ford also resorted to defending his administration's record on the environment where the theme was framed as land and water conservation. Ford frames his effort in terms of more *"scenic rivers, more wilderness areas"* and *"double the national parks"*.[27]

4.2.3.2 1980 – Jimmy Carter and Ronald Reagan

Jimmy Carter followed up on his previous position on environmental protection from 1976 when he, in 1980, called for regulation of the coal industry. He framed the coal industry as harmful to the land, water, and air quality and called for increased coal production. As was the case with the 1976 campaign, Carter also criticized his Republican opponent's record on the environment in 1980. In his criticism of Reagan's record as governor in California, Carter based his attack on air pollution standards. The only missing element from four years earlier is the omittance of strip mining and the destruction of nature from human activity.

The Republican presidential candidate, Ronald Reagan, challenged Jimmy Carter on environmental policies during the second debate of 1980. Unlike his opponent, Reagan only kept to the air pollution frame in his climate narratives. He dually framed the issue by accepting the necessity of air pollution standards and that modern technology can solve air pollution issues. He also framed environmental regulation, and more precisely, air pollution standards, as harmful for the mining companies and as a hindrance for people who want to drive cars.

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[27] See R-1976-2.

Therefore, Reagan took a dual position where he frames environmental regulation as something that should be implemented and something that might interfere in ordinary people's lives and in the energy industry, thus being too costly.

4.2.3.3 1984 – Walter Mondale and Ronald Reagan

Walter Mondale from the Democratic party followed more or less the same pattern as the previous debates when he framed his environmental narratives as air, water and land protection. He also brought up a new issue in toxic waste dumps. For the first time in the televised debates, Mondale also noted that human activity that affects the environment also impacts the future.[28] By doing so, Mondale framed the human impact on the environment both as a contemporary issue and one that impacts future generations.

Once again, Ronald Reagan of the Republican party had to defend his record on the environment and did so through highlighting national parks as environment. Thus, Reagan took a limited approach to the issue and left his previous position of four years earlier, where he included water and land protection and air quality enhancement through clean coal technology.

4.2.3.4 1988 – Michael Dukakis and George Bush Sr.

The Democratic nominee, Michael Dukakis, kept to the same approach as former Democratic candidates before him. He committed himself to protecting the environment, which he framed mainly as local water pollution. Dukakis also brought up new opportunities which might arise together with the need for environmental protection. By framing environmental protection as an opportunity to expand markets through new products such as bio-degradable plastics, Dukakis adhered to the environmental protection as economic growth frame. Dukakis also attacked his opponent, George Bush Sr., for his environmental record, framing him and his fellow Republicans as an *"environmental wrecking crew"*.[29]

George Bush Sr. of the Republican party had to, as other Republicans before him, defend his record on the environment. Bush Sr. framed his environmental commitment as a concern for clean water and the preservation and expansion of national parks and the outdoors.

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[28] See D-1984-2.
[29] See D-1988-7.

4.2.3.5 1992 – Bill Clinton, George Bush Sr., and Ross Perot[30]

Bill Clinton, the Democratic candidate for the presidency in 1992, did, as his Democratic predecessors, bring up the environment several times. Although most of his mentions took the form of a slogan where he listed up his priorities, some more specific elements were noticeable. Clinton frames his environmental concerns through waste recycling and clean water technology, as well as through fuel efficiency standards. All of the aforementioned policies fit within the air, water and land narrative.

For the first time in the presidential debates, a Republican candidate attacked their democratic opponent's environmental record when George Bush Sr. claimed that Bill Clinton's environmental record in Arkansas was poor. The second mention that Bush Sr. had on the environmental theme was an attack on the fuel efficiency standards, which he framed as a policy that puts autoworkers out of business at the behest of the *"extremes in the environmental movement"*.[31]

It is also worth noticing that Ross Perot, who ran as an independent, adhered to traditional Republican narratives. He insinuated that environmental protection standards might be an economic disadvantage in relation to competition from Mexico.

4.2.3.6 1996 – Bill Clinton and Bob Dole[32]

Bill Clinton's second presidential campaign in 1996 saw him once again returning to the environmental theme in the televised debates. Most of his references came as parts of his general campaign promises, where the environment was one of the issues he would pay special attention to if he were to be re-elected. He claims there is a need to both protect, preserve, and invest in the environment. Where Bill Clinton expands on the term environment, he frames it as toxic waste dumps. He also attacks his opponent, Bob Dole, whom he calls a *"polluter"*, claiming that he was complicit in rewriting environmental laws, insinuating Dole weakened environmental protections. Clinton also kept to the line, which Michael Dukakis first brought up in 1988, that environmental protection and economic growth can go hand-in-hand.

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[30] Ross Perot, which ran as an independent in 1992, only limited himself to a single mention where he framed Mexico as having an industrial advantage due to them not having pollution controls and environmental controls.
[31] See R-1992-2
[32] Republican candidate Bob Dole completely omitted the issue, and no positions or utterances were recorded which fell into the environmental and climate category.

4.2.3.7 2000 – Al Gore and George W. Bush Jr.

The Democratic presidential nominee in 2000, Al Gore, is perhaps the most prominent environmentalist of the U.S. presidential nominees to date. Thus, it is no surprise that Gore had a broad approach to the environmental and climate theme. Gore pointed towards both the need for clean coal technologies to curb air pollution and the expansion of renewable technologies. He also narrates the environment within the traditional air, water and land context but also went further by moving away from local and limited issues to global issues. Gore called for U.S. leadership on the climate and global as well as domestic cooperation to mitigate the impact of global warming. By doing so, he framed the theme not only as a localized problem but a larger, global one, ushering in a new frame of climate as a grander scale issue. However, Gore also brings forth traditional environmental frames, such as wildlife preservation and national park investments, as well as environmental and climate policies as an opportunity for economic growth and job creation.

George W. Bush Jr. followed his peer on the necessity of clean coal technologies to combat air pollution. Bush Jr. also narrates his environmental concerns as concerns for industrial waste and land-and water conservation. Thus, he follows the traditional land, air and water understanding of environmental issues. However, he deviated from his opponent on the environmental-economic theme, as he framed environmental regulation as an expense rather than an opportunity. Bush Jr. also questions Gore's claim that global warming is related to human activities framing that claim as doubtful, suggesting that more information is necessary before they should act on it. Lastly, Bush Jr. takes a strong position against the U.S. taking an active role in combating global warming by framing such a commitment as a *"burden"*.[33]

4.2.3.8 2004 – John Kerry and George W. Bush Jr.

The 2004 campaign saw the Democratic party nominating John Kerry as their presidential candidate. Like the former Democratic nominees, he also touched upon the environmental and climate theme during the debates. However, unlike Gore, he was much less precise in his environmental frames and spent much of his time on attacking the Bush administration's environmental record. In his attacks, Kerry framed the environment as clean air and water quality standards. He also copied Gores position that global cooperation is necessary to cope with global warming. In his attacks, he frames Bush as a president who does not believe in

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[33] See R-2000-6.

science while claiming that he pulled out of cooperation on climate issues when he declared the Kyoto treaty as dead.

George W. Bush Jr. framed his effort on environmental protection through the lens of road-based pollution, brownfields, and air quality. He also brought up his record on wildlife preservation and forest protection as part of his environmental narrative. Bush Jr. thus narrates environmental protection as a local issue that his administration has been concerned with during his presidency. This is not the case with international cooperation, and the Kyoto treaty, which he claims is an expense and liability that would have cost the U.S. many jobs. By doing so, Bush attacks global cooperation and initiatives as an inconvenience and unnecessary expense while also accepting that some federal and local incentives are necessary.

4.2.3.9 2008 – Barack Obama and John McCain

Barack Obama, representing the Democratic party, went up against John McCain from the Republican party in the 2008 presidential debates. He follows a somewhat different approach than most previous presidential candidates by narrating environmental and climate exclusively through energy solutions. Obama presents his solutions as clean coal technologies, renewable energy sources such as wind and solar, as well as biodiesel and nuclear energy. Like other Democratic candidates, Obama also frames environmental and climate issues as an opportunity for innovation and a job-creating opportunity rather than an expense. He also followed the common Democratic approach of criticizing their Republican opponent's record on the environment. Obama attacked McCain's record on the environment in the Senate, claiming that he is only an environmentalist on paper but that he has never come through by virtue of action.

Where Obama deviates somewhat from previous Democratic candidates, McCain represents a fundamental break with earlier Republican nominees in his environmental and climate narratives. McCain frames himself as an environmentalist and is the first and only Republican to proclaim a clear need to address climate change. He also attacks the Bush' administration[34] record on climate change framing the current pathway as a road towards a damaged planet.[35] McCain also attacks Obama, which is another break with the traditional Republican defensive stance on the environment and climate. The last break with traditional Republican positions on the environment and climate is how McCain framed climate change as an opportunity to create jobs rather than a cost. By doing so, he followed a conventional Democratic position. However,

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[34] The George W. Bush Jr. Administration (2001 – 2009).
[35] See R-2008-5.

McCain's environmental frames follow the more traditional lines of clean coal technologies and combine renewable energy with traditional energy sources like oil and coal.

4.2.3.10 2012 – Barack Obama and Mitt Romney

The 2012 presidential campaign saw Barack Obama from the Democratic pitted against Republican candidate Mitt Romney. As in the 2008 presidential debates, Obama narrated environmental solutions through clean industrial energy production and fuel efficiency for vehicles. Obama framed natural gas and clean energy as an environmental energy solution for the U.S. while also keeping with the Democratic line of seeing environmental and climate policy as a job-creating opportunity. Obama also attacked his opponent, Mitt Romney, for closing down a coal-powered plant, framing him as being inconsistent on his environmental policy. In doing so, Obama is the first and only Democratic candidate to criticize a Republican opponent for an action that can be perceived as favourable for the environment and climate.

The Republican candidate Mitt Romney left the Republican position, which John McCain established for a more traditional Republican approach. Following the traditional Republican line, Romney frames environmental policies as an expense rather than an opportunity, thus returning to the same frame as former Republican candidates. He supports environmentally friendly energy in terms of clean coal technologies while also positioning himself as a friend of green energy.

4.2.3.11 2016 – Hillary Clinton and Donald J. Trump

The Democratic presidential nominee, Hillary Clinton, faced off against Donald J. Trump during the 2016 presidential campaign. Clinton took a traditional Democratic stance when she framed climate change as an opportunity to create new jobs. Expanding on this frame, she also drew in international competition where new, green technologies will be the foundation for a new energy superpower in the future. Energy solutions were also framed through a transitional lens where Clinton proposed natural gas as a bridge between non-renewable and renewable energy sources. Clinton also attacked her Republican opponent's environmental policies when she called Donald J. Trump a climate sceptic when she suggested that he thinks climate change is a hoax.[36]

The Republican candidate, Donald J. Trump, on his part, approached the theme through attacks on his opponent from the Democratic party. Trump framed the Environmental Protection Agency and the Obama administration as hostile towards energy and energy companies. He

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[36] See D-2016-1.

also attacked Clinton by suggesting that she wanted to put the miners out of business. In addition to the attacks on the Democratic policies, he also reverted to a traditional environmental energy proposal by framing his solution as clean coal technologies, thus mirroring both Democratic and Republican candidates from the past.

4.2.3.12 2020 – Joe Biden and Donald J. Trump

The final presidential televised debates to date pitted the Democratic candidate Joe Biden against Republican candidate Donald J. Trump. The 2020 debates saw more attention directed towards the environment and climate theme than any other year of televised presidential debates. No other candidate has ever come close regarding the sheer number of elements that comprise Biden's climate change solutions. Domestically, he frames his solution through renewable energy sources and transitional industries, such as fracking. He also points towards electric vehicles and calls for the stop of the subsidization of oil companies. Keeping with a more traditional frame, Biden reverts local industrial pollution as an issue. Another frame utilized by Biden is climate change as an economic growth opportunity when he suggests that new green technologies and green energy will create millions of new jobs. Biden addresses the necessity of international cooperation by promising to re-join the Paris Accord on the international level. His commitment to international cooperation is also framed through the protection of the Amazonas rainforest. A final point to notice is the emergence of a new narrative, namely mitigating the impact of climate change. Biden proposes to weatherize buildings and invest in infrastructure which is better suited to handle extreme weather patterns. The 2020 debates saw, for the first time, a candidate that proposed solutions to mitigate already existing consequences of climate change which attests to the pressing reality of climate change.

Donald J. Trump took a different approach than his Democratic competitor. Biden mostly framed the theme through climate change. In contrast, Trump framed the theme through a more traditional environmental narrative by suggesting that he was a proponent of immaculate air and water and wildlife preservation, a typical historical frame utilized by both Republican and Democratic candidates. He focuses on domestic environmental and climate initiatives through an economic lens, framing them as expensive and hostile towards job creation and industries. Thus, he stands with the traditional Republican position that frames such policies as hostile towards the job market and specific industries. Climate mitigation policies such as those initiated in California and Bidens plan to weatherize buildings is framed as crazy and an economic disaster. Trump is going so far as to suggest that Joe Biden wants to *"kill the*

economy".[37] Trump follows a relatively recent but common Republican frame of hostility towards international incentives and cooperation on climate. He frames competing nations such as China, India, and Russia as filthy and as having filthy air, while the Paris Accord is framed as unfair. Trump goes so far as to suggest that the Paris Acord would have destroyed U.S. businesses. However, by withdrawing from the treaty, Trump suggests that his administration has done an incredible job on the environmental field without destroying U.S. industries.

4.2.3.13 Main Arguments, Summary

Historically, the most common approach to the term has seen candidates discussing environmental concerns as clean air, clean water, and land preservation. This position is evident as early as 1976 and is represented frequently through the corpora up to 2020. There is also a clear connection between energy and environmentalism. In the earliest debates, this was narrated through a need for clean coal technologies, connecting clean air with energy solutions. On the other hand, renewable energy solutions are mentioned as early as 1980[38] but framing through the environmental and climate lens only manifested itself from the 2000 debates.

It is clear from the data that Democratic candidates express a larger willingness to spend money on environmental policies than their Republican counterparts. This is interconnected with how Democratic candidates frame environmentalism and climate change as a job-creating opportunity while Republicans tend to frame it as an expense and as being hostile towards U.S. industries. Another significant difference between the parties is that Democrats are far more willing to criticize Republicans for lacklustre policies on climate and the environment. In contrast, Republicans traditionally criticize Democrats for over-spending and being hostile towards consumers, workers and carbon-based industries.

Another difference is that Democratic candidates tend to propose a broader range of policies as a part of their solution narratives than Republicans. Republicans have usually proposed land protection, water quality and clean-coal technologies as their solutions. They have also been less favourably inclined towards global and international cooperation than their Democratic peers. The only exception to this general schism between the candidates is John McCain, which more or less kept to a traditional Democratic line of international cooperation, acknowledging the reality of climate change, framing the issue as a job-creating opportunity, and attacking the

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[37] See R-2020-10.
[38] Ronald Reagan proposed renewable energy sources as a way of solving the energy crunch during the 21st of September debate in 1980. This was not included in the corpus, however, due to there not being any suggestions that Reagan was framing renewable energy through environmental concerns.

environmental and climate record of the former Republican Bush administration. The results from this part of the data are therefore in line with the frames and quantitative data. It also allows for more context and insight into the frames and quantitative data, thus complementing the previously discussed data.

4.3 Findings

4.3.1 Main Findings

The main findings section concerns the results, which carry significant weight in terms of numbers and recurrence in the CTPD.

4.3.1.1 Economic Burden versus Economic Opportunity

The most prominent frames uncovered in this study were the two economic frames suggested by Nisbet (2009). The two frames, economic burden and economic opportunity, also adhered firmly to the assumed party lines. Therefore, the results from the study follow previous studies on U.S. political, environmental and climate narratives. As suggested by Brewer (2012) and discussed in section 2.3, John McCain broke with the Republican norm of framing environmental and climate policies as an economic burden. He adhered to the Democratic line of economic opportunity, but this is also the only deviation in the CTPD from these traditional lines. The Democratic candidates view environmental and climate concerns as an issue that necessitates action through regulation and economic spending, but also an opportunity for growth and investment, Republicans tend to view the environmental and climate mitigation initiatives more or less as a threat to U.S. consumers and industry, or as an unjustifiable use of money. However, the economic burden frame is vastly more prominent from 2000 to 2020, with 16 examples, contrary to 1976 to 1996, which only recorded 5. This suggests that although the economic burden is a typical Republican frame, it has gained traction with time and is more widely used in relation to climate narratives than environmental ones.

4.3.1.2 Democratic Domination of Climate and Environmental Discourse

Section 2.2 and 2.3 hypothesized that Republican candidates would be less concerned with the climate and environment than their Democratic counterparts. Through the quantitative data presented in Table 3 and Figure 9, it is evident that democratic candidates spend more time on environmental and climate issues. Democratic candidates have also used more words covering the theme than their Republican peers in 8 of the 12 televised debates since 1976. Furthermore, of the 10 274 words recorded on the issue by the two major parties, 5905, or 56.86% of the total, is accredited to Democratic candidates, while 4369 words, or 43.14%, are recorded on

Republicans. When Democrats talk more on the issue, they talk, on average, 83%[39] more than Republicans. In contrast, Republicans talk on average 44% more than Democrats in the four instances they have recorded more words on the topic. When we also consider that Republicans spend around 24%[40] of their time arguing against climate and environmental action, a clear trend emerges where Democrats are paying more attention to the issue and arguing more decisive for action. Thus, the results from this study strengthen the data from minor studies[41], which found that environmental and climate issues are more heavily emphasized by Democrats than Republicans.

4.3.1.3 The Case of Pro and Against Mitigation and Adaptation Policies

Not a single Democratic candidate has, during the debates, argued against spending on climate or the environment. The only exception might be Barack Obama in 2012 when he attacked Mitt Romney for closing a coal plant.[42] His attack, however, was framed as a criticism of Romney's apparent lack of consistency in his policies and not directly as a criticism of Romney's decision to shut down the coal plant. Republican candidates, on the other hand, have historically displayed a considerable degree of scepticism towards environmental regulations,[43] allocation of funds towards renewable energy and climate policies[44], international cooperation on climate issues[45] and, to some extent, scepticism towards scientific evidence for climate change.[46] Based on the data from section 4.2.3, the candidate's main arguments can be used to investigate whether or not the candidates express scepticism or unwillingness to address environmental or climate-related issues.

In fact, every Republican candidate except Gerald Ford (1976) and Bob Dole (1996) have argued against one of the aforementioned items.[47] Ronald Reagan, however, only argued that regulations cost jobs[48] in 1980, and not in 1984, where he concerned himself with a defence of his own administration's environmental policy narrated as park and wildlife preservation.[49] However, a thorough analysis of the data revealed that Republican candidates, to a large extent, frame their environmental and climate narratives both in favour and against mitigation policies,

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[39] This is without the 1996 debates, where Bob Dole did not discuss the issue.
[40] See Table 5.
[41] See Brewer (2012) and Jarman (2005) in Section 2.3 .
[42] See D-2012-4.
[43] See R-2020-1, R-2016-1&2, R-2012-3, R-1992-2 & R-1980-1&3.
[44] See R-2020-10, R-2012-1&2, R-2008-2, R-1992-2 & R-1988-2.
[45] See R-2020-8, R-2004-3 & R-2000-6.
[46] See R-2020-3, R-2020-10 R-2000-7 & R-2000-6.
[47] Note that Bob Dole (1996) simply omitted the issue altogether.
[48] See R-1980-1&3.
[49] See R-1984-1.

regulation, money allocation to green technologies, and international cooperation. Table 5 display the results for the statements made by Republican candidates, noted down as the number of words and percentage points for the combined numbers. Note that no such table was gathered for Democratic candidates as all utterances are on the pro-side with the possible exception of the Obama reference from 2012.[50] Those utterances noted within the against block displayed resistance towards regulations, laws, subsidies, or other allocations of funds to renewable technologies and similar projects. It also includes scepticism towards climate change and international or local cooperation to mitigate such issues as environmental degradation and climate change. Those noted in the mixed block contained a mix of the aforementioned narratives combined with intentions to invest in greener technologies, regulate pollution, environmental protection, and other initiatives aimed at safeguarding air, water and land quality and human health. The *pro* block is utterances which only calls for or supports such initiatives.

Year	Against	Mixed	Pro	SUM
1976	0	0	221	221
1980	215	0	103	318
1984	0	0	118	118
1988	0	268	37	305
1992	80	0	22	102
1996	0	0	0	0
2000	0	221	473	694
2004	0	134	404	538
2008	0	0	545	545
2012	86	70	0	156
2016	59	140	0	199
2020	596	532	45	1173
SUM	1036	1365	1968	4369
PERCENTAGE POINTS	23.71	31.24	45.04	100

Table 5: Distribution of environmental and climate narratives based on whether the Republican candidates expressed scepticism towards climatic and environmental degradation mitigation policies or not.

Although most of the references within the environmental and climate theme were categorized as positively aimed, a significant proportion of the quotes are *against* or *mixed*. It is also worth noticing that after John McCain in 2008 framed emissions of greenhouse gases as a pressing issue and took a stand against former president George W. Bush Jr. and his administration,[51] the Republican party has altered course. There is a marked move towards a more critical environmental and climate policy line, with Mitt Romney and Donald J. Trump taking a stance against government initiatives in climate mitigation and a green transition.

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[50] See D-2012-4.
[51] See R-2008-2&5.

Republicans, however, do display considerable concern for the environment when framed in two specific ways. The first is environmentalism as a concern for air quality and emissions from coal-burning. Over time, several Republicans and Democrats have advocated for clean coal technologies in the debates. This is especially prominent in 1976 and 1980[52], which advocates that the energy crisis[53] also brought concerns for the impact of increased coal production on air quality. The theme re-emerged in 2000 but has in the two decades since its last appearance turned into a notably Republican[54] stance as Democratic candidates tended to shift their focus more towards renewable energy sources. The second environmental position common with Republican presidential candidates is narrating the environment theme through land conservation, water quality. Although this frame disappeared in 2012 and 2016, it re-emerged in 2020 with Donald. J. Trump focuses heavily on the Republican position of protecting federal land, wildlife, and water and air quality.[55] The Democratic position of pollution control, regulations, and worries for future impact is not utilized by Republicans, except John McCain. The approach by McCain mirrors historical and contemporary frames by Democratic candidates, such as supporting renewable energy sources[56] and suggesting that current and historical policies have damaged the planet[57].

However, there are significant discrepancies between Republican and Democratic candidates regarding climate and environmental narratives. As we have seen, Republicans are, to a much larger extent than Democrats, against spending on green technologies, regulations on pollution and emission standards, and rapid action to combat environmental degradation. The typical Republican environmental and climate narrative is framed strictly as land, natural harmony or social progress. However, this frame is also covered by Democratic candidates, making it a shared position.[58] The difference, however, lies in the Democratic inclusion of climate change as a global issue that necessitates action, a position that Republicans usually do not follow.

4.3.1.4 Climate Concerns – Introducing a Global Issue

Close reading revealed that both Republican and Democratic candidates from 1976 frame environmental issues mainly through the natural harmony or social progress frames. The most

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[52] See: D-1976-1,2&3, R-1976-1, D-1980-1 & R-1980-1.
[53] See section 3.2.6.
[54] See: R-2000-1,2&5, R-2004-2&4, R-2008-3&7, R-2012-3, R-2016-1.
[55] See: R-1976-2, R-1980-2, R-1984-1, R-1988-2, R-2000-4&5, R-2004-1&2 & R-2020-1,2,3&8.
[56] See: R-2008-1,3,5&7.
[57] See: R-2008-5.
[58] See: D-1976-5,7&8, D-1980-1&2, D-1984-1,2&3, D-1988-7, D-1996-5&7, D-2000-3,4,8,9&12, D-2004-2 & D-2020-9.

prominent examples within these frames are air quality and toxic waste, natural parks and the wilderness, land degradation, and water quality. The first potential deviation from this path comes from Democratic candidate Walter Mondale in 1984[59] , who suggests that lack of environmental protection might have long-lasting or permanent effects. By suggesting that contemporary environmental policies were not fair for the future, he also moves the issue out of a localized and immediate frame into one that might affect future generations.

Any definite proof of a shift towards the environment as a global concern does not emerge, however, until 2000, when Al Gore argues that the world will see the consequences of global warming and suggests that we already in the year 2000 know the cause of global warming.[60] George W. Bush Jr. also suggested that global warming is a serious issue while at the same time the framing science behind global warming as uncertain.[61] Barack Obama followed Al Gore in framing environment as a global issue during the 2008 campaign by acknowledging climate change and global warming as issues and framing climate change as a crisis and thus touching upon the looming disaster frame.[62] In 2008, John McCain, as the only Republican ever, took an unequivocal position on climate change as a pressing and fundamental issue. McCain suggests that they might hand the next generation a damaged planet and that he has seen the effects of greenhouse gas emissions worldwide.[63]

Neither Barack Obama nor Mitt Romney narrated environmentalism as a global concern in the 2012 campaign. On the other hand, Hillary Clinton attacked her opponent Donald J. Trump for not believing in climate change while proclaiming that she views climate change as a serious problem that necessitates action.[64] Joe Biden frames U.S. pollution as a global issue and urges international cooperation through the Paris Accord.[65] Biden also moves on to frame climate change as an existential threat to humanity, limiting the window of opportunity to eight to 10 years before the world reaches the point of no return.[66] Donald J. Trump, on the other hand, suggests that he believes in human impact on the climate to an extent,[67] which is his only reference to the environmental theme in a global context. Although he touches upon the Paris

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[59] See: D-1984-2.
[60] See: D-2000-8&10.
[61] See: R-2000-6&7.
[62] See: D-2008-1&4.
[63] See: R-2008-1,2,5&6.
[64] See: D-2016-1,3&4.
[65] See: D-2020-5.
[66] See: D-2020-7.
[67] See: R-2020-3.

Climate accord, he frames it as a threat to U.S. jobs and unfair, thus adhering to the Economic burden frame.[68]

Accordingly, there was a shift from the turn of the millennia, which ushered in concerns framed as a global theme. However, as we have also seen, only John McCain of Republican candidates has categorically accepted the global level of the theme. On the other side, George W. Bush Jr. and Donald J. Trump did not rule out global climate issues but framed them as uncertain. Since 2000, all Democratic candidates but John Kerry has framed their environmental narratives as local and global issues, although Barack Obama only did so in 2008. There is, however, a discrepancy between Republican and Democratic presidential candidates, which emerged in 2000, where Democratic candidates are more inclined to treat environmental concerns both as a localized and global issue than Republicans. The 2008 campaign, where John McCain serves as the only example of a Republican framing the theme both as a local and global issue.

4.3.2 Minor Findings

The minor findings section is concerned with smaller results which are not as conclusive as those mentioned in section 4.3.1 Main Findings. The discussion will be based on an assessment of both qualitative and quantitative data.

4.3.2.1 Polarization and Hostility

The literature review saw some attention being brought to increasing polarisation in U.S. political discourse, and it was suggested that traces of increasing polarization might be evident in the CTPD. The data from the research project did indeed find that Republican candidates, after John McCain in 2008, have turned more hostile towards climate mitigation policies[69] while still adhering to the economic burden frame. Of the 35 attacks which were recorded, Republicans only stood for 2 of the 16 attacks before 2000. While they have a slight minority with 9 out of 19 attacks from 2000 to 2020. This might suggest that there has been an increasing polarization from the 2000s. This potential upturn in polarization has the same timeframe as the increase in attention towards climate change, which suggests that climate change and global-level issues, not the local ones, might be a foundation for polarization. This is also backed by the entry of the delusion frame and the scientific uncertainty frame, which occurred for the first time in 2004 and 2000, respectively. However, the data is not suitable to determine

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[68] See: R-2020-8.
[69] See Table 5.

whether the increasing polarization in the CTPD is caused by attention towards climate change or if the polarization on the issue is a consequence of general polarization in U.S. politics.

4.3.2.2 Attention to Climate and Environmental Issues

The quantitative data suggest that there might be a somewhat increasing attention towards climate and environmental issues across the timeframe in the CTPD. If the thesis had not included the 2020 presidential debates, the conclusion would be that the attention reached its peak in 2000 and has seen a steady downturn until 2016.[70] However, with the inclusion of the 2020 debates, the topic witnessed a notable upturn in attention in the last election period, suggesting that the increased global attention to the topic has materialized itself in the debates, albeit somewhat late. However, the data cannot determine if this will manifest itself as a recurring trend or if climate and the environment received an irregular amount of attention in 2020.

4.3.2.3. Moving to Climate and staying with Environment

As already mentioned in section 4.1.1.4, the climate or global concerns emerged with the turn of millennia. This does not, however, entail that local frames and local concerns are discarded as an issue. Although the term environment is not present in the CTPD from 2012 until 2020, the environment part of the discussion does not disappear. The theme has been discussed as both a local and global concern in every debate since 2000. The 2020 debates are especially interesting in the way it reverts to the environment theme. Republican candidate Donald J. Trump frames climate change as an environmental concern, corresponding to the natural harmony frame. He almost exclusively omits global-scale issues and goes back to prominent examples from the 1970s to the 1990s by promoting air quality, water quality and natural land preservation.[71] It is, therefore, not necessarily the case that climate has eclipsed environment in the CTPD, especially from the Republican perspective. However, the attention to environment might also be due to increased attention towards the consequence of climate change, especially from Democrats, which again might have played a role in reinvigorating the natural harmony frame. The 2020 debates saw, for the first time, damage-reduction policies being discussed in light of climate change. Such discussion might increase mentions on the local level of the discussions as the issue is global, but the consequences will manifest themselves locally and globally.

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[70] See Figure 10.
[71] Corresponding more or less to the Natural harmony and Social Progress frames.

4.4 Summary of Findings:

This chapter has presented the collection of data from both the quantitative and qualitative analysis of the CTPD. The distribution of utterances and spoken words over the timeline debugged the suggestion that originated from the initial data[72] that 1976 and 1980 saw major discussions on environmental issues. Rather, the quantitative data pinpointed 2020 as the election year where the most time was spent on climate and the environment, followed by 2000 as the second most prominent year. Surprisingly, 1988 stood out in third place, well above 1976, 1980, 2004 and 2008, which followed suit. Two decades stood out as less concerned with the environment and climate, namely the 1990s and, more surprisingly, the 2010s. Although the debates display some deviations in the concern for the theme, climate and the environment remain a minuscule topic. Even though the topic has been touched upon in all the debates since 1976, environment and climate issues only average 2.50% of the total words on the debates, suggesting that the theme is present but usually only touched upon briefly. The two most prominent years, 2000 and 2020, with 4.61% and 8.13% of the total words allocated to the theme, demonstrate at least a reasonable interest. However, on average, the allocated time on the theme suggests that climate and the environment is a primarily minor concern. The lesser position of the theme in the debates goes a long way to explain the results from section 3.2. The explorational phase suggested that 1976, 1980, 2008 and 2012 were high points regarding environmental and climate concerns. The opposite was accurate for 2008 and 2012, which were statistical low-points in relation to environmental and climate concerns. 1976 and 1980 were found to cover the issue, although to a lesser extent than what was suggested by the initial data.

When registering the number of words each candidate spends on the environmental and climate strand, it became evident that Democrats also talk considerably more on the theme than Republicans. In total, 127 utterances were categorized within the environmental and climate theme and thus were included in the study. Of these utterances, 81 were attributed to Democratic candidates, while the remaining 44 to Republicans. Democrats are accredited for 56.86% of the total words on the theme when counting only representatives from the two parties. Thus, there is a noticeable Democratic dominance of the theme in the CTPD.

The qualitative analysis of the corpus, combined with quantitative data, uncovered both familiar and somewhat unfamiliar tendencies. General trends, such as Republicans framing environmental and climate issues through the economic burden frame and Democrats as an

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[72] See sections 3.2.4, 3.2.5 and 3.2.6.

economic opportunity, were well accounted for with the notable exception of John McCain. However, this trend was more prominent in the latter two decades than in the first two and a half. As found in similar studies, Republicans tend to be arguing against the reality or the severity of climate change, which there also was some evidence for in the CTPD. This tendency, however, was found to be a relatively recent one, which only arrived with the introduction of global-level concerns. The introduction of the scepticism frame also corresponds with the introduction of more hostile frames, such as the sanity frame, as well as an increase in attacks, especially from Republican candidates. Thus, the climate narratives might be a battleground of increasing polarization.

Another general trend found in the CTPD was the tendency of Democrats to frame climate and the environment in terms of international leadership and cooperation. Republicans, on the other hand, do not adhere to this approach (except for John McCain). Through the examination of questions, it was revealed that there might be a shift at the turn of the millennia where a growing interest in and awareness of climate in a global context. This shift ushered in a more international perspective on climate and environment where the climate and environmental narratives were beginning to be framed as both a local and global concern. However, this change only materialises itself with Democratic presidential candidates, as Republican candidates, except John McCain, mostly kept to a localized understanding of climate and environmental narratives. This suggests a schism between the two parties on the issue. As the frame was not one of Nisbets (2009) pre-determined frames, it attests to the importance of allowing for additions when utilizing frame schemes from other studies.

5. Research Questions, Limitations and Further Research

This thesis aimed to uncover the prominence of environmental and climate narratives and their frames in the U.S. presidential debates from 1960 until 2020. Following this aim, transcripts from the debates were analyzed both qualitatively and quantitatively. The data uncovered how much the different candidates talk about climate and the environment and *how* they talk about it. Thus, the thesis has achieved the main aim of the research, namely, to uncover the role of climate and environmental narratives in the U.S. televised presidential debates.

The data analysed and synthesized in chapter four represents the climate and environmental discourse in the televised presidential debates from 1960 until 2020. In section 5.1, the research questions will be reviewed in light of the findings from chapter four. Section 5.2 addresses limitations to the study while section 5.3 suggests further research trajectories. Section 5.4 provides a brief summary.

5.1 Research Questions and Hypotheses – Results

The following discussion reverts to section 1.6, Research Questions and Hypotheses. All of the sub-questions will be considered chronologically after the list of questions in section 1.6. The main research question will be addressed at the end.

5.1.1 Sub Question 1:

Is climate and environment a prominent theme in U.S. presidential debates, and how notable is the topic compared to other themes?

As this thesis did not record how prominent other themes than the climate and environmental theme were in the debates, the data must be compared with results from other studies. Two studies have examined the thematic distribution of the presidential debates based on the number of spoken words on a given topic.[73]

It should be noted before the results are discussed that the percentage distribution of themes in this research project comes from a position of only looking at environmental and climate-related discourse. Thus, it is only looking *for* climate and environmental discourse. Such a point of departure will have a noticeable impact on the results. A series of remarks by the candidates and larger pieces of discourse can, arguably, be placed in a series of different thematic categories, as they often include a variety of thematic references. For instance, 10 out of the 13 recorded climate and environmental utterances recorded from Bill Clinton in 1992 include

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[73] See Epwene (2017) and McKinney (2005).

references to other themes such as health (Medicare, Medicaid), education and the economy (taxes, balancing the budget).[74] These elements could be placed in other categories, which would have reduced the recorded prominence of the environmental and climate theme.

Due to how utterances are recorded and categorized, it is plausible that the results are skewed favourably towards the inclusion of discoursal elements into the environment and climate category. Thus, it is likely that the distribution found in this research project comes close to a high extreme in the prominence of environmental and climate categories in the presidential debates. This does not entail that the results from the study is wrong, but rather that they must be used with caution and are not necessarily directly comparable to results from other studies.

Although other research projects might not be directly comparable, similar projects have found instances of up to 30% of the debates being allocated to economic concerns. In comparison, other prominent themes have placed themselves between the 20% to 10% mark. None of the debates has ever spent so much time on the environment and climate theme. The two presidential debates of the 2020 campaign came close with 8.13% recorded, but no other debate years are near that number. The average coverage of the theme was recorded as 2.50% from 1976 until 2020. If one excludes the 2020 campaign and includes the 1960 campaign, the same number would be 1.82%, which suggest that the overall attention to the environmental and climate theme has been minuscule on average until 2020, with some minor peaks in 1988 (3.23%) and 2000 (4.61%). Keep in mind that the results might also be close to a high-extreme in the number of recordings on the environment and climate. Therefore, the conclusion is that environment and climate is a minor theme in U.S. presidential debates. However, the trend might be turning upwards based on whether the upwards tendency from the 2020 presidential election continues.

5.1.2 Sub Question 2:

Has concerns for the environment and climate developed and changed over time?

Looking back on sections 2.2 and 2.3, several assumptions can be made for the development of concerns for climate and the environment over time. First off, there have been evident ebbs and flows for the concern for the environment and climate-related issues in the presidential debates. Given that several other studies have looked at the development of climate narratives

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[74] See D-1996-1, 2, 4, 6, 8, 9, 10, 11, 12 & 13.

in U.S. politics, it would be natural to assume that the presidential debates and the narratives followed more or less the same patterns as other U.S. political and media discourse.

When answering this question, two main changes emerge, which are worth noticing. The first element, which was addressed in section 4.3.1.4, is the emergence of climate change as an issue. After the turn of the millennium, candidates draw more attention to climate change than the natural harmony frame (or environment). This shift corresponds more or less with a timeframe where other researchers have pointed towards an increase in interest in climate change. It is no surprise that this is also evident from the presidential debates, although the breakthrough in 2020 might suggest some lag in implementing the issue into the debates. However, the attention towards global-level challenges does not result in a unanimous effort to alleviate the issue but instead reveals a cleft between Democrats and Republicans. Although the economic burden frame on behalf of Republicans and the economic opportunity frame for Democrats have persisted through environmental and climate policies, the scientific uncertainty, trust in experts and delusion frames have all appeared together with the emergence of climate change and global-level challenges. This suggests that although issues such as local pollution, biological degradation and preservation of nature might have been a cause of some political animosity, the advent of climate change have been a point of contention and further polarization.

Climate narratives have also introduced international cooperation and international leadership frame, which is not present before 2000. This frame has also been exclusively Democratic-dominated, while the Economic competitiveness (which also includes some references to international competition) is evenly split between the two parties. Where the parties deviate is on the interpretation of what will be beneficial for U.S. competitive power. Democrats (and John McCain) tend to frame green technologies as a competitive advantage, while Republicans are more inclined to frame traditional energy sources and industries as an international advantage.

On the environmental part of the study, the results are somewhat inconclusive. Environmental concerns are initially a shared issue with minor deviations between the parties, such as the economic frames. When Democratic candidates turned their attention more towards the global scale and climate, Republicans have mostly kept to the local narrative in their climate discourse. In 2020, Republican candidate Donald J. Trump reverted to familiar themes from the pre-2000 debates when he framed his position on the issue through clean air, water and

preservation of nature. Thus, the environmental theme has moved from a shared but somewhat Democratic-dominated domain towards a shared but somewhat Republican-dominated one. However, the evidence for this is not as conclusive as the economic burden and influx of climate into the general narratives.

The general trend is, therefore, that there has been an ongoing (but small) concern for the environment with some minor changes, while the introduction of climate came with a distinct turn in the political narratives. With climate, narratives and positions have separated the parties to the extent that the Republicans, to some degree, question the existence of climate change and thus naturally frames mitigation policies as an economic burden. Democrats, on the other hand, shows evidence of framing the issue through both national security, looming disaster, as well as an economic opportunity. They also focus on international leadership and cooperation, neither of which are marked Republican frames.

5.1.2.1 Sub Question 2a:
Have there been changes in how different candidates frame the issue compared to other representatives of their own party?

As briefly mentioned in the discussion on sub-question 2 (see section 5.1.2), there has been a rather wide discrepancy between candidates and election years in how environmental and climate issues had been framed. The data shows that candidates, generally, keep to the party lines on how they frame the environmental and climate theme, and there are only minor deviations from the general trends that can be found within each party in light of historical developments, which necessarily entails some changes and alterations over time. There is, however, one exception to these results, and that is John McCain of the Republican party. It was noted in section 2.3 that Brewer (2012) found McCain to deviate from the traditional Republican issue frames on environmental and climate issues. The same results were found in this study, thus complementing the suggestion from Brewer (2012) that this was the case.

During the 2008 debates, John McCain took a prototypical Democratic position of framing Republican administrations as hostile towards environmental mitigation policies and challenging the human role in climate change. He also framed himself as an instigator of global initiatives fighting climate change while also framing climate change and mitigating policies as an opportunity for job creation and economic growth, which no other Republican candidate has ever done. By doing so, McCain broke with most Republican conventions towards climate

and environment narratives and thus represented the only example of a genuine break with contemporary party lines from a candidate on the environment and climate theme.

5.1.2.2 Sub Question 2b:

Have there been changes in how much of the debates the candidates spend on the climate and environmental theme?

As was evident from Figure 10, the percentage of words in the debates which were allotted to environment or climate discussions displayed some noticeable changes over time. In nine of the twelve debates, the percentage points of words allotted to discussing climate and the environment ranged between 2.31% points and 0.90% points. All three debates outside of this spectre ranged higher than 2%, with 1988 recording a 3.23%, 2000 a 4.61% and 2020 a whole 8.13% of the debates allocated to the topic. Thus, the aforementioned three election periods, and especially the last, stand out as deviations from the norm where the candidates spent a noteworthy amount of the debates on the issue of climate and environment. It is also worth noticing that the attention towards the environment and climate theme was just as predicted in the discussion on Ungar (1992), Mazur and Lee (1993), Trumbo (1996) and Krosnick et al. (2000).[75] Based on their data, we predicted a somewhat higher interest in the theme in 1988 than 1992 and 1996 before another peak in 2000, all of which were true.

Perhaps more surprising was that the 1976 and 1980 debates showed over 2% attention to the issue in both debates. The format of the debates during this year might have affected the time spent on the issue, as the candidates were allocated a reasonable amount of time on each question[76]. The moderators also brought up the environmental theme once in 1976 and twice in 1980, which have increased the candidates' opportunity to discuss the issue. Another interesting observation is the lack of attention to the issue from 2004 until 2016, especially the 2012 and 2016 debates, which show the least interest in the issue of all the debates. The moderator did not bring up the issue in 2012, while environmentally friendly energy was brought up during the 2016 debates. The candidates, however, were more interested in energy-related issues outside of the environmental and climate sphere, as is attested by the frequency tables from the initial search, which undoubtedly was elevated by energy references.

Given that these two debates scored exceptionally high on these references, it attests to the lack of interest in renewables and sustainable energy sources and the environmental and climate

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[75] See chapter 2.2.
[76] For an outline of the form formats the debates, see Appendix A.

theme as a whole in these sets of debates. The data shows, conclusively, that there have been a few significant changes in attention over time. However, as 10 out of the 13 debates spend about one to two per cent of the allotted time on the theme, most of the election periods only show slight variation in absolute numbers. As previously mentioned, the results from this study is mostly likely close to an extreme-high due to the researcher looking *for* environmental and climate narratives. The debates which show little attention to the environmental and climate themes might therefore be found to be even less interesting in the theme by other researchers.

5.1.2.3 Sub question 2c:

Have the moderators brought up the environmental and climate theme in the debates, and if so, what impact might that have had on the debates?

As is referred to in Appendix D and discussed in section 4.2.1 Question Matters, the environmental and climate theme has indeed been brought up by moderators several times during the span of the televised presidential debates. Over the time span of the thesis, only three election years, 1992, 1996 and 2012, omitted the issues from the perspective of the questionnaires. 1980, 2008 and 2020 touched upon the theme in two debates, while 1976, 1984, 1988, 2000, 2004 and 2016 brought up the theme in one.[77]

As has been discussed in Chapter 1.2, the debates introduce important themes from the contemporary time. Thus, the inclusion of environmental and climate concerns in the questions might suggest some interest in the issue in the given years. This suggestion is further strengthened when the candidates follow up on the question by discussing the issue at hand and not omitting the issue or deviating towards a different topic. The first time the issue was brought up in 1980[78], neither candidate touched on the part of the question that suggested that one is pushing the environment to dangerous limits. In 1984, only Ronald Reagan addressed the question, although it should be noted that the question itself was addressed to him. In every other instance, however, both candidates have adhered to the theme when environmental and climate-related issues have been brought up in the question matters.

However, the question matters have not adhered as clearly to the shift from environment to climate, or put in other words, from localized issues such as pollution and natural degradation to global challenges such as climate change. The five recorded questions after 2000 all adhere

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[77] Note that the different formats of the debates result in the 2000 and 2020 debates having multiple questions due to follow-ups being allowed. While this is not the case in some of the other debates.
[78] See Appendix D.

to the environmental theme, while the 2000 debates saw, for the first time, questions related to climate and global-scale issues.[79] The 2004 and 2012 debates ambiguously framed the questions, making it hard to determine whether it adheres to one of the two terms. However, the 2008 and 2020 debates clearly adhere to the shift from local concerns to global issues. However, it should be noted that the 2020 debates delve much deeper into the issue than other debates in terms of questions and follow-up questions. Thus, they also naturally include more elements into their question matters than what is the case in other debates.

However, the questions addressed to the candidates usually result in answers and discussions on the topic. Therefore, the questions play a part in influencing how the candidates address the issue, especially in the cases where follow-up questions are asked. The two election periods with the most questions on the topic (2000 and 2020) are also the debate years with the most attention being diverted to the environmental and climate theme. As the lack of a question on a topic leaves the candidates to address the issue, it is not surprising that the three years with no questions on the theme are among the years with the least attention on the topic.

5.1.3 Sub Question 3:

Is there a discrepancy between how Democratic and Republican presidential candidates frame the environmental and climate theme?

As is evident from the results of this study, there are some noticeable differences in *how* the candidates frame environmental and climate-related issues. For a run-through of *how much* the candidates talk about climate and the environment, refer to sub-question 2b (Chapter 5.1.2.2). There are noticeable differences between Republican and Democratic candidates in how they frame the climate and environmental theme. Although there are some individual differences, some general trends can be found from the data material. Some of these differences were addressed in sub-question 2.

The most noticeable difference between the two parties was through the economic frames. Republicans tend to frame environmental and climate through the economic burden frame with the sole exception of John McCain in 2008, which utilized the Democratic-dominated frame of economic opportunity. John McCain is also the only Republican who has touched upon the looming disaster frame. The Republicans are instead represented as using the scepticism frame when it comes to climate change. Given that McCain is the only Republican who has touched upon some of the Democratic-dominated frames, it is no surprise that he is the only candidate

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[79] See Appendix D.

who has ever framed his narratives through compromise and cooperation across party lines, which he did three times in 2008. No other candidate, neither Republican nor Democratic, has ever done so either before or after.

Climate change is also framed by Democrats through international competitiveness and international leadership, while Republicans tend to frame economic and environmental initiatives as a negative for U.S. economic competitiveness. The splits between the two parties have also probably been even more polarized in the last year as the discovered frame of delusion/sanity show five out of the six occurrences in the last two election periods with both Democratic candidates Hillary Clinton (2016) and Joe Biden (2020) framing Donald. J Trump as delusional while he did the same towards Biden in 2020.

5.1.4 Sub Question 4:

Is there a discrepancy between Democratic and Republican presidential candidates in how much they talk about the environment and climate theme?

The general trend displayed from the quantitative data in the CTPD is that Democratic candidates talk more than their Republican counterparts about the environment and climate. In total, Democrats were recorded with 56.86% of the total discourse on climate and the environment. Democrats also talk more on average in the debates where they dominate the environmental and climate discourse than Republicans do when they talk more than their Democratic peer. Democrats speak more often, and are to a lesser extent than Republicans, left to defend their positions. As some of the more extensive Republican statements on the theme is defences, it might suggest that they are to some degree "forced" to address the issue, as omittance might be a worse choice.

In conclusion, the difference between how much Democrats and Republicans address the theme is profound. Democrats talk more and more often and might be less pressured to talk on the issue than Republican candidates. This has also been a continuous trend throughout the CTPD, with somewhat more equal numbers between the candidates since 2008, most likely due to more restrictions on the candidates.

5.1.5 Sub Question 5a

Is there a marked space in time where acknowledgement of human impact on the climate and environment can be found?

References to air quality and human impact on local biospheres can be found in the CTPD as early as 1976. When it comes to references such as climate change, and global warming, however, the first reference was made by Al Gore during the second debate of the 2000 campaign. On the Republican side, however, John McCain is the only Republican candidate who has ever discussed global warming or climate change without casting doubt over the role humans play in facilitating it.

5.1.6 Sub Question 5b

Is there a discrepancy between Democratic and Republican candidates when it comes to acknowledging the human impact on the environment and climate?

As referred to in Sub Question 5a, Democratic candidates are far more prone to accepting human impact on the climate than their Republican counterparts. When it comes to local issues, there are no noticeable differences between Republican and Democratic candidates. However, Democratic candidates seem to value environmental protection higher on average than their Republican counterparts. Democratic candidates are far more concerned with the issue than Republicans, which have shown tendencies to dispute the reality and severity of climate change and global warming when it comes to climate and global issues. This was the case in 2020, with Donald J. Trump and George W. Bush Jr. in 2000. Both of which were up against two Democratic candidates who unequivocally framed climate change as a looming disaster. In debates where Democratic candidates have not taken such an unambiguous stance, Republicans have not framed climate change through the sceptic frame.

5.1.7 Main Thesis Question

How do narratives on climate and the environment manifest in the U.S. televised presidential debates from 1960 until 2020?

The environmental and climate theme in televised U.S. presidential debates, is first and foremost, a minor theme. The debates in 1988 and 2000 show some interest on the topic, but the average interest over the debates is noticeably low. The only example of the theme being somewhat prominent was during the 2020 debates, where 8.13% of the words by the candidates were addressed towards the climate and environmental theme.

The question matters in the debates also attest to notable but minor attention to the environmental and climate theme. Over the study's timeframe, most debates have included a question that includes environmental and climate as an issue or general theme. The questions often include different themes and issues in the environment and climate discourse, which might attest to the somewhat minor position of the theme in the CTPD. The exceptions were 2000 and 2020, which delved deep into the environmental and climate question. As these two debates also saw more attention on the topic than other debates, these years stand out as outliers compared to the other debates. 1988 also saw a noticeable amount of attention on the topic.

The quantitative data suggest that Democrats are more concerned with climate change and the global-scale consequences of global warming than Republicans are. Democrats talk more on the issue than Republicans; they talk more often on the theme and has done so regularly since the global-scale issues were introduced in 2000. The data is also clear on Democratic dominance on the environmental part of the study; however, there is a notable difference between the two. Democrats talk more about the environment than Republicans, but Republicans have a more nuanced approach to what this thesis called environment and often support policies and initiatives on the environment. This nuance is in stark contrast with the climate term, which Republicans, especially since 2012, have framed as an economic burden or suggested that the whole existence of perils such as global warming is doubtful.

Most of the frames uncovered from the CTPD were standard frames already affiliated with political discourse and known political positions from the two parties. Democrats completely dominate the discourse on global initiatives and international leadership. At the same time, Republicans are less inclined to spend money on mitigation policies and are increasingly sceptical of the certainty of climate-related issues. The economic burden frame is an apparent Republican strategic frame except for John McCain, who adhered to the Democratic frame of economic opportunity when addressing the climate and environmental themes. However, it is interesting that Republicans are somewhat more lenient on environmental policies when framed as land preservation, air quality, water quality, national parks, and similar elements. This suggests that the polarization is more heavily rooted in the climate part of the discourse than the environment. Increasing polarization is further supported by the expanding amount of attacks and the introduction of the delusion frame, which correlates with the introduction of the climate theme. However, the data does not answer whether or not the polarisation of the climate theme results from general polarization or is one of the main stages for the politicization and further polarization of U.S. politics.

5.2 Limitations of the Study

This section considers the limitations of this thesis and is separated into two parts. The first part contemplates the data and methodological choices in the thesis. The second part will focus specifically on limitations related to AntConc and the potential implications that might have on the results.

5.2.1 Limitations in Data and Methodology

Utilizing corpora for linguistic studies does have its weaknesses. These are often related to the representativeness of the data and how generalizable the results are. Representativeness is not an issue in this thesis, as the thesis incorporates every single televised presidential debate between 1960 and 2020. The presidential debates cannot be generalized to represent the whole of U.S. political discourse and must instead be considered as its own phenomena.

The quantitative data is not enough to provide concluding remarks but allows for further examination of prominent themes and paths through qualitative analysis. Although the researcher has spent substantial time studying the data, there is a chance that some mentions and references to climate and environment might have been missed. However, using multiple methods to capture the data offers reliable assurances that the relevant material has been considered. The choice of what to include and dismiss might be different based on individual factors such as knowledge of the field and how the data and context are interpreted through individual experiences and insight. Nevertheless, the use of a mixed-method where quantitative data back the qualitative analysis strengthens the findings and validity of the study. As it is primarily up to the researcher to decide what is related to the environmental and climate theme, the decisions that are taken cannot be 100% objective as some quotes are arguably more ambiguous than others. Even with supporting materials on the context of the debates and historical events surrounding the debates, some items and references might be misinterpreted. Such misinterpretations might result in the inclusion of data that might not be relevant for the study. It is also possible that the opposite is the case; namely, some excluded items should have been included in the analysed data.

Selecting the data in the aforementioned manner also creates another issue as the question of where to start a quote and where to end it caused some trouble. Prior research on similar topics includes everything from short sentences to several hundred words-long paragraphs. In a complicated dataset such as the presidential where the topics are switched rapidly, and the candidates also deviate from the prescribed topic regularly. The mix of topics and frequent

deviations create utterances that might include references to a large number of issues and topics, even in one sentence. This is especially the case when candidates bring up their main campaign promises, such as Bill Clinton in 1996 when he brought up budget balancing, Medicare, Medicaid, education and the environment in a short 13-word sentence.[80] In this example, only the single word *environment* makes it relevant for this research project. It could therefore be argued that only that word, or for instance, this fracture of the sentence, is relevant:

"Now let's [...] protect [...] the environment."

While this is the sentence that was recorded in the study:

"Now let's balance the budget and protect Medicare, Medicaid, education and the environment."

The same issue occurs with more extensive pieces of monologue as well. Larger monologues might also profoundly impact the quantitative results, making them essential to address. Some of the monologues include both references that are relevant to the theme and references and items that are not relevant. One piece of monologue might, for instance, start with references to climate or the environment and then move on to something else before reverting to the original topic. For example, Democratic candidate Al Gore, after receiving a question on his concerns for climate change and the environment, went on to discuss the issue while also bringing in Japan and their economic competitiveness in his argumentation.[81] Similar examples are spread across the debates due to the aforementioned tendency of the candidates to deviate from the topic combined with the general trend of including different topics and in monologues. Thus, the researcher must also decide whether or not to split up the monologues into two separate pieces containing more relevant discourse or to cut out the pieces of information deemed irrelevant. Both of these actions would somewhat alter the data and thus have the potential to alter the results of the study.

A special issue also occurs in the debates where Republican candidate Donald J. Trump participated in the debates, as these debates are characterized by frequent interruptions, which breaks up monologues that otherwise would have been connected. This issue is especially prevalent in the first debate of the 2020 campaign. Therefore, it was necessary to merge small pieces of dialogue that were interrupted into more coherent pieces for analysis. Other researchers might prefer to leave the utterances untouched or merge different pieces than what

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[80] See D-1996-1.
[81] See D-2000-8.

was chosen in this research project. Thus, other researchers might be left with ways of structuring data from the 2020 campaign than what was gathered in this study.

To summarize, the choice of data, what data to include and how the researcher interprets the data might affect what data is included and how it is counted and interpreted. Thus, there is a possibility that different researchers might come up with slightly different results. However, the choice of what to include and exclude and how to delimitate different items will always be prone to human preferences and choice and is, therefore, a source of possible deviations. However, the inclusion and listing of the relevant quotes in Appendix C allow other researchers to view the data used in this thesis. As the raw data is publicly available, it is also possible to backtrack raw data and quotes to single debates, making the results and data more transparent.

5.2.2 Limitations to AntConc

As already touched upon in section 3.2.1, the use of AntConc created some minor issues that must be addressed in terms of how they might cause validity limitations in the results. Most of the discovered issues were related to frequency hits, which were distorted by the tool not processing certain items. Items such as hyphens, semicolons and colons and other symbols were processed as codes such as \x97 and \xA0. These codes were consistent with individual symbols and signs, suggesting that AntConc has issues with processing such items and thus replaces them with a code that can be measured and counted just like any other word or phrase. However, using a tool that has issues with processing relatively common symbols might create issues if the researcher is concerned with such nuances in written texts. As this thesis was not concerned with such nuances due to the data being oral in its origin, it was not considered a significant issue.

Initially, this research project gathered a list of common words in the corpus that carried meaning in and of themselves.[82] The list was gathered from the 1000 most common words before filtering. Thus, fictitious words such as \x97 and \xA0 will have displaced words that were just below the threshold for inclusion in the list. However, as there was only a matter of three words being displaced due to fictitious words in the top 1000 most frequent words, there is little to suggest that this error had any meaningful impact on the initial results, which were used to move forward with a research path. The fact that the issue with fictitious words only initially played a role in finding a research path and not when the rest of the data was processed

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[82] See figure 2.

also supports the notion that the issue was minuscule in its possible effect on the validity of the results.

Although the issue was not considered to be a large one, it should be noted that minor alterations in syntax might change the meaning of a phrase or sentence, which might have implications, especially for qualitative results. Should a hyphen or other punctuation marks be erroneously processed in AntConc, it might alter the meaning of an utterance. One noticeable example from the debates was when Donald J. Trump spoke about Syria and Aleppo in a manner that resulted in online searches for "lepo", as in, *"what is a lepo"*, which were one of the Google queries that spiked after the debate (Orkent, 2016). It showcases how minor alterations might change how the reader or listener perceives a word or phrase. The issue might be further exacerbated if the researcher only utilizes the transcripts for analysis and does not watch parts of the debates if a quote of interest might have different connotations based on punctuation or pauses. One should therefore be wary of the way quotes, in general, is interpreted, and especially quotes that include symbols that AntConc has trouble processing.

Lastly, it should be noted that although these issues were considered a minor inconvenience, they might have a more significant impact on similar studies. For instance, if the researcher were considered spelling mistakes or other anomalies, the issues AntConc have displayed might make it a sub-par choice for such research approaches. The same would, of course, be the case if the researcher is concerned with punctuation marks, as these were the items that caused the most issues. The issues discovered with the software would also pose problems for researchers looking at, for instance, learner corpora, as it might not be reliable enough to discover different types of errors, especially related to characters such as a colon, semicolon, parentheses. Thus, the researcher must weigh the advantages of using AntCont compared to the apparent issues and possible inconveniences the tool might pose from a quality standpoint.

5.1.3 Limitations Summary

As discussed in the two preceding chapters, there are some limitations to the study and the approach taken. The issues that occurred when using AntConc were considered a minor inconvenience rather than an issue that distorts the results to any meaningful extent. This is especially the case as the issues were noted, recorded, and examined, concluding that they were not a severe problem. However, it should be noted that the problems that manifested themselves in this research project might have a greater impact on other studies than what was considered

to be the case in this study. Thus, other concordance tools might be more applicable in other studies.

Great care was taken to provide a transparent approach that is possible to follow while also providing the resources necessary to gather the utilized raw data and include the relevant data for the study in the appendices. Therefore, a synopsis of every debate was assembled in Appendix A. All the relevant quotes are assembled in Appendix C, and all the relevant questions are listed in Appendix E. Much of chapter 3 also goes into discussing the initial approach and methodology taken to assess the data, which further bolsters the transparency of the complete project. Thus, it should be possible to assess the data, approach, and considerations made in this study, which allows for a better assessment of the results. As the results and data gathering includes several human choices on what to include and what not to include, as well as how to interpret the data, it goes without saying that other researchers might come up with at least minor deviations through their assessment of the same data. Thus, it is reasonable to expect that the human consideration and judgement that went into this research project have had a noticeable impact on the results. However, human impact is hard to overcome, but it does not necessarily suggest that it is an issue. As the results are coming from decisions that have been made after careful consideration and the use of previously tested methods, it should alleviate some of the biases. There is nevertheless an inherent risk of researcher bias when human consideration is taken into account.

5.3 Further Research Trajectories

This study can serve as a basis for further research in different areas, as it contains research covering an extensive historical period of political discourse. The selection of environment and the climate as a thematic limitation does not necessarily entail further research based on the same theme. It also opens up for research on whether or not the same levels of contention or fluctuations across time when it comes to interests in topics can be found when examining other themes and topics covered in the presidential debates.

As briefly mentioned in the discussion on limitations to the study, it would be interesting to include a comparative survey of U.S. political discourse through other media channels. The researcher's suggestions include the Senate or Congress, Twitter, TV appearances on major TV shows or channels, or other sizable political stages. The aim of said study could be to uncover any differences between the discourse in the televised presidential debates versus different

stages. Such a project might be undertaken as a meta-study, as long as other studies on climate discourse have limited their research to a similar theme or comparable timeframe to this study.

Another research trajectory that follows more or less the same pathway is to try to include other political parties and their candidates' positions on climate and the environment. As the presidential debates effectively exclude third-party and independent candidates (with some minor historical exceptions) from participating, they also inevitably exclude potentially interesting concerns and narratives covering climate and the environment. Such a project can, for instance, be done through examining debates across any given timeframe also covered by this study, that included minor parties and also covered the environment or climate in some form or function.

If the researcher wishes to keep with the environmental and climactic strand, this study also offers ample opportunity to create a comparative framework based on other countries. The most straightforward approach would be to examine similar phenomena in other English-speaking countries, such as the prime minister debates in the UK. Especially keeping within the realm of the English language would provide a stable platform for linguistic comparisons. Still, this is not to say that it is impossible to compare across different languages. Neither is it necessary to keep within two-party political systems as narratives in multi-party-political systems should be directly comparable to two-party systems and vice versa. However, it should be noted that categorizing and recording the data could be more labour intensive when including more variables in the forms of different political parties.

Lastly, there is ample opportunity to explore contrasts and similarities between what is uttered in the presidential debates and other sources from sitting presidents, such as presidential actions, briefings, proclamations, statements, legislation and remarks. These items can be compared to what is uttered in the presidential debates to compare campaign promises with actions taken and statements made when the president is sworn in. As this project excluded vice-presidential debates from the data, the televised vice-presidential debates can also prove to be a manageable small corpus that can be compared with the results from the CTPD. In such a case, keeping with the environment and climate theme and a similar approach is advisable.

5.4 Conclusion

This thesis sought to explore the centrality of environmental and climate issues in U.S. televised presidential debates. To achieve this aim, the study analyzed the content of every transcript from the televised presidential debates since the first was held in 1960 and every fourth year from 1976 until 2020. The thesis displayed how one can utilize corpus linguistics in an explorational manner to look for interesting themes and topics within the corpus and how to expand on initial data to uncover various elements within the data set.

The CTPD assessment revealed, first and foremost, that the debates in 1960 did not bring up environmental or climate-related issues during any of the four debates of that year.

In terms of quantitative data, the thesis uncovered and specified several key elements of the debates. The quantitative data revealed that Democratic candidates talk more about climate and the environment than their Republican peers. Democrats have talked more about the theme than Republicans in 8 out of the 12 debates since 1976. Democrats also revert to the topic more often, suggesting that they tend to bring it up in different contexts to a larger extent than Republicans do. The attention towards climate and the environment has been relatively low over the timeframe, with only 2020 standing out as an election year where the theme can be said to be a significant part of the debates. The debates of 2000 and 1988 should also be mentioned as diverting some attention towards the issue. It is also interesting to note that 2012 and 2016 score as the lowest years regarding the percentage of words corresponding to discussion on the environment or climate. This is contrary to the notion that the issue has received increasing attention over time, which should suggest that these election years would pay more attention to the topic.

On the qualitative part of the study, the data suggested, consistent with research on U.S. politics and environmental discourse, that Democratic candidates are more interested in discussing climate and environmental issues and has regularly been so since 1976. Democratic candidates are also exclusively positively inclined towards measures proposed to mitigate human impact on the environment and climate. Republican candidates, on the other hand, display more individual variation as their candidates range from being in support of most policies (McCain) to being completely against almost any spending and incentives on climate and environmental degradation mitigation. Republicans are also far less inclined to support international cooperation and global incentives on fighting climate change and have generally displayed scepticism towards the role humans play in being an accelerator of climate change.

The frames uncovered in the thesis adhered more or less entirely to common political frames and frames uncovered in studies of climate narratives. The economic burden versus economic opportunity frame is the most notable example from the CTPD. Other elements are also present, such as Democratic trust in experts and their policy of international leadership. Republicans, on the other side, are more inclined to use the scientific uncertainty frame. As Democrats frame the issue as more pressing, they also adhere to the looming disaster frame and the religious and ethical call for action frame. These are only touched upon by one Republican, John McCain, who follows most Democratic frames in his climate and environmental narratives.

The natural harmony frame, which adheres more or less to the term *environment* in this study, is used by both parties. The same is the case with the social progress frame, which takes human health into consideration, but more so by Democrats than Republicans. The data that points towards an increase in polarization from the CTPD seems to be tightly related to the climate-based discussions. The introduction of climate as an issue has also been followed by an increase in attacks, the introduction of the delusion frame, and the scientific uncertainty frame.

The results from this study contribute as an affirmation of previous research on how Democratic and Republican politicians frame climate and environmental narratives through a further affirmation of several common assumptions and theories. It also expands on the theme by adding a sizeable historical trajectory to the discussion, a component that was lacking. This research project also adds to the already extensive research material on the presidential debates. However, by focusing on climate and environmental frames, the thesis adds another dimension to the large assemblage of research on the debates and the collection of climate narratives. Understanding contemporary and historical climate and environmental narratives also play a role in coping with the challenge ahead. It is only by understanding different positions and narratives on the topic that we can truly find common ground, and hopefully, a means of creating a shared platform for a sustainable future.

As with other studies based on the presidential debates, this study also contributes to elevating the presidential debates as a credible source for examining policy narratives and climate communication. The researcher hopes that this was accomplished.

6. References

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7. Appendices

Appendix A: Brief Synopsis of the Presidential Debates

Although presidential debates have been held for over 60 years, the debates themselves have taken various forms. While a panel of journalists has moderated some debates, others have been moderated by a single journalist. Some debates had a pre-announced theme before the debate started, while others were open in nature, and the candidates were not given the questions beforehand. Debates can also take the shape of so-called town hall debates, where the broader public can ask candidates questions in the hall where the debates take place through letters or social media. The most commonly used framework for the debates to date is a debate moderated by a single journalist, thematically open, and with pre-determined questions withheld from the candidates and the public. As the debates have varied in form through time, it is necessary to present a short synopsis of the main talking points and structure of the various debates analysed in this thesis. The synopsis will follow a historical timeline, beginning in 1960 continuing until the 2020 debates.

Note that the second debate of the 2020 presidential election between President Donald J. Trump of the Republican party and his opponent, Joe Biden of the Democratic party, was cancelled. What separates this instance from the October 13th debate in 1960 is that although Nixon and Kennedy were located in different cities, they held a debate where they could hear and respond to each other. The substitution for the second debate between President Donald J. Trump and Joe Biden was a sort of questionnaire where both candidates were separate from each other and did not answer the same questions. Thus, it does not come under the debate form and thus is omitted from this thesis.

Kennedy-Nixon, 26th September 1960 – Chicago, Illinois. For the first time ever, two presidential candidates took the stage in a televised debate before a presidential election. On stage were Democratic presidential nominee John F. Kennedy and his opponent, Republican nominee Richard M. Nixon. The debate started off with each candidate giving an opening statement to the public with an allocated eight minutes for each candidate. Following the opening statements, each candidate was questioned by a panel of correspondents restricted to the subject matter of internal- or domestic American matters. After the questionnaires, each candidate was allocated three minutes for closing statements. Between the opening- and closing statements, the questions asked to the candidates were related to a broad set of themes, such as

leadership qualities, economic programs, and health programmes, as well as education, subsidies for U.S. farmers and the threat of communism.

Kennedy-Nixon, 7th October 1960 – Washington D.C., District of Columbia. After the success of the first presidential debate, John F. Kennedy and Richard M. Nixon followed up with a second televised debate. This time, neither candidate made an opening or closing statement; rather, one full hour was allocated to direct questions to each candidate. The questions came from a panel of four journalists, and the debate was moderated by Frank McGee from ABC News. Each journalist took turns asking questions to the candidate, where the candidate in question answered, followed by a comment from his opponent. There was no thematic restriction on this debate, nor a time limit for each question, only the final limit of one hour in total determined who got the last question. The questions ranged from foreign policy to civil rights, economic and political issues related to the ongoing cold war and other foreign policy-related themes, as well as unemployment.

Kennedy-Nixon, 13th October 1960 – New York (Kennedy) and Los Angeles (Nixon). For the first and only time in history, the presidential debate was broadcast from two different cities separating the candidates. Republican candidate for president Richard M. Nixon participated in the debate from Los Angeles, while Democratic candidate John F. Kennedy took the stage in New York. Both candidates received questions from the same panel, consisting of four journalists. Both candidates were asked the same question and took turns answering questions from each journalist. While the candidates were not in the same city, both received the same questions and could hear the other candidate's response. No specific amount of time was allocated to each question, but the debate was limited to one hour in total. The questions asked to the candidates were initially focused on foreign policy and military interventionism before moving on to domestic policy issues such as partisanship and racial issues. The candidates were also asked questions on the economy and taxation before it was ended on a discussion on U.S. prestige abroad.

Kennedy-Nixon, 21st October 1960 – New York. The historic televised debates broadcasted for the last time in 16 years when John F. Kennedy and Richard M. Nixon once again came together on stage for a final time in the 1960 presidential election. The debate lasted for one hour, and each candidate started off with an opening statement of about eight minutes each and ended with closing statements for three to five minutes each. In-between the opening and closing statements, the candidates were asked questions from a panel of four journalists, and

Quincy Howe of ABC News moderated the debate. This last debate followed mostly a foreign policy theme, where the candidates were asked questions related to nuclear arms control, the possibility of a weapons control summit with the Soviet Union and how to handle the contested islands of Quemoy and Matsu off the Chinese east coast, directly opposite of Taiwan. Other questions related to the decline of U.S. prestige abroad and whether the U.S. could challenge communism's global offensive. The only question related to the domestic policy was whether the candidates could give the names of possible nominees for the position of secretary of state.

Carter-Ford, 23rd September 1976 – Philadelphia, Pennsylvania. After a 16-year break, the first debate between sitting president Gerald R. Ford from the Republican party and Jimmy Carter representing the Democratic party took place in Walnut Street Theatre in Philadelphia. Edwin Newman moderated the debate, and the questions came from a panel of three journalists. The thematic focus of the debate was restricted to domestic and economic policy, and the candidates did not have any prepared remarks or notes with them on stage. The rules of the debate consisted of a question to a candidate who was given three minutes to answer the questions, with the second candidate given two minutes to respond. Follow-up questions were allowed and would thus constitute a two-minute answer from both candidates. In the end, the participants were allocated 3 minutes each for a closing statement. The debaters were asked 12 questions, where taxes and budget-balancing were the most prominent themes. But the candidates were also asked to elaborate on their stance related to energy policy, the function of the federal government, the intelligence agencies and partisanship in Washington.

Carter-Ford, 6th October 1976 – San Francisco. The second Carter-Ford debate took place at the Palace of Fine Arts Theatre in San Francisco. Like the previous debates between these candidates, a panel of journalists asked the questions to the candidates while Pauline Fredrick of NPR moderated the debate. This debate did also have a pre-announced theme, this time, foreign and defence issues. The second Carter-Ford debate like, the first, did not allow the candidates to bring notes or a prepared remark to the stage. Similarly, the second debate followed the same sequential rules for questions as the first Carter-Ford debate, namely a question to a candidate, which was given three minutes to answer the questions. The second candidate was given two minutes to respond. As with the first debate of the 1976 runoff, both candidates were given 3 minutes each for a closing statement. Where the first debate was restricted to domestic and economic policy, this second debate was focused on foreign and defence issues. The grand challenges of the U.S. relationship with the Soviet Union and the possibility of strategic arms limitations were at the forefront of the discussion. The other topics

of the debates were related to the Middle East, China, and Vietnam and general questions on U.S. interventionism as a policy tool.

Carter-Ford, 22ⁿᵈ October 1976 – Williamsburg, Virginia. The last debate between Jimmy Carter and Gerald R. Ford was held in the College of William and Mary in Williamsburg, Virginia. The debate was moderated by Barbara Walters, and the questions were asked by a panel of three journalists. The subject matter of the debate was open, allowing for all issues and topics. The candidates were also given slightly less time to respond to the questions than the two previous debates, with 2 ½ minutes to answer a question, and the other candidate was given 2 minutes to respond. Closing statements were allocated three minutes for each candidate, and no prepared remarks or notes were allowed. As this debate had no limitations on the theme of the questions, the panel sought to cover a broad range of issues on this evening. Several of the questions were similar in nature as those familiar with U.S. politics hear about today, such as Second Amendment rights, distrust in politicians, revitalizing U.S. cities, racial issues, and supreme court appointments. Questions related to Yugoslavia, possible constitutional amendments and environmental concerns were amongst the other issues the candidates had to follow up on.

Reagan-Anderson, 21ˢᵗ September 1980 – Baltimore. The first debate of the 1980 presidential election stood out by the fact that Congressman John Anderson participated in the debate as an independent candidate and that sitting president Jimmy Carter declined the invitation to participate. The debate was moderated by Bill Moyers, and the questions came from a panel of seven journalists. The questions did not follow any particular subject matter, and each panellist asked a single question to the two candidates. The candidates had two and a half minutes to state their position related to a question, and each of them was given 1 minute 15 seconds to respond to the other candidate's statement. Three minutes for a closing remark was allocated to both the candidates. The debate format only allowed for a handful of questions where three out of six were related to economic issues and fiscal restraint. The other questions were whether the candidates would be impacted by their faith if they were to become president, reinstituting the draft in the U.S. military, environmental dangers, and energy policy.

Reagan-Carter 28ᵗʰ September 1980 – Cleveland. The second and last debate of the 1980 presidential campaign was between sitting president Jimmy Carter and his opponent from the Republican party, Ronald Reagan. Thus, the independent candidate John Anderson did not participate in this debate even though he was present in the first debate. A panel of four

journalists asked the questions, and the moderator was Howard K. Smith. Initially, the debate consisted of similar questions asked by the journalists to both candidates with follow-up questions to try to sharpen the responses. In the second half of the debate, the panellists asked a question, and both candidates were given time to respond. Following both responses, the candidates were allowed to respond, rebut, or question the other candidate's answer twice. Both of the debaters were allowed to take notes during the debate but to bring notes to the stage. The subject matter of this debate was rather broad, covering domestic, economic, and foreign policy and national security issues. Following the broad thematic spectre, the questions ranged from deflationary policies, federal balancing and budgetary cuts to interventionism, racial issues, energy policy, and the environment.

Reagan-Mondale, 7th October 1984 – Louisville, Kentucky. The first debate between the sitting president Ronald Reagan and Democratic contestant Walter Mondale took place in the Kentucky Center for Arts in Louisville. The candidates were given questions from a panel of three journalists and were moderated by Barbara Walters of ABC News. The candidates were given the same question from the panel, and after both candidates had answered the question, they were given the opportunity to rebut what the other candidate had said. The debate focused primarily on the economy and other domestic issues. In the end, both candidates were given 4 minutes for closing statements. Economic disparity, unemployment and budget-balancing were some of the most pressing issues the candidates had to proclaim their stance on. Reagan and Mondale were also questioned on their leadership qualities, religious beliefs, and views on abortion rights.

Reagan-Mondale, 21st October 1984, Kansas City. The second debate between Ronal Reagan and Walter Mondale was also the last time the presidential debates were sponsored by the League of Women Voters, who had stood for the debates since 1960. The questions were asked by a panel of four journalists and were moderated by Edwin Newman of the King Features Syndicate. One by one, the candidates were asked a question, with two and a half minutes to respond, then the same panellist will ask a follow-up question where the candidates were given one minute to respond. After both candidates were given a question with a follow-up, both candidates had one-minute rebuttal time each. In the end, both candidates were allocated four minutes each for summations. The theme of the debate was foreign policy issues and defence-related policy. The questions in this debate were rather blunt and covered, amongst other themes, whether the U.S. supported terrorism in foreign nations and how the candidates

stood on interventionism. Other questions were related to the Soviet Union and global communism as well as nuclear proliferation and how to handle it.

Bush-Dukakis, 25th September 1988 – Wake Forest, North Carolina. Republican candidate for president George W. Bush and Democratic candidate Michael Dukakis participated in two debates during the 1988 presidential campaign. This was the first time the presidential debates were sponsored by the Commission on Presidential Debates, which has done so to date. The first debate between the two contestants was moderated by Jim Lehrer of the McNeil-Lehrer News Hour, and a panel of three journalists provided the questions. The questions in the first debate of the 1988 campaign were equally divided between foreign and domestic policy matters. The candidates were asked a question and given two minutes to answer, followed by a one-minute rebuttal from the other debater. The respondent was then given a follow-up question with two minutes to answer, followed by a one-minute rebuttal from his opponent. The debate ended with both candidates giving a two-minute closing statement. The questions were rather diverse and diverged from drug issues, entitlement programmes, federal deficit policy to the death penalty, abortion rights, and the individual candidate's leadership qualities. Both candidates were also asked about their policy on arms sales, relation with the Soviet Union, and vice president's choice.

Bush-Dukakis, 13th October 1988 – Los Angeles, California. The second and final debate of the 1988 presidential runoff was held as an open-ended debate, with no restrictions on the questions' themes asked the candidates. The moderator, Bernard Shaw from CNN, was complemented by a panel of three journalists. The questions ranged broadly from abortion rights, the military, the death penalty, the environment, and economic concerns such as taxation and budgetary constraints within areas such as healthcare and military spending. Just as with the first debate of the 1988 campaign, the candidates were asked a question and given two minutes to answer, followed by a one-minute rebuttal from the other candidate. The respondent was then given a follow-up question with two minutes to answer, followed by a one-minute rebuttal from his opponent. At the end of the debate, both candidates were allocated two minutes each for a closing statement.

Clinton, B.-Bush-Perot, 11th October 1992 – St. Louis, Missouri. The 1992 presidential debates distinguish themselves as the first, and only time three candidates participated in the debates. Independent candidate Ross Perot took the take together with Democratic nominee Bill Clinton and sitting President George Bush. The moderator, Jim Lehrer, was complemented

by a panel of three journalists who asked the questions. Each subject matter started with a question to one of the candidates, who were given two minutes to respond, and each of the two other candidates was given one minute for a rebuttal. Another question, or a follow-up within the same subject matter, was given to another candidate until all candidates had answered a question once and rebutted twice. There were no restrictions on the subject matter or content of the questions. Thus, the questions varied between character issues, the military, the economy, jobs programmes, foreign affairs divisiveness within the U.S. and health issues. Finally, the candidates were given two minutes each for a closing statement.

Clinton, B.-Bush-Perot, 15th October 1992 – Richmond, Virginia. The second debate between Perot, Bush and Clinton followed the more and more internalized townhall format. Two hundred nine participants in the audience were selected, which all had individual questions. Members of the audience were asked to come forward and ask the candidates a question. The moderator, Carole Simpson, asked follow-up questions, sought to balance speaking time between the three participants and moderated follow-up questions and responses from the presidential candidates. The questions ranged from job-creating policy and the looming shadow of federal deficit spending to consensus politics and the debaters' personalities. Other questions also touched on the rising cost of healthcare in the U.S. as well as issues related to pensions and Medicare. At the end of the session, all three candidates were given two minutes each for their closing statements.

Clinton, B.-Bush-Perot, 19th October 1992 – East Lansing, Michigan. The last debate of the 1992 presidential campaign was also the last time an independent candidate participated in the presidential debates. The moderator, Jim Lehrer, asked questions to the candidates for the first half of the debate; here, the candidates were given time to respond, while the other candidates got to follow up on the opponents' response. For the second half of the debate, a panel of three journalists asked the questions to candidates, and no responses were allowed. In the end, all three candidates were given two minutes each for a closing statement. The initial part of the debate was mostly concentrated on the candidates' personal ability, leadership capability, and credibility. The questions then moved on to economic matters such as taxation and whether an issue had to turn into a crisis before it got attention. As usual, military matters were also discussed, as were foreign policy issues military and women's representation in high-office roles.

Clinton, B.-Dole, 6ᵗʰ October 1996 – Hartford, Connecticut. The first presidential debate of the 1996 campaign was the last time only two debates were held between the Republican and Democratic nominees. The Democratic candidate, President Bill Clinton, participated against Republican candidate Bob Dole with the moderator, Jim Lehrer asking the questions to both candidates. The debate was started and ended with two-minute statements by both candidates. Between the statements, the moderator asked the candidates questions which were answered in 90-second responses, followed by a 60-second rebuttal, and ended with a 30-second response to the rebuttal. The debate was initiated with questions on how the candidates saw the federal government's role and economic issues such as taxation and where the government should spend money. A broad spectre of questions followed these initial themes, including, but not restricted to, education policy, the Middle East and Iraq, personal characteristics, and U.S. interventionism.

Clinton, B.-Dole, 16ᵗʰ October 1996 – San Diego, California. The second and last debate between Bill Clinton and Bob Dole was held at the University of San Diego and followed a town hall format. The audience was divided into five sections based roughly on the theme of their questions. The moderator, Jim Lehrer, moved from one section to another, asking questions from a person in the audience from each segment in turn. Like the first debate of 1996, the candidate in question got 90 seconds to answer, followed by a 60-second rebuttal and another 30 seconds to respond to the rebuttal. As was the case in the first showdown, the San Diego debate also opened and ended with two-minute statements from both candidates. As is often the case with townhall debates, this debate covered a broad spectre of foreign and domestic policy issues. Several questions were related to healthcare and entitlement programmes' prices and who should be paying for them. As usual, the federal deficit was discussed, as were taxation policies. The debaters were also asked to explain their Affirmative Action policies, manufacturing jobs in the U.S., and broadening the political discourse.

Bush Jr.-Gore, 3ʳᵈ October 2000 – Boston, Massachusetts. At the turn of the millennia, the presidential campaign stood between Republican candidate George W. Bush (the son of former president George Bush) and Democratic nominee Al Gore. Jim Lehrer moderated the debate, and he had picked the questions and themes of the debate. The candidates were asked questions and given two minutes to answer, followed by a one-minute rebuttal from the other candidate. In some instances, the moderator allowed for follow-ups and debate for a total of three minutes on each theme. The candidates were given two minutes each for a closing statement. The debate was initiated with questions related to the leadership qualities of both candidates as well as

policy and personal differences between them. The debate then moved on towards health-related issues and abortion rights both in and of itself and related to Supreme Court nominees. Both candidates were also questioned extensively in Foreign policy and the use of military intervention, as well as who is best suited for handling though decisions.

Bush Jr.-Gore, 11th October 2000 – Wake Forest, North Carolina. The second debate of the 2000 presidential campaign had a conversation format, where both candidates were urged to follow up on each other's answers. The moderator, Jim Lehrer, chose the questions and the themes for the debate, and the only rule was that no response could exceed two minutes. However, the candidates were given two minutes each for a closing statement at the end of the debate. This format's free-flow style allowed the moderator to delve into a myriad of different themes, either of his own choosing or to try to focus on a specific issue one or both of the presidential candidates mentioned during the conversation phase. The initial phase and the following questions were related to U.S. foreign policy and global projection of both military and economic might. Following an extended foreign policy and military-centred discussion, the candidates were asked about their policy related to several domestic issues. The issues brought up were racial issues such as racial discrimination and racial profiling, gay and lesbian rights, and health insurance and environmental issues. The final question of the evening focused on the degree to which the candidates adhered to facts or whether they were predisposed to exaggerations or even lies.

Bush Jr.-Gore, 17th October 2000 – St. Louis, Missouri. George W. Bush and Al Gore debated a third and final time on the 17th of October at Washington University in St. Louis. The debate was based on a town hall format but with questions from voters in the St. Louis area only. The moderator, Jim Lehrer, had been given the questions beforehand, and choosing among those, called out the questioners from the audience who laid forth their concerns. Both candidates were given two minutes to answer the same question or to rebut the answer of the other candidate to the question. The moderator had the ability to open up for further debate after both candidates had answered. The first questions to the candidates from the voters were based on healthcare issues, such as the dominant role of insurance companies in the sector, the price of pharmaceutical drugs and whether the candidates had a national healthcare plan. The debate then moved over to education policies and the middle east, gun control laws and how the candidates thought they could address the concerns of the young American voters. The debate was closed off with questions on Affirmative Action, tax proposals, capital punishment and a segment on scepticism towards politicians and whether the candidates could be trusted.

As was starting to become a norm at the time, both candidates were given two minutes each for their closing statements.

Bush Jr-Kerry, 30th September 2004 – Coral Gables, Florida. Sitting president and Republican candidate George W. Bush and his opponent Democratic candidate John Kerry took the stage for the first debate of the 2004 campaign at the University of Miami in Florida. The overarching themes of the debate were foreign policy and homeland security. The moderator, Jim Lehrer, composed and asked the questions to candidates. The Coral Gables debate format followed a question by the moderator and a two-minute response, a 90-second rebuttal, and an extension of one minute at the discretion of the moderator. As usual, both candidates were given two minutes for closing statements. As this debate was somewhat restricted thematically, both candidates were forced to delve into specific issues and sharpened questions on national security and foreign policy, which were a natural consequence of the 9/11 terrorist attacks against the Pentagon and World Trade Center. The debate itself was initiated on a sequence on whether or not a similar attack to 9/11 could be avoided and who is the better candidate to make sure that is the case. The candidates also discussed how and when to military intervene in the conduct of other nations, as well as an extensive line of questions on the war in Iraq. The candidates were also asked about their policy towards Russia, Iran, and North Korea, as well as what they perceived to be the most severe national security threat.

Bush Jr.-Kerry, 8th October 2004 – St. Louis, Missouri. Sitting President George W. Bush and Senator John Kerry stood opposite one another for the second time at Washington University in St. Louis. This second debate of the 2004 presidential runoff followed the town hall format, with Missouri residents asking the questions. Each member of the audience had, before the debate, written down one question for each candidate, and the moderator, Charles Gibson of ABC News, had picked out the questions he found to be the best. The audience members addressed their questions to a specific candidate, which were given two minutes to answer the question. The other candidate was then given one minute and a half for rebuttal. The moderator also had the option to extend the discussion by one additional minute if he found it fruitful for the discussion. The questions in this town hall debate started off with a question relating to the quality of the candidates before the debate moved on to several questions related to foreign policy issues and the middle east. The rest of the debate touched upon a myriad of themes mostly within the domestic policy sphere, such as taxation and the economy, abortion rights and supreme court nominees, environmental concerns, and homeland security, among

other issues. At the end of the questionnaire, both the candidates were given two minutes for closing statements.

Bush Jr.-Kerry, 13ᵗʰ October 2004 – Tempe, Arizona. Arizona State University hosted the last of the three presidential debates of the 2004 presidential runoff between George W. Bush and John Kerry. This final debate concentrated on domestic affairs and was moderated by Bob Schieffer. The moderator picked the topics and questions and asked the candidates the questions. The candidate then got two minutes to respond to the question and his opponent a minute and a half for a rebuttal. At the discretion of the moderator, each candidate could be given 30 seconds to extend the discussion if necessary. This final debate of the 2004 presidential campaign saw the moderator asking as much as 20 questions to the candidates with a broad spectre of themes and issues covered. These issues were, amongst others, related to homeland security, and economic security and losses of U.S. manufacturing jobs to foreign nations. The candidates were also questioned on such issues as LGBTQ rights, abortion rights, affirmative action, polarization, and gun control legislation. The last question of the evening was on what the candidates had learned from the women surrounding them in their close family. After this last question, both candidates were, as had become a trend, allocated two minutes each for closing statements.

Obama-McCain, 26ᵗʰ September 2008 – Oxford, Mississippi. At the University of Mississippi, moderator Jim Lehrer welcomed Democratic presidential candidate Barrack Obama and his opponent, Republican candidate John McCain for their first debate in the 2008 campaign. This first debate was restricted to foreign policy and national security, which also included the global financial crisis. The debate was divided into roughly nine, nine-minute segments and each segment started with a question to a candidate which was given two minutes to respond. Following the response, the other candidate was given two minutes to rebut the answer, followed by five minutes of open discussion. There were no closing or opening statements in this debate. The debaters were initialled questioned on their plans for leading the U.S. out of the 2008 financial crisis and the cost of a potential financial bailout, as well as its impact on the federal budget. The next segment moved the candidates to debate Iran and Russia as potential threats before closing off, with the debaters being asked whether they deem it likely that there will be a new terrorist attack on U.S. soil.

Obama-McCain, 7ᵗʰ October 2008 – Nashville, Tennessee. A common feature of the presidential debates has been the inclusion of the town hall format in one of the debates. This

debate followed said format, and it included both questions on foreign and domestic policy. The moderator, Tom Brokaw of NBC News, selected the questions provided by the audience and questions sent through the mail. Each candidate was given two minutes to respond to the same question and then one minute each as a follow-up. As with the first debate, the financial crisis of 2008 was the most pressing issue of the Nashville debate. Issues such as an economic bailout, and what sacrifices the voters should be willing to make and the growing federal deficit were all discussed. Following the initial skirmish on the candidate's stance on economic policy, the debate turned to include environmental concerns and alternate energy projects. The debate later turned towards healthcare, the role of the U.S. in the world, Russia, Afghanistan, and Pakistan as foreign adversaries before it was ended with a question on what the candidates did not know and how they will learn it. As there were no closing statements in this debate, that last question ended the debate.

Obama-McCain, 15th October 2008 – Hempstead, New York. Moderator Bob Schiefer welcomed Barack Obama and John McCain to their third and final debate at Hofstra University. This final debate was focused on domestic policy only. Both candidates were allocated two minutes to answer the same question, followed by an open discussion where the candidates were encouraged to ask follow-up questions to another. The discussion was divided roughly into nine-minute segments and was initially heavily skewed towards economic issues such as tax cuts and reducing the federal debt, and budget balancing. The candidates were then asked about the way the candidates had run their campaign and the way both candidates attacked each other in campaign ads. The debaters then were asked about their vice-president choice, energy and climate control, healthcare, and abortion rights before the last question of the evening were related to education policy. The debate was closed off with two-minute closing statements from each candidate.

Obama-Romney, 3rd October 2012 – Denver, Colorado. In the 2012 campaign for president, Democratic candidate president Barack Obama ran against Republican candidate Mitt Romney. The first debate was centred around domestic issues. The format of the debate is based on six roughly 15-minute segments where each candidate is given 2 minutes to respond to an opening question, followed by an open discussion for the remainder of the segment. This first debate of the 2012 presidential campaign focused mainly on healthcare and economic issues, except a single segment on partisanship in Washington. Both candidates were asked questions on federal deficit and programmes for job creation as well as to which degree they thought the federal government should intervene in the economy. Economic policy was also in

question, related to healthcare and entitlement programmes, where the candidate laid forth their policy stance on issues such as Obamacare and health care vouchers. Subsequently, the debate ended with both candidates giving closing statements.

Obama-Romney, 16th October 2012 – Hempstead, New York. The second debate in the 2012 campaign followed the town hall format, where questions from the public were given to the candidates. Only the moderator and his team had seen the questions beforehand. Each candidate was given two minutes to respond to the same question, followed by another two-minute rebuttal of the other candidate. As is common in townhall debates, the questions ranged between foreign and domestic policy issues. In the foreign policy sphere, the candidates were asked about their position on the attack on the U.S. embassy in Benghazi, as well as deteriorating international relations. Most of the questions, however, were related to the domestic policy sphere where the candidates were asked about their economic policy, energy policy and job creation, especially within manufacturing. The candidates were also asked to discuss their stance on such issues as gun control, immigration issues and the pay gap between men and women.

Obama-Romney, 22nd October 2012 – Boca Raton, Florida. The last debate between President Barack Obama and Mitt Romney followed a traditional debate format where a question was asked by the moderator, and each candidate was given two minutes to respond, followed by an open debate based on their answers. The Boca Raton debate was restricted to foreign policy issues only. The two first segments of the debate were focused on the Middle East and whether it is unravelling. The candidates were also asked whether they would intervene or act in some other way into the ongoing civil war in Syria. The debate then moved towards a general discussion on U.S. foreign policy and the candidates' stance on military expansion. The last segments of the debate touched upon Israel and Iran as well as Afghanistan before the candidates were asked whether they saw China as the biggest threat to national security. Both candidates were also given two minutes each for a closing statement.

Clinton, H.-Trump, 26th September 2016 – Hempstead, New York. The first debate between the candidates for the 2016 presidential runoff between Democratic candidate Hillary Clinton and Republican candidate Donald J. Trump was held at Hofstra University in Hempstead, New York. The format of the debate was a 90-minute debate divided into different segments, 15 minutes long. Each segment was started off with a lead-off question to both candidates, which were given 2 minutes to respond, followed by an open discussion. The

questions were not shared with the commissions or campaigns, and there were no closing statements from the candidates. The six segments covered three topic areas, namely, achieving prosperity, America's direction, and securing America. Within these segments, the candidates were initially asked about their job-creating policies and the impact of tax cuts, a question which turned into personal issues related to both candidates. Following this segment, the candidates were asked about racial issues and homeland security before the candidates again turned towards personal characterizations and quality.

Clinton, H.-Trump, 9th October 2016 – Washington University, St. Louis. The second debate between Hillary Clinton and Donald J. Trump in the 2016 runoff was a town hall debate where questions came in from all over the country and from questioners in the crowd. Each candidate was given two minutes to respond to the questions, and the moderators asked follow-up questions to the candidates based on their answers. The questions were reviewed before they were asked but not altered in any way. Initially, the questions were related to the personal characteristics of both candidates as well as their supposedly inappropriate behaviour in the first debate. The candidates were then asked about the rising costs of healthcare and islamophobia before the questions returned to the personal plane with a discussion on the two-facedness of U.S. politicians. The candidates were also asked about their stance on energy policy, foreign policy issues such as the war in Syria and Supreme Court appointments. There were no closing statements in this debate.

Clinton, H.-Trump, 19th October 2016 – Las Vegas, Nevada. The third and final debate of the 2016 campaign took place at the University of Nevada in Las Vegas and were based on six segments of 15 minutes each. The topics and the questions were selected by the moderator, Chris Wallace from Fox News. No topic was agreed upon beforehand, so the debate was unrestricted in terms of subjects. The questions were not given to the candidates or the commission beforehand. Starting off this final debate in Las Vegas, Chris Wallace asked the candidates on their stance on Supreme Court appointments, gun laws and abortion rights before the questions turned towards immigration issues. The candidates were also asked about their stance on energy policy as well as the national debt. In the foreign policy segment, the questions were focused on so-called foreign hot spots such as Syria, Iraq, and the role of Russia in the Middle East. Both candidates were also asked questions that sought to delve into whether either candidate was fit for office. The candidates did not agree to have a closing statement. Still, they were nevertheless asked to do so as the moderator challenged the candidates for closing statements in the debate's final question.

Trump-Biden, 29ᵗʰ September 2020 – Cleveland, Ohio. Three debates were scheduled for the 2020 presidential campaign, as has been the norm since 2000. As the second debate was cancelled, only two debates were held during the 2020 campaign. The first debate, however, went as planned, and the candidates, Republican nominee President Donald J. Trump, took the stage together with his opponents, Democratic nominee Joseph R. Biden (commonly known as Joe Biden). The moderator, Chris Wallace of Fox News, stood for the questions, and the debate had no thematic limitation. Each candidate was allocated two minutes to answer a question which opened a 15-minute segment. The remaining 11 minutes were allocated to an open discussion between the candidates before moving on to the next segment. The format allowed for several questions with follow-up questions from the moderator, but the debate was mainly kept within the domestic policy sphere. Starting off, the candidates were asked questions on the Supreme Court, Obamacare, ending the Filibuster and handling the ongoing Covid-19 pandemic. The debate then moved towards economic recovery, taxation, and racial issues such as unequal justice for African Americans. The later part of the debate touched upon crime rates and civil unrest, as well as climate change and election integrity, amongst other themes. No opening or closing statements were held.

Trump-Biden, 22ⁿᵈ October 2020 – Nashville, Tennessee. The final debate in question was the last of two debates between President Donald J. Trump and Joseph R. Biden. Kristen Welker of NBC News moderated the debate, which consisted of roughly six major topics. Initially, within each topic, the moderator asked an opening question, and both candidates were given two minutes to answer the question. The remaining time in each segment was allocated to follow-up questions from the moderator and discussion between the candidates. The Nashville debate focused mainly on domestic policy issues and only had one segment on foreign policy. The foreign policy segment touched upon national security and election interference by foreign countries as well as questions on US-China relations and North Korea. In the domestic policy sections, the candidates were asked to discuss their policy on environmental issues, healthcare and handling the Covid-19 pandemic. The other questions of the debate were related to race issues in the U.S. and the personal qualities and characteristics of the candidates. There were no closing remarks, but the last segment on leadership only allocated one minute each to both candidates before ending the debate and thus constituted some sort of statement on the candidate's leadership qualities.

Appendix B: Keywords Utilized in the Initial Frequency Search

Based on linguistic studies of similar character covering climate and the environment, the following keywords were chosen as items in the initial frequency search:

ENVIRONMENT	GAS	EMISSION	(GREEN)HOUSE	CARBON
CLIMATE	WARM(ING)	FOSSIL	FUEL	RENEWABLE
ALTERNATIVE	BURN(ING)	POLLUTION	DIRTY	ENERGY
DEVELOP	RESOURCE	TRANSITION	TRANSFORMATION	COAL
PLANET	CHALLENGE	FUTURE	CRISIS	OIL
SOLAR	NUCLEAR	WIND	ELECTRIC(ITY)	CLEAN

Note that every quote is marked with a number in the left margins. The number can be read as follows: D (Corresponds to the Candidate's party affiliation), 1976 corresponds to the year, while the number that follows the year lists the quotes for simple references to individual quotes. Thus D-1976-1) is to be read as the first quote from the Democratic candidate during the 1976 election. The quotes are sorted as follows: First, election year, then the Democratic candidate, then the Republican candidate (and independent in 1992), before moving on to the next election year. All the quotes are also marked at the end with a note on which of the debates they originated from.

NB. No references were made during the 1960 debates.

NB. Ross Perot's single reference in 1992 is included and is listed as I-1992-1).

NB. Bob Dole is not present in the Appendix as his appearance during the 1992 presidential campaigns did not include any references to the relevant theme.

NB. John Andersson, who participated in the first debate of the 1980 campaign, is not present in the Appendix for the same reasons as mentioned above; he did not concern himself with the issue.

1976 – Carter versus Ford

Jimmy Carter (Democratic Candidate)

D-1976-1)   *"We need to concentrate our research and development effort on coal-burning and extraction that's safe for miners, that also is clean burning."*
1st debate, 1976

D-1976-2)   *"[…] we ought to have a shift to the use of coal, particularly in the Appalachian regions where the coal is located-a lot of very high quality, low carbon coal-I mean low-sulfur coal is there"* 1st debate, 1976

D-1976-3)   *"Well, I might say I think the League of Conservation Voters is absolutely right. This administration's record of environment is very bad."*
3rd debate, 1976

D-1976-4)   *"I think it's accurate to say that the strip mining law, which was passed twice by the Congress and only lacked two votes, I believe, of being overridden, would have been good for the country. The claim that it would have put*

140,000 miners out of work is hard to believe when at the time Mr. Ford vetoed it, the United Mine Workers was supporting the bill. And I don't think they would have supported the bill had they known that they would lose 140,000 jobs. 3rd debate, 1976

D-1976-5)   *There has been a consistent policy on the part of this administration to lower or to delay enforcement of air pollution standards and water pollution standards. And under both Presidents Nixon and Ford, money have been impounded that would have gone to cities and others to control water pollution.* 3rd debate, 1976

D-1976-6)   *We have no energy policy. We, I think, are the only developed nation in the world that has no comprehensive energy policy to permit us to plan, in an orderly way, how to shift from increasing the scarce energy forms--oil--and have research and development concentrated on the increased use of coal, which I strongly favour--the research and development to be used primarily to make the coal burning be clean.* 3rd debate, 1976

D-1976-7)   *We need a heritage trust program, similar to the one we had in Georgia, to set aside additional lands that have geological and archaeological importance, natural areas for enjoyment. The lands that Mr. Ford brags about having approved are in Alaska, and they are enormous in size, but as far as the accessibility of them by the American people, is very far in the future.* 3rd debate, 1976

D-1976-8)   *We have taken no strong position in the control of pollution of our oceans. And I would say the worst threat to the environment of all is nuclear proliferation. And this administration, having been in office now for 2 years or more, has still not taken a strong and bold action to stop the proliferation of nuclear waste around the world, particularly plutonium."* 3rd debate, 1976

Gerald Ford (Republican Candidate)

R-1976-1)   *"I recommended to the Congress that we should increase coal production in this country from 600 million tons a year to 1,200 million tons by 1985. In order to do that, we have to improve our extraction of coal from the ground; we have to improve our utilization of coal, make it more efficient and make it cleaner."* 1st debate, 1976

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R-1976-2)   *"But let's talk about what the Ford administration has done in the field of environment. I have increased, as President, by over 60 percent, the funding for water treatment plants in the United States, the Federal contribution. I have fully funded the land and water conservation program; in fact, have recommended, and the Congress approved, a substantially increased land and water conservation program. I have added in the current year budget, the funds for the National Park Service. For example, we proposed about $12 million to add between 400 and 500 more employees for the National Park Service. And a month or so ago, I did likewise say over the next 10 years we should expand--double--the national parks, the wilderness areas, the scenic river areas. And then, of course, the final thing is that I have signed and approved of more scenic rivers, more wilderness areas since I've been President than any other President in the history of the United States."*
3rd debate, 1976

1980 – Carter versus Reagan

Jimmy Carter (Democratic Candidate)

D-1980-1)   *"To repeat myself, we have this year the opportunity, which we'll realize, to produce 800 million tons of coal — an unequalled record in the history of our country. Governor Reagan says that this is not a good achievement, and he blames restraints on coal production on regulations — regulations that affect the life and the health and safety of miners and also regulations that protect the purity of our air and the quality of our water and our land. We cannot cast aside those regulations. We have a chance in the next 15 years, insisting upon the health and safety of workers in the mines, and also preserving the same high air and water pollution standards, to triple the amount of coal we produce."* 2nd debate, 1980

D-1980-2)   *"As a matter of fact, the air pollution standard laws that were passed in California were passed over the objections of Governor Reagan, and this is a very well known fact."* 2nd debate, 1980

Ronald Reagan (Republican Candidate)

R-1980-1)   *"The coal that the President mentioned: Yes, we have it, and yet one-eighth of our total coal resources is not being utilized at all right now. The mines are closed down; there are 22,000 miners out of work. Most of this is due to regulations which either interfere with the mining of it or prevent the burning of it. With our modern technology, yes, we can burn our coal within the limits of the Clean Air Act. I think, as technology improves, we'll be able to do even better with that."* 2nd debate, 1980

R-1980-2)   *"And for Mr. Carter to suggest that I want to do away with the safety laws and with the laws that pertain to clean water and clean air, and so forth as Governor of California, I took charge of passing the strictest air pollution laws in the United States — the strictest air quality law that has ever been adopted in the United States. And we created an OSHA, an occupational safety and health agency, for the protection of employees before the Federal Government had one in place. And to this day, not one of its decisions or rulings has ever been challenged."* 2nd debate, 1980.

R-1980-3)   *"Yes. If it is a well-known fact that I opposed air pollution laws in California, the only thing I can possibly think of is that the President must be suggesting the law that the Federal Government tried to impose on the State of California — not a law, regulations that would have made it impossible to drive an automobile within the city limits of any California city, or have a place to put it if you did drive it against their regulations. It would have destroyed the economy of California, and, I must say, we had the support of Congress when pointed out how ridiculous this attempt was by the Environmental Protection Agency. We still have the strictest air control or air pollution laws in the country."* 2nd debate, 1980

1984 – Mondale versus Reagan

Walter Mondale (Democratic Candidate)

D-1984-1)   *"The American people want this environment protected. They know that these toxic waste dumps should have been cleaned up a long time ago, and they know that people's lives and health are being risked, because we've had an administration that has been totally insensitive to the law and the demand for the protection of the environment."* 1st debate, 1984

D-1984-2)   *"I believe that we will be better off if we protect this environment. And contrary to what the President says, I think their record on the environment is inexcusable and often shameful. These laws are not being enforced, have not been enforced, and the public health and the air and the water are paying the price. That's not fair for our future."* 1st debate, 1984

D-1984-3)   *"I want this nation to protect its air, its water, its land, and its public health. America is not temporary; we're forever. And as Americans, our generation should protect this wonderful land for our children."* 2nd debate, 1984

Ronald Reagan (Republican Candidate)

R-1984-1)   *"The environment? Yes, I feel as strongly as anyone about the preservation of the environment. When we took office, we found that the national parks were so dirty and contained so many hazards, lack of safety features, that we stopped buying additional parkland until we had rectified this with what was to be a 5-year program--but it's just about finished already--a billion dollars. And now we're going back to budgeting for additional lands for our parks. We have added millions of acres to the wilderness lands, to the game refuges. I think that we're out in front of most […]* 1st debate, 1984

1988 – Dukakis versus Bush Sr.

Michael Dukakis (Democratic Candidate)

D-1988-1)   *"I would hope that from this point on, we get to the issues that affect the vast majority of Americans, jobs, schools, health care, housing, the environment. Those are the concerns of the people that are watching us tonight."*
1st debate, 1988

D-1988-2)   *"I think it's going to require a combination of supply management and reasonable price supports to make sure that our farmers get a decent price and I think it also is going to require an administration that understand that there are tremendous opportunities out there for the development of new uses for agricultural products, new uses which can help us to clean up our environment at the same time. Bio-degradable plastics—plastic—gasohol, which the Vice President has been involved in, road de-icers made from corn*

products. I mean, there are enormous opportunities out there to expand markets and to build a strong future for our farmers." 1st debate, 1988

D-1988-3)   *"Yes, it's a tough problem as Mr. Bush says, but it's not an insolvable problem. It's one that we will solve and must solve, with a clean and wholesome environment and with a strong America that's strong militarily and economically as we must be, an America that provides strong international leadership because we're true to our values."* 1st debate, 1988

D-1988-4)   *[…] build economic growth, build a good strong future for America, invest in those things which we must invest in economic development, good jobs, good schools for our kids, college opportunity for young people, decent health care and affordable housing, and a clean and safe environment. We can do all of those things, and at the same time build a future in which we are standing on a good strong fiscal foundation."* 2nd debate, 1988

D-1988-5)   *"And we also have important domestic priorities, in education and housing and health care, in economic development, in job training, in the environment. And all of these things are going to have to be addressed."* 2nd debate, 1988

D-1988-6)   *"[…] yes, at some point it may be possible to reduce defence outlays and use those for important things here at home, like jobs and job training and college opportunity and health and housing and the environment and the things that all of us care about."* 2nd debate, 1988

D-1988-7)   *"I don't know which George Bush I'm talking about here or looking at. The George Bush who was the charter member of the environmental wrecking crew that went to Washington in the early '80s and did a job on the EPA, or the one we've been seeing and listening to the past two or three months. But let me say this, because he spent millions and millions of dollars of advertising on the subject of Boston Harbour. George, Boston Harbour was polluted for 100 years. I'm the first governor to clean it up. No thanks to you. No thanks to you. We've been cleaning it up for four years. We passed landmark legislation in '84. No thanks to you. You did everything you could to kill the Clean Water Act. […] And those grants which make it possible for states and local communities to clean up rivers and harbours and streams."* 2nd debate, 1988

George Bush. (Republican Candidate)

R-1988-1)   *"I talked in New Orleans about a gentler and kinder nation and I have made specific proposals on education and the environment and on ethics and energy and how we do better in battling crime in our country."* 1st debate, 1988

R-1988-2)   *"90 percent reductions in lead since I chaired that regulatory task force; 90 percent. It's almost you remember that expression, get the lead out? It's almost out. Almost gone. Clean water? I'm for clean water. But what I'm not for what I'm not for is measuring it the way that the Democratic Congress does. We sent up a good bill on clean water, a sound bill on clean water. But the only way you can express your love for clean water is to double the appropriations for clean water, and then rant against the deficit. I am for clean water. I've been an outdoorsman and a sportsman all my life. I've been to these national parks. I led for the Earl Wallop bill or formerly Dingell-Johnson. I headed the task force when I was a member of the Congress way back in the late '60s on these kinds of things, on the Republican side. I led for that. And so I refuse to measure one's commitment as to whether you're going to double the spending. That is the same old argument that's gotten us into trouble on the deficit side. So I'll just keep saying, I am one. I'm not going to go down there and try to dump the sludge from Massachusetts off the beaches off of New Jersey. I'm not going to do that.. I mean, this guy, this is too much. But I'm not going to do that. I'm an environmentalist. I believe in our parks. I believe in the President's commission on outdoors. And I'll do a good job, because I am committed."* 2nd debate, 1988

1992 – Clinton, B versus Bush & Perot

Bill Clinton (Democratic Candidate)

D-1992-1)   *"I want to take every dollar by which we reduced defence and reinvest it in technologies for the 21st century: in new transportation, in communication, and environmental clean-up technologies."* 1st debate, 1992

D-1992-2)   *"My plan would dedicate $20 billion a year in each of the next 4 years for investments in new transportation, communications, environmental cleanup, and new technologies for the 21st century."* 2nd debate, 1992

D-1992-3)   *"There are 200,000 people in California, for example, who have lost their defence-related jobs. They ought to be engaged in making high-speed rail.*

They ought to be engaged in breaking ground in other technologies, doing waste recycling, clean water technology, and things of that kind. We can create millions of jobs in these new technologies, more than we're going to lose in defence if we target it." 2nd debate, 1992

D-1992-4) *"Invest and grow: raise some more money; spend the money on tax incentives to have growth in the private sector; take the money from the defence cuts and reinvest it in new transportation and communications and environmental cleanup systems. This will work."* 3rd debate, 1992

D-1992-5) *"I never said, and I defy you to find where I said -- I gave an extensive environment speech in April. I said that we ought to have a goal of raising the fuel efficiency standards to 40 miles a gallon. I think that should be a goal. I never said we should write it into law if there is evidence that that goal cannot be achieved. [...] We also ought to convert more vehicles to compressed natural gas. That's another way to improve the environment."* 3rd debate, 1992

D-1992-6) *"I say, on balance, it does more good than harm if we could get some protection for the environment so that the Mexicans have to follow their own environmental standards, their own labour law standards, and if we have a genuine commitment to re-educate and retrain the American workers who lose their jobs and reinvest in this economy."* 3rd debate, 1992

President George Bush (Republican Candidate)

R-1992-1) *"What's his mistake? Admit it, that Arkansas is doing very, very badly against any standard: environment, support for police officers, whatever it is."* 3rd debate, 1992

R-1992-2) *"But one mistake he's made is fuel efficiency standards at 40 to 45 miles per gallon will throw many autoworkers out of work, and you can't have it both ways. There's a pattern here of appealing to the autoworkers and then trying to appeal to the spotted owl crowd or the extremes in the environmental movement. You can't do it as President. You can't have a pattern of one side of the issue one day and another the next."* 3rd debate, 1992

Ross Perot (Independent Candidate)

I-1992-1) *"To those of you in the audience who are business people, pretty simple: If you're paying $12, $13, $14 an hour for factory workers, and you can move your factory south of the border, pay $1 an hour for labour, hire young -- let's*

assume you've been in business for a long time; you've got a mature work force -- pay $1 an hour for your labour, have no health care -- that's the most expensive single element in making a car -- have no environmental controls, no pollution controls, and no retirement, and you don't care about anything but making money, there will be a giant sucking sound going south."
2nd debate, 1992

1996 – Clinton, B. versus Dole

Bill Clinton (Democratic Candidate)

D-1996-1)   *"Now let's balance the budget and protect Medicare, Medicaid, education and the environment"* 1st debate, 1996

D-1996-2)   *"And in addition to that, it will force bigger cuts in Medicare, Medicaid, education, and the environment than the ones that he and Mr. Gingrich passed that I vetoed last year."* 1st debate, 1996

D-1996-3)   *"And it wasn't me that let the polluters actually come into the Halls of Congress, into the rooms, and rewrite the environmental laws. That's what Speaker Gingrich and Senator Dole did, not me."* 1st debate, 1996

D-1996-4)   *"I believe you can protect the environment and grow the economy."* 1st debate, 1996

D-1996-5)   *"Their budget cut enforcement for the Environmental Protection Agency by a third. It cut funds to clean up toxic waste dumps— with 10 million of our kids still living within 4 miles of a toxic waste dump—by a third. It ended the principle of the polluters should pay for those toxic waste dumps unless it was very recent."* 1st debate, 1996

D-1996-6)   *"The way to get a better America is to balance the budget and protect Medicare, Medicaid, education, and the environment; to give a targeted tax cut"* 1st debate, 1996

D-1996-7)   *"But the important thing is, what are we going to do now? […] investing in our environment, cleaning up two-thirds of the worst toxic waste dumps."* 1st debate, 1996

D-1996-8)   *"I'd like the American people to know that I have […] a commitment to grow the economy while protecting the environment."* 1st debate 1996

D-1996-9) *"Our plan will balance the budget and grow the economy, preserve the environment, and invest in education. We have the right approach for the future."* 1st debate, 1996

D-1996-10) *"Strong families need a strong economy. To me, that means we have to go on and balance this budget while we protect Medicare and Medicaid and education and the environment."* 2nd debate, 1996

D-1996-11) *"[…] they passed a budget that had $270 billion in Medicare cuts, the first education cuts in history, cut environmental enforcement by 25 percent"* 2nd debate, 1996

D-1996-12) *"The Economist magazine polled lots of economists. Seven Nobel Prize winners have said, if this tax scheme passes, it will require huge cuts—40 percent— in the environment, in law enforcement, in education."* 2nd debate, 1996

D-1996-13) *"Your responsibility is to show up on November 5th, because you're going to decide whether we're going to balance the budget now but protect Medicare, Medicaid, education, and the environment."* 2nd debate, 1996

2000 – Gore versus Bush Jr.

Al Gore (Democratic Candidate)

D-2000-1) *"I will make sure that we invest in our country and our families. And I mean investing in education, health care, the environment, and middle-class tax cuts and retirement security."* 1st debate, 2000

D-2000-2) *"And in the long-term we have to give new incentives for the development of domestic resources like deep gas in the western Gulf, like stripper wells for oil, but also renewable sources of energy. And domestic sources that are cleaner and better. And I'm proposing a plan that will give tax credits and tax incentives for the rapid development of new kinds of cars and trucks and buses and factories and boilers and furnaces that don't have as much pollution, that don't burn as much energy, and that help us get out on the cutting edge of the new technologies that will create millions of new jobs. Because, when we sell these new products here, we'll then be able to sell them overseas."* 1st debate, 2000

D-2000-3) *"Now, another big difference is Governor Bush is proposing to open up some of our most precious environmental treasures, like the Arctic National Wildlife Refuge for the big oil companies to go in and start producing oil there. I think that is the wrong choice. It would only give us a few months' worth of oil and the oil wouldn't start flowing for many years into the future. I don't think it's a fair price to pay to destroy precious parts of America's environment. We have to bet on the future and move beyond the current technologies to have a whole new generation of more efficient, cleaner, energy technology."*
1st debate, 2000

D-2000-4) *"I strongly support new investments in clean coal technology. I made a proposal three months ago on this. And also domestic exploration yes, but not in the environmental treasures of our country. We don't have to do that. That's the wrong choice. I know the oil companies have been itching to do that, but it is not the right thing to do."* 1st debate, 2000

D-2000-5) *"I think we have to make the right and responsible choices. I think we have to invest in education, protecting the environment, health care, a prescription drug benefit that goes to all seniors,"* 1st debate, 2000

D-2000-6) *"Too many people have been left behind. We have got to do much more. The key is job training, education, investments in health care and education, environment, retirement security."* 1st debate 2000

D-2000-7) *"I think that in the aftermath of the Cold War, it's time for us to do something very similar, to step up to the plate, to provide the leadership on the environment, leadership to make sure the world economy keeps moving in the right direction."* 2nd debate, 2000

D-2000-8) *"I think that in this 21st century we will soon see the consequences of what's called global warming. There was a study just a few weeks ago suggesting that in summertime the north polar ice cap will be completely gone in 50 years. Already people see the strange weather conditions that the old timers say they've never seen before in their lifetimes. And what's happening is the level of pollution is increasing significantly. Now, here is the good news, Jim. If we take the leadership role and build the new technologies, like the new kinds of cars and trucks that Detroit is itching to build, then we can create millions of good new jobs by being first into the market with these new kinds of cars and trucks and other kinds of technologies. You know the Japanese are*

breathing down our necks on this. They're moving very rapidly because they know that it is a fast-growing world market. Some of these other countries, particularly in the developing world, their pollution is much worse than anywhere else and their people want higher standards of living. And so they're looking for ways to satisfy their desire for a better life and still reduce pollution at the same time. I think that holding onto the old ways and the old argument that the environment and the economy are in conflict is really outdated. We have to be bold. We have to provide leadership. Now it's true that we disagree on this. The governor said that he doesn't think this problem is necessarily caused by people. He's for letting the oil companies into the Arctic National Wildlife Refuge. Houston has just become the smoggiest city in the country. And Texas is number one in industrial pollution. We have a very different outlook. And I'll tell you this, I will fight for a clean environment in ways that strengthen our economy." 2nd debate, 2000

D-2000-9)   *"I'm really strongly committed to clean water and clean air, and cleaning up the new kinds of challenges like global warming. He is right that I'm not in favour of energy taxes. I am in favour of tax cuts to encourage and give incentives for the quicker development of these new kinds of technologies. And let me say again, Detroit is rearing to go on that. We differ on the Arctic National Wildlife Refuge, as I have said. We differ on whether or not pollution controls ought to be voluntary. I don't think you can -- I don't think you can get results that way. We differ on the kinds of appointments that we would make."* 2nd debate, 2000

D-2000-10)   *"[…] a lot of the supporters of the Kyoto Treaty actually ended up voting for that because the way it was worded. But there's no doubt there's a lot of opposition to it in the Senate. I'm not for command and control techniques either. I'm for working with the groups, not just with industry but also with the citizen groups and local communities to control sprawl in ways that the local communities themselves come up with. But I disagree that we don't know the cause of global warming. I think that we do. It's pollution, carbon dioxide, and other chemicals that are even more potent, but in smaller quantities, that cause this. Look, the world's temperature is going up, weather patterns are changing, storms are getting more violent and unpredictable. What are we going to tell our children? I'm a grandfather now. I want to be able to tell my*

grandson when I'm in my later years that I didn't turn away from the evidence that showed that we were doing some serious harm. In my faith tradition, it is -- it's written in the book of Matthew, "Where your heart is, there is your treasure also." And I believe that -- that we ought to recognize the value to our children and grandchildren of taking steps that preserve the environment in a way that's good for them." 2nd debate, 2000

D-2000-11)   *"I choose education and health care, the environment and retirement security, and I ask for your support."* 2nd debate, 2000

D-2000-12)   *"And I think that you pointed the way in your comments, because when you say there are multiple things accomplished by farmers, you're specifically including conservation and protection of the environment. And yes, farmers are the first environmentalists. And when they decide not to plow a field that is vulnerable to soil erosion, that may cost them a little money, but it helps the environment. I think that we ought to have an expanded conservation reserve program. And I think that the environmental benefits that come from sound management of the land ought to represent a new way for farmers to get some income that will enable them -- enable you to make sensible choices in crop rotation, and when you leave the land fallow and the rest."* 3rd debate, 2000

D-2000-13)   *"And I will invest in education, health care, protecting the environment and retirement security. We both made promises in this campaign. I promise you I will keep mine."* 3rd debate, 2000

George W. Bush Jr. (Republican Candidate)

R-2000-1)   *"I want to develop the coal resources in America. Have clean coal technologies."* 1st debate, 2000

R-2000-2)   *"There's an interesting issue up in the northwest as well. Do we remove dams that produce hydroelectric energy? I'm against removing dams in the northwest. We need to keep that in line. I was in coal country in West Virginia. There is an abundant supply of coal in this country. I know we can do a better job of clean coal technologies. I'm going to ask the Congress for $2 billion to make sure we have the cleanest coal technologies in the world."*
1st debate, 2000

R-2000-3)   *"It's the right thing for the consumers. Less dependency upon foreign sources of crude is good for consumers. And we can do so in an environmentally friendly way."* 1ˢᵗ debate, 2000

R-2000-4)   *"Well, let me start with Texas. We are a big industrial state. We reduced our industrial waste by 11%. We cleaned up more brown fields than any other administration in my state's history, 450 of them. Our water is cleaner now."* 2ⁿᵈ debate, 2000

R-2000-5)   *"I think we ought to have federal liability protection, depending upon whether or not standards have been met. The book you mentioned that Vice President Gore wrote, he also called for taxing -- big energy taxes in order to clean up the environment. And now that the energy prices are high, I guess he's not advocating those big energy taxes right now. I believe we ought to fully fund the Land and Water Conservation Fund to -- with half the money going to states so states can make the right decisions for environmental quality. I think we need to have clean coal technologies. I propose $2 billion worth. By the way, I just found out the other day an interesting fact, that there is a national petroleum reserve right next to -- in Prudhoe Bay that your administration opened up for exploration in that pristine area. And it was a smart move because there's gas reserves up there. We need gas pipelines to bring the gas down. Gas is a clean fuel that we can burn to -- we need to make sure that if we decontrol our plants that there's mandatory -- that the plants must conform to clean air standards, the grandfathered plants, that's what we did in Texas. No excuses. You must conform. In other words, there are practical things we can do. But it starts with working in a collaborative effort with states and local folks. If you own the land, every day is Earth Day. People care a lot about their land and care about their environment. Not all wisdom is in Washington, D.C. on this issue."* 2ⁿᵈ debate, 2000

R-2000-6)   *"I think it's an issue that we need to take very seriously. But I don't think we know the solution to global warming yet. And I don't think we've got all the facts before we make decisions. I tell you one thing I'm not going to do is I'm not going to let the United States carry the burden for cleaning up the world's air. Like Kyoto Treaty would have done. China and India were exempted from that treaty. I think we need to be more even-handed, as evidently 99 senators -- I think it was 99 senators supported that position."* 2ⁿᵈ debate, 2000

R-2000-7) *"Yeah, I agree. I just -- I think there has been -- some of the scientists, I believe, Mr. Vice President, haven't they been changing their opinion a little bit on global warming? A profound scientist recently made a different [...] What the heck. I -- of course there's a lot -- look, global warming needs to be taken very seriously, and I take it seriously. But science, there's a lot -- there's differing opinions. And before we react, I think it's best to have the full accounting, full understanding of what's taking place. And I think to answer your question, I think both of us care a lot about the environment. We may have different approaches."* 2nd debate, 2000

R-2000-8) *"The Vice President is right, by the way. Every day is earth day if you own the land. I like the policies that will encourage farmers to put -- set aside land as well for conservation purposes. Thank you."* 3rd debate, 2000

2004 – Kerry versus Bush Jr.

John Kerry (Democratic Candidate)

D-2004-1) *"Boy, to listen to that, the President I don't think is living in a world of reality with respect to the environment."* 2nd debate, 2004

D-2004-2) *"Now, when it comes to the issue of the environment, this is one of the worst administrations in modern history. The Clear Skies bill that he just talked about—it's one of those Orwellian names you pull out of the sky, slap it onto something—like No Child Left Behind, but you leave millions of children behind. Here they're leaving the skies and the environment behind. If they just left the Clean Air Act all alone the way it is today, no change, the air would be cleaner than it is if you pass the cleaner skies act. We're going backwards. In fact, his environmental enforcement chief air quality person at the EPA resigned in protest over what they're doing to what are called the New Source Performance Standards for air quality. They're going backwards on the definition for wetlands. They're going backwards on the water quality. They pulled out of the global warming, declared it dead; didn't even accept the science. I'm going to be a President who believes in science."* 2nd debate, 2004

D-2004-3) *"The fact is that the Kyoto treaty was flawed. I was in Kyoto, and I was part of that. I know what happened. But this President didn't try to fix it. He just*

declared it dead, ladies and gentlemen, and we walked away from the work of 160 nations over 10 years. You wonder, Nikki, why it is that people don't like us in some parts of the world. You just say, "Hey, we don't agree with you. Goodbye." The President has done nothing to try to fix it. I will."
 2nd debate, 2004

D-2004-4)　　*"I have a plan to protect the environment so that we leave this place in better shape to our children than we were handed it by our parents. That's the test."* 2nd debate, 2004

D-2004-5)　　*"And I think that everything you do in public life has to be guided by your faith, affected by your faith, but without transferring it in any official way to other people. That's why I fight against poverty. That's why I fight to clean up the environment and protect this Earth."* 3rd debate, 2004

George W. Bush Jr. (Republican Candidate)

R-2004-1)　　*"Off-road diesel engines—we have reached an agreement to reduce pollution from off-road diesel engines by 90 percent. I've got a plan to increase the wetlands by 3 million. We've got an aggressive brownfield program to refurbish inner-city sore spots to useful pieces of property. I proposed to the United States Congress a Clear Skies Initiative to reduce sulphur dioxide, nitrogen oxide, and mercury by 70 percent. I was—fought for a very strong title in the farm bill for the Conservation Reserve Program to set aside millions of acres of land for—to help improve wildlife in the habitat. We proposed and passed a Healthy Forests bill, which was essential to working with—particularly in western States, to make sure that our forests were protected. What happens in those forests, because of lousy Federal policy, is they grow to be— they are not—they're not harvested. They're not taken care of, and as a result, they're like tinder boxes. And over the last summers I've flown over there. And so this is a reasonable policy to protect old stands of trees and, at the same time, make sure our forests aren't vulnerable to the forest fires that have destroyed acres after acres in the West. We've got a good, commonsense policy. Now, I'm going to tell you what I really think is going to happen over time, is technology is going to change the way we live, for the good, for the environment. So I proposed a hydrogen automobile, a hydrogen-generated automobile. We're spending a billion*

dollars to come up with the technologies to do that. That's why I'm a big proponent of clean coal technology, to make sure we can use coal but in a clean way. I guess you'd say I'm a good steward of the land. The quality of the air is cleaner since I've been the President; fewer water complaints since I've been the President; more land being restored since I've been the President.'' 2nd debate, 2004

R-2004-2) *"Well, had we joined the Kyoto treaty, which I guess he's referring to, it would have cost America a lot of jobs. It's one of these deals where in order to be popular in the halls of Europe, you sign a treaty. But I thought it would cost a lot of—I think there's a better way to do it. And I just told you the facts, sir. The quality of the air is cleaner since I've been the President of the United States. And we'll continue to spend money on research and development because I truly believe that's the way to get from how we live today to being able to live a standard of living that we're accustomed to and being able to protect our environment better—the use of technologies."* 2nd debate, 2004

R-2004-3) *"The best way to keep jobs here in America is, one, have an energy plan. I proposed one to the Congress 2 years ago. It encourages conservation, encourages technology to explore for environmentally friendly ways for coal and use coal and gas. It encourages the use of renewables like ethanol and biodiesel. It's stuck in the Senate. He and his runningmate didn't show up to vote when they could have got it going in the Senate."* 2nd debate, 2004

2008 – Obama versus McCain

Barack Obama (Democratic Candidate)

D-2008-1) *"Over 26 years, Senator McCain voted 23 times against alternative energy, like solar, and wind, and biodiesel. And so we -- we -- we've got to walk the walk and not just talk the talk when it comes to energy independence, because this is probably going to be just as vital for our economy and the pain that people are feeling at the pump -- and, you know, winter's coming and home heating oil -- as it is our national security and the issue of climate change that's so important."* 1st debate, 2008

D-2008-2) *"What we're going to have to do is to approach it through alternative energy, like solar, and wind, and biodiesel, and, yes, nuclear energy, clean coal technology. And, you know, I've got a plan for us to make a significant investment over the next 10 years to do that."* 1st debate, 2008

D-2008-3) *"We're going to have to develop clean coal technology and safe ways to store nuclear energy."* 2nd debate, 2008

D-2008-4) *"So what that means is that we can't simply drill our way out of the problem. And we're not going to be able to deal with the climate crisis if our only solution is to use more fossil fuels that create global warming. We're going to have to come up with alternatives, and that means that the United States government is working with the private sector to fund the kind of innovation that we can then export to countries like China that also need energy and are setting up one coal power plant a week."* 2nd debate, 2008

D-2008-5) *"This is one of the biggest challenges of our times. And it is absolutely critical that we understand this is not just a challenge, it's an opportunity, because if we create a new energy economy, we can create five million new jobs, easily, here in the United States. It can be an engine that drives us into the future the same way the computer was the engine for economic growth over the last couple of decades. And that's why we've got to make some investments and I've called for investments in solar, wind, geothermal. Contrary to what Senator McCain keeps on saying, I favour nuclear power as one component of our overall energy mix."* 2nd debate, 2008

D-2008-6) *"If we can get that right, then we can move in a direction not only of energy independence, but we can create 5 million new jobs all across America, including in the heartland where we can retool some of these plants to make these highly fuel-efficient cars and also to make wind turbines and solar panels, the kinds of clean energy approaches that should be the driver of our economy for the next century."* 3rd debate, 2008

John McCain (Republican Candidate)

R-2008-1) *"We have to have wind, tide, solar, natural gas, flex fuel cars and all that but we also have to have offshore drilling and we also have to have nuclear power. [...] Nuclear power is not only important as far as eliminating our dependence on foreign oil but it's also responsibility as far as climate change*

is concerned and an issue I have been involved in for many, many years and I'm proud of the work, of the work, that I've done there along with President Clinton." 1st debate, 2008

R-2008-2) *"I have opposed the president on spending, on climate change,"*
1st debate, 2008

R-2008-3) *"We can work on nuclear power plants. Build a whole bunch of them, create millions of new jobs. We have to have all of the above, alternative fuels, wind, tide, solar, natural gas, clean coal technology."* 2nd debate, 2008

R-2008-4) *"I have advocated and taken on the special interests, whether they be the big money people by reaching across the aisle and working with Senator Feingold on campaign finance reform, whether it being a variety of other issues, working with Senator Lieberman on trying to address climate change."*
2nd debate, 2008

R-2008-5) *"But when we can -- when we have an issue that we may hand our children and our grandchildren a damaged planet, I have disagreed strongly with the Bush administration on this issue. I travelled all over the world looking at the effects of greenhouse gas emissions, Joe Lieberman and I. And I introduced the first legislation, and we forced votes on it. That's the good news, my friends. The bad news is we lost. But we kept the debate going, and we kept this issue to -- to posing to Americans the danger that climate change opposes. Now, how -- what's -- what's the best way of fixing it? Nuclear power. Senator Obama says that it has to be safe or disposable or something like that. Look, I -- I was on Navy ships that had nuclear power plants. Nuclear power is safe, and it's clean, and it creates hundreds of thousands of jobs. And -- and I know that we can reprocess the spent nuclear fuel. The Japanese, the British, the French do it. And we can do it, too. Senator Obama has opposed that. We can move forward, and clean up our climate, and develop green technologies, and alternate -- alternative energies for -- for hybrid, for hydrogen, for battery-powered cars, so that we can clean up our environment and at the same time get our economy going by creating millions of jobs."* 2nd debate, 2008

R-2008-6) *"OK. But it's very clear that I have disagreed with the Bush administration. I have disagreed with leaders of my own party. I've got the scars to prove it. Whether it be bringing climate change to the floor of the Senate for the first time."* 3rd debate 2008

R-2008-7)   *"Sen. Obama will tell you, in the -- as the extreme environmentalists do, it has to be safe. Look, we've sailed Navy ships around the world for 60 years with nuclear power plants on them. We can store and reprocess spent nuclear fuel, Sen. Obama, no problem. So the point is with nuclear power, with wind, tide , solar, natural gas, with development of flex fuel, hybrid, clean coal technology, clean coal technology is key in the heartland of America that's hurting rather badly."* 3rd debate, 2008

2012 – Obama versus Romney

Barack Obama (Democratic Candidate)

D-2012-1)   *"But what I've also said is, we can't just produce traditional sources of energy. We've also got to look to the future. That's why we doubled fuel efficiency standards on cars. That means that in the middle of the next decade, any car you buy, you're going to end up going twice as far on a gallon of gas. That's why we've doubled clean energy production like wind and solar and biofuels."* 2nd debate, 2012

D-2012-2)   *"Now, Governor Romney will say he's got an all-of-the-above plan. But basically, his plan is to let the oil companies write the energy policies. So he's got the oil and gas part, but he doesn't have the clean energy part."*
2nd debate, 2012

D-2012-3)   *"[…] we still continue to open up new areas for drilling. We continue to make it a priority for us to go after natural gas. We've got potentially 600,000 jobs and a hundred years' worth of energy right beneath our feet with natural gas. And we can do it in an environmentally sound way."* 2nd debate, 2012

D-2012-4)   *"And when I hear Governor Romney say he's a big coal guy, I mean, keep in mind, when—Governor, when you were Governor of Massachusetts, you stood in front of a coal plant and pointed at it and said, "This plant kills," and took great pride in shutting it down. And now suddenly, you're a big champion of coal. So what I've tried to do is be consistent. With respect to something like coal, we made the largest investment in clean coal technology to make sure that even as we're producing more coal, we're producing it cleaner and smarter. Same thing with oil. Same thing with natural gas."* 2nd debate, 2012

Mitt Romney (Republican Candidate)

R-2012-1)   *"And in 1 year, you provided $90 billion in breaks to the green energy world. Now, I like green energy as well, but that's about 50 years' worth of what oil and gas receives."* 1ˢᵗ debate, 2012

R-2012-2)   *"But you make a very good point, which is that the place you put your money makes a pretty clear indication of where your heart is. You put $90 billion into green jobs. And I—look, I'm all in favour of green energy. Ninety billion—that would have hired 2 million teachers."* 1ˢᵗ debate, 2012

R-2012-3)   *"On Government land, your administration has cut the number of permits and licenses in half. If I'm President, I'll double them and also get the oil from offshore in Alaska, and I'll bring that pipeline in from Canada. And by the way, I like coal. I'm going to make sure we can continue to burn clean coal. People in the coal industry feel like it's getting crushed by your policies."* 1ˢᵗ debate, 2012

2016 – Clinton, H. versus Trump

Hillary Clinton (Democratic Candidate)

D-2016-1)   *"Take clean energy. Some country is going to be the clean- energy superpower of the 21st century. Donald thinks that climate change is a hoax perpetrated by the Chinese. I think it's real."* 1ˢᵗ debate, 2016

D-2016-2)   *"I want us to invest in you. I want us to invest in your future. That means jobs in infrastructure, in advanced manufacturing, innovation and technology, clean, renewable energy, and small business, because most of the new jobs will come from small businesses."* 1ˢᵗ debate, 2016

D-2016-3)   *"We are, however, producing a lot of natural gas, which serves as a bridge to more renewable fuels. And I think that's an important transition. So I have a comprehensive energy policy, but it really does include fighting climate change, because I think that is a serious problem. And I support moving toward more clean, renewable energy as quickly as we can, because I think we can be the 21st century clean energy superpower and create millions of new jobs and businesses."* 2ⁿᵈ debate, 2016

D-2016-4)   *"I think we can compete with high-wage countries, and I believe we should. New jobs and clean energy, not only to fight climate change, which is a*

serious problem, but to create new opportunities and new businesses."
3rd debate, 2016

Donald J. Trump (Republican Candidate)

R-2016-1)   *"I think it's such a great question because energy is under siege by the*
Obama administration. Under absolutely siege. The EPA, Environmental
Protection Agency, is killing these energy companies. And foreign companies
are now coming in buying our—buying so many of our different plants and
then re-jiggering the plant so that they can take care of their oil. We are
killing—absolutely killing our energy business in this country. Now, I'm all for
alternative forms of energy, including wind, including solar, et cetera. But we
need much more than wind and solar. And you look at our miners. Hillary
Clinton wants to put all the miners out of business. There is a thing called
clean coal. Coal will last for 1,000 years in this country. Now we have natural
gas and so many other things because of technology." 2nd debate, 2016

R-2016-2)   *"The EPA is so restrictive that they are putting our energy companies out of*
business. And all you have to do is go to a great place like West Virginia or
places like Ohio, which is phenomenal, or places like Pennsylvania and you
see what they're doing to the people, miners and others in the energy business.
It's a disgrace." 2nd debate, 2016

2020 – Biden versus Trump

Joe Biden (Democratic Candidate)

D-2020-1)   *"He's absolutely wrong, number one. Number two, if in fact, when, during our*
Administration in the Recovery Act, I was able, was in charge, able to bring
down the cost of renewable energy to cheaper than or as cheap as coal and
gas and oil. Nobody's gonna build another, uh, coal fired plant in America.
No one's going to build another oil fire plant in America. They're going to
move to renewable energy, number one." 1st debate, 2020

D-2020-2)   *"Number two, we're going to make sure that we are able to take the federal*
fleet and turn it into a fleet that's run on, that're electric vehicles. Making sure
that we can do that, we're going to put 500,000 charging stations and all of
the highways that we're going to be building in the future. We're going to
build a economy that in fact is going to provide for the ability us to take 4

million buildings and make sure that they in fact are weatherized in a way that in fact will –they'll emit significantly less gas and oil because the heat will not be going out. There's so many things that we can do now to create thousands and thousands of jobs. We can get to net zero, in terms of energy production, by 2035. Not only not costing people jobs, creating jobs. Creating millions of good-paying jobs. Not 15 bucks an hour, but prevailing wage, by having a new infrastructure that in fact, is green." 1st debate, 2020

D-2020-3)   *"And the first thing I will do, I will rejoin the Paris Accord. I will join the Paris Accord because with us out of it, look what's happening. It's all falling apart. And talk about someone who has no, no relationship to, with foreign policy. Brazil, the rainforests of Brazil are being torn down, are being ripped down. More, more carbon is absorbed in that rainforest than every bit of carbon that's emitted in the United States. Instead of doing something about that, I would be gathering up and making sure we had the comp–countries of the world coming up with 20 billion dollars, and say, "Here's $20 billion. Stop, stop tearing, tearing down the forest. And if you don't, then you're going to have significant economic consequences."* 1st debate, 2020

D-2020-4)   *"The fact is, it's going to create millions of good-paying jobs. And these tax incentives to people, for people to weatherize, which he wants to get, get rid of. It's going to make the economy much safer. Look how much we're paying now to deal with the hurricanes, with, deal with. . . By the way, he has an answer for hurricanes. He said, maybe we should drop a nuclear weapon on them, and they may go away."* 1st debate, 2020

D-2020-5)   *"We're going to be in a position where we can create hard, hard, good jobs by making sure the environment is clean, and we all are in better shape. We spend billions of dollars now, billions of dollars, on floods, hurricanes, rising seas. We're in real trouble. Look what's happened just in the Midwest with these storms that come through and wipe out entire sections and counties in Iowa. They didn't happen before. They're because of global warming. We make up 15% of the world's problem. We in fact, but the rest of the world, we've got to get them to come along. That's why we have to get back into, back into the Paris Accord."* 1st debate, 2020

D-2020-6)   *"The Green New Deal will pay for itself as we move forward. We're not going to build plants that, in fact, are great polluting plants, we're gonna build […]*

No, I don't support the Green New Deal. [...] I support the Biden plan that I put forward. [...] The Biden plan, which is different than what he calls The Radical Green New Deal." 1st debate, 2020

D-2020-7) *"Climate change, climate warming, global warming is an existential threat to humanity. We have a moral obligation to deal with it. And we're told by all the leading scientists in the world we don't have much time. We're going to pass the point of no return within the next eight to 10 years. Four more years of this man eliminating all the regulations that were put in by us to clean up the climate, to clean up — to limit the — limit of emissions, will put us in a position where we're going to be in real trouble. Here's where we have a great opportunity. I was able to get both all the environmental organizations as well as labour, the people worried about jobs, to support my climate plan. Because what it does, it will create millions of new, good-paying jobs. We're going to invest in, for example, 500,000 — 50,000, excuse me, 50,000 charging stations on our highways so that we can own the electric car market in the future. In the meantime, China's doing that. We're going to be in a position where we're going to see to it that we're going to take 4 million existing billion, buildings and 2 million existing homes and retrofit them so they don't leak as much energy, saving hundreds of millions of barrels of oil in the process and creating significant number of jobs. And by the way, the whole idea of what this is all going to do, it's going to create millions of jobs and it's going to clean the environment. Our health and our jobs are at stake. That's what's happening. And what — right now, by the way, Wall Street firm has indicated that my plan — my plan will, in fact, create 18.6 million jobs, 7 million more than his. This from Wall Street and I'll create $1 trillion more in economic growth than his proposal does, not on climate just on the economy."* 2nd debate, 2020

D-2020-8) *"I do rule out banning fracking because the answer we need — we need other industries to transition to get to, ultimately, a complete zero emissions by 2025. What I will do with fracking over time is make sure that we can capture the emissions from the fracking. Capture the emissions from gas. We can do that and we can do that by investing money into — it's a transition to that."* 2nd debate, 2020

D-2020-9)   *"My response is that those people live on what they call 'fence lines'. He doesn't understand this. They live near chemical plants that, in fact, pollute. Chemical plants and oil plants and refineries that pollute. I used to live near that when I was growing up in Claymont, Delaware. And all the more oil refineries in Marcus Hook and the Delaware River than there is any place, including in Houston at the time. When my mom would get in the car when there were first frost to drive me to school, turned on the windshield wipers there'd be oil slick in the window. That's why so many people in my state were dying and getting cancer. The fact is those frontline communities, it doesn't matter what you're paying them. It matters how you keep them safe. What do you do? And you impose restrictions on the pollutions, on the pollutants coming out of those fence line communities."* 2ⁿᵈ debate, 2020*

D-2020-10)   *"I would transition form the oil industry, yes. Because the oil industry pollutes, significantly — but here's the deal. Well, if you let me finish the statement, because it has to be replaced by renewable energy over time. Over time. And I'd stop giving to the oil industry — I'd stop giving them federal subsidies. You won't give federal subsidies to the gas and, excuse me, to solar and wind. Why are we giving it to oil industry?"* 2ⁿᵈ debate, 2020*

D-2020-11)   *"At the same time, we can make sure that our economy is being run, and moved, and motivated by clean energy, creating millions of new jobs. And that's the fact, that's what we're going to do."* 2ⁿᵈ debate, 2020*

D-2020-12)   *"I don't know where he comes from. I don't know where he comes up with these numbers. $100 trillion? Give me a break. This plan was — This plan has been endorsed by every major — every major environmental group and every labour group. Labour. Because they know the future lies, the future lies in us being able to breathe. And they know they're good jobs in getting us there. And by the way, the fastest growing industry in America are –is, is, is the electric — excuse me, solar energy, and wind. He thinks wind causes cancer, windmills. It's the fastest growing jobs and they pay good prevailing wages, 45, 50 bucks an hour. We can grow and we can be cleaner, if we go the route I'm proposing."* 2ⁿᵈ debate, 2020*

Donald J. Trump (Republican Candidate)

R-2020-1)   *"I want crystal clean water and air. I want beautiful clean air. We have now the lowest carbon. If you look at our numbers right now, we are doing phenomenally. But I haven't destroyed our businesses. Our businesses aren't put out of commission. If you look at the Paris Accord, it was a disaster from our standpoint. And people are actually very happy about what's going on because our businesses are doing well. As far as the fires are concerned, you need forest management. In addition to everything else, the forest floors are loaded up with trees, dead trees that are years old and they're like tinder and leaves and everything else. You drop a cigarette in there the whole forest burns down. You've got to have forest management."* 1st debate, 2020

R-2020-2)   *"I believe that we have to do everything we can to have immaculate air, immaculate water, and do whatever else we can that's good. You know, we're planting a billion trees–the Billion Tree Project–and it's very exciting for a lot of people."* 1st debate, 2020

R-2020-3)   *"I think a lot of things do, but I think to an extent, yes. I think to an extent, yes. But I also think we have to do better management of our forests. Every year I get the call. California's burning, California's burning. If that was cleaned, if that were, if you had forest management, good forest management, you wouldn't be getting those calls. You know, in Europe, they live their forest cities. They call forest cities. They maintain their forest. They manage their forest. I was with the head of a major country, it's a forest city. He said, "Sir, we have trees that are far more, they ignite much easier than California. There shouldn't be that problem." I spoke with the Governor about it. I'm getting along very well with the governor. But I said, "At some point you can't every year have hundreds of thousands of acres of land just burned to the ground."* 1st debate, 2020

R-2020-4)   *"Because it [the Clean Power Plan] was driving energy prices through the sky."* 1st debate, 2020

R-2020-5)   *"[Fuel economy standards keep pollution down] Well, not really because what's happening is the car is much less expensive, and it's a much safer car, and you're talking about a tiny difference. […] The car has gotten so expensive because they have computers all over the place for an extra little bit of gasoline. And I'm okay with electric cars too. I think I'm all for electric*

cars. I've given big incentives for electric cars but what they've done in California is just crazy." 1st debate, 2020

R-2020-6) *"He's talking about the Green New Deal. And it's not 2 billion or 20 billion, as you said. It's 100 trillion dollars. […] Where they want to rip down buildings […] And rebuild the building. […] It's the dumbest-most ridiculous […] Where airplanes are out of business. Where two car systems are out […] where they want to take out the cows too. […] It would destroy our country."* 1st debate, 2020

R-2020-7) *"So why didn't you get the world—China sends up real dirt into the air. Russia does. India does. They all do. We're supposed to be good. And by the way, he made a couple of statements. The Green New Deal is a hundred trillion dollar […] not 20 billion. […] You want to rebuild every building. […] Well, you want to rebuild everything."* 1st debate, 2020

R-2020-8) *"So we have the trillion trees program, we have so many different programs. I do love the environment, but what I want is the cleanest, crystal clear water, the cleanest air. We have the best, lowest number in carbon emissions, which is a big standard that I noticed Obama goes with all the time. Not Joe. I haven't heard Joe use the term because I'm not sure he knows what it represents or means, but I have heard Obama use it. And we have the best carbon emission numbers that we've had in 35 years. Under this administration, we are working so well with industry, but here's what we can't do — Look at China, how filthy it is. Look at Russia. Look at India. It's filthy. The air is filthy. The Paris Accord, I took us out because we were going to have to spend trillions of dollars and we were treated very unfairly. When they put us in there, they did us a great disservice. They were going to take away our businesses. I will not sacrifice tens of millions of jobs, thousands, and thousands of companies because of the Paris Accord. It was so unfair. China doesn't kick in until 2030. Russia goes back to a low standard and we kicked in right away. It would have been — It would have been– It would have destroyed our businesses. So, you ready? We have done an incredible job environmentally. We have the cleanest air, the cleanest water, and the best carbon emission standards that we've seen in many, many years. […] And we haven't destroyed our industries."* 2nd debate, 2020

R-2020-9)   *"They came out and said very strongly, '$6,500 will be taken away from families under his plan', that his plan is an economic disaster. If you look at what he wants to do, you know the, if you look at his plan, his environmental plan, you know who developed it? AOC+3. They know nothing about the climate. I mean, she's got a good line of stuff, but she knows nothing about the climate. And they're all hopping through hoops for AOC+3. Look, their real plan costs $100 trillion. If we had the best year in the history of our country for 100 years, we would not even come close to a number like that. When he says buildings, they want to take buildings down because they want to make bigger windows into smaller windows. As far as they're concerned, if you had no window it would be a lovely thing. This is the craziest plan that anybody has ever seen. And this wasn't done by smart people. This wasn't done by anybody. Frankly, I don't even know how it can be good politically. They want to spend $100 trillion. That's their real number. He's trying to say it was six. It's $100 trillion. They want to knock down buildings and build new buildings with little tiny, small windows and many other things. And many other things."*
2nd debate, 2020

R-2020-10) *"I know more about wind than you do. It's extremely expensive, kills all the birds, it's very intermittent. It's got a lot of problems and they happen to make the windmills in both Germany and China. And the fumes coming up — if you're a believer in carbon emission, the fumes coming up to make — make these massive windmills is more than anything that we're talking about with natural gas, which is very clean. One other thing — Solar. I love solar, but solar doesn't quite have it yet. It's not powerful enough yet to — to really run our big beautiful factories that we need to compete with the world. So, it's all a pipe dream, but you know what we'll do? We're gonna have the greatest economy in the world. But if you want to kill the economy, get rid of your oil industry. You want – and what about fracking?"* 2nd debate, 2020

Appendix D: Questions to the Candidates on Environment or Climate

Note that the years 1960, 1992, 1996 and 2012 did not include any questions that were categorized within the theme of Environment or Climate.

1976

- *One of the heartening things is that I and my colleagues have received literally hundreds and maybe even thousands of suggested questions from ordinary citizens all across the country who want answers. [...] But let me go on, because one main subject on the minds of all of them has been the environment, particularly curious about your record. People 'really want to know why you vetoed the strip mining bill. They want to know why you worked against strong controls on auto emissions. They want to know why you aren't doing anything about pollution of the Atlantic Ocean. They want to know why a bipartisan organization such as the National League of Conservation Voters says that when it comes to environmental issues, you are--and I am quoting--"hopeless"* **3rd debate, initial question**

1980

- *Every serious examination of the future supply of energy and other essential resources - including air, land, and water - finds that we face shortages and skyrocketing prices, and that, in many ways, we're pushing the environment to dangerous limits. I'd like to know, specifically, what changes you would encourage and require in American lifestyles in automobile use, housing, land use and general consumption, to meet problems that aren't going to respond to campaign lullabies about minor conservation efforts and more production?* **1st debate, initial question**

- *Can the United States develop synthetic fuels and other alternative energy sources without damage to the environment, and will this process mean steady higher fuel bills for American families?* **2nd debate, initial question**

1984

- *Mr. President, much of what you said affects the quality of life of many Americans--their income, the way they live, and so forth--but there's an aspect to quality of life that lies beyond the private sector which has to do with our neighbourhoods, our cities, our streets, our parks, our environment. In those areas, I have difficulty seeing what your program is and what you feel the Federal responsibility is in these areas of the quality of life in the public sector that affects everybody, and even enormous wealth by one individual can't create the kind of environment that he might like.*
  2nd debate, initial question

1988

- *Mr. Vice President, I'd like to cover a subject that wasn't covered in the first debate. You have said in this campaign, I am an environmentalist, and described yourself as having zero tolerance for polluters. And yet your record does seem to suggest otherwise. When you were head of the President's task force on regulatory relief, you did urge EPA to relax regulations involving the elimination of lead from gasoline. I believe you urged suspension of rules requiring industries to treat toxic waste before discharging them in sewers. And your group also urged OSHA to weaken the regulations requiring that workers be informed of dangerous chemicals at the work site. Finally, I believe you did support the President's veto of the Clean Water Act. My question is, aren't you--how do you square your campaign rhetoric with this record?*
  2nd debate, initial question

2000

- *New question, new subject. Vice President Gore, on the environment. In your 1992 book you said, quote, "We must make the rescue of our environment the central organizing principle for civilization and there must be a wrenching transformation to save the planet." Do you still feel that way?* **2nd debate, initial question**

- *Where do you see the basic difference in very simple terms in two or three sentences between you and the governor on the environment? If a voter wants to make a choice, what is it?* **2nd debate, follow-up question**

- *If somebody wanted to vote on the environment, how would you draw the differences, Governor?* **2ⁿᵈ debate, follow-up question**

- *Would you believe the federal government still has some new rules and new regulations and new laws to pass in the environmental area or do you think.* **2ⁿᵈ debate, follow-up question**

- *What about global warming?* **2ⁿᵈ debate, follow-up question**

2004

- *Mr. President, how would you rate yourself as an environmentalist? What specifically has your administration done to improve the condition of our Nation's air and water supply?* **2ⁿᵈ debate, initial question**

2008

- *Senator McCain, I want to know, we saw that Congress moved pretty fast in the face of an economic crisis. I want to know what you would do within the first two years to make sure that Congress moves fast as far as environmental issues, like climate change and green jobs?* **2ⁿᵈ debate, initial question**

- *Let's talk about energy and climate control. Every president since Nixon has said what both of you... Climate change, yes -- has said what both of you have said, and, that is, we must reduce our dependence on foreign oil. When Nixon said it, we imported from 17 to 34 percent of our foreign oil. Now, we're importing more than 60 percent. Would each of you give us a number, a specific number of how much you believe we can reduce our foreign oil imports during your first term?* **3ʳᵈ debate, initial question**

2016

- *What steps will your energy policy take to meet our energy needs, while at the same time remaining environmentally friendly and minimizing job loss for fossil power plant workers?* **2ⁿᵈ debate, initial question**

2020

- *The forest fires in the West are raging now. They have burned millions of acres. They have displaced hundreds of thousands of people. When state officials there blamed the fires on climate change, Mr. President, you said, "I don't think the science knows." Over your four years, you have pulled the US out of the Paris Climate Accord. You have rolled back a number of Obama Environmental records, what do you believe about the science of climate change, and what will you do in the next four years to confront it?* **1st debate, initial question**

- *What do you believe about the science of climate change, sir?* **1st debate, follow-up question**

- *You believe that human pollution, gas, greenhouse gas emissions contributes to the global warming of this planet?* **1st debate, follow-up question**

- *But sir, if you believe in the science of climate change, why have you rolled back the Obama Clean Power Plan which limited carbon emissions in power plants? Why have you relaxed…? Why have you relaxed fuel economy standards that are going to create more pollution from cars and trucks?* **1st debate, follow-up question**

- *All right, Vice President Biden. I'd like you to respond to the president's climate change record, but I also want to ask you about a concern. You propose $2 trillion in green jobs. You talk about new limits, not abolishing, but new limits on fracking. Ending the use of fossil fuels to generate electricity by 2035, and zero net emission of greenhouse gases by 2050. The president says a lot of these things would tank the economy and cost millions of jobs.* **1st debate, follow-up question**

- *What about, what about the argument that President Trump basically says, that you have to balance environmental interests and economic interests? And he's drawn his line.* **1st debate, follow-up question**

- *All right. Let me. Wait a minute, sir. I actually have studied your plan, and it includes upgrading 4 million buildings, weatherizing 2 million homes over four years, building one and a half million energy efficient homes. So the question becomes, some, the president is saying, I think, some people who support the president would say, that sounds like it's going to cost a lot of money and hurt the economy.*
  1st debate, follow-up question

- *The Green New Deal and the idea of what your environmental changes will do. So, do you support the Green New Deal?* **1st debate, follow-up question**

- *Gentlemen, we're running out of time so we got to get on to climate change, please. You both have very different visions on climate change. President Trump, you say that environmental regulations have hurt jobs in the energy sector. Vice President Biden, you have said you see addressing climate change as an opportunity to create new jobs. For each of you, how would you both combat climate change and support job growth at the same time? Starting with you, President Trump, you have two minutes uninterrupted.* **2nd debate, initial question**

- *Would you rule out banning fracking?* **2nd debate, follow-up question**

- *Why would you do that?* [transition from the oil industry]
  2nd debate, follow-up question

Appendix E: Main Argumentative Points of the Candidates by Year

Year	Democratic Candidate	Republican Candidate
1976	Jimmy Carter's Main Positions: • Increased effort on clean coal burning and safe extraction. • Shift to low-sulphur coal in the Appalachian regions. • The Ford administration has a very bad environmental record. • Banning strip mining which has support from miners, would not cost 140 000 jobs. • The Ford administration has delayed or lowered enforcement of air and water pollution standards. • There is a need to set aside natural lands for recreational use. • The U.S. should take a strong position against pollution in the oceans. The Ford administration has done too little. • Stop proliferation of nuclear waste around the world. The Ford administration has done too little.	Gerald R. Ford's Main Positions: • Doubling U.S. coal production and making it cleaner. • His administration has increased funding of water treatment plants by 60%. • Has initiated a land and water conservation program. • An increase in national park areas and funding for the national park service. • Has signed and approved more wilderness areas and scenic rivers than any other President.
1980	Jimmy Carter's Main Positions: • Regulation of the coal industry protects the purity of the air as well as land and water quality. • Coal production could be tripled while still insisting on health and safety for workers and air and water pollution standards. • Reagan protested against the air pollution standards which were passed over his objections while he was Governor in California.	Ronald Reagan's Main Positions: • Coal mines are being shut down due to regulation of mining and coal burning. • Modern technology can keep coal-burning clean and within the Clean Air Act. • He passed the strictest air pollution laws in the history of the U.S. as Governor as well as establishing an occupational safety and health agency. • The federal government tried to impose regulations that would have made it impossible to drive a car in cities in California. This would have destroyed the economy in California.

1984	Walter Mondale's Main Positions:	Ronald Reagan's Main Positions:
	- The American people want the environment to be protected. - Toxic waste dumps are a risk to people's health and safety and should have been cleaned up a long time ago. - The Reagan administration has been insensitive to the law and people's demands for environmental protection. - We will be better off with environmental protection. - The Reagan administration environmental record is inexcusable and shameful, and public health and air and water quality are paying the price. - He wants the U.S. to protect its land, water and air and public health. The land should be protected for the next generation.	- He feels strongly for the preservation of the environment. - National parks were dirty and hazardous. - After the rectification of national parks, millions of acres of wilderness have been added to the game refuges.
1988	Michael Dukakis' Main Positions:	George Bush's Main Positions:
	- There are opportunities in new agricultural products which can help clean up the environment, such as bio-degradable plastics, gasohol, and road de-icers from corn products. - The environment is an important domestic priority. - He cleaned up Boston Harbour and rivers and streams while Bush fought against the Clean Water Act and grants, which makes it possible to clean up rivers, harbours, and streams.	- He has made specific proposals on the environment (although this was not the case in the first debate). - He is for clean water. But does not approve of funding that can increase the deficit. - He is an environmentalist and believes in U.S. parks and the Presidential Commission on outdoors.
1992*	Bill Clinton's Main Positions:	George Bush's Main Positions:
	Reduced investments in defence should be used for new technologies such as environmental clean-up technologies.	- Bill Clinton's environmental record in Arkansas is poor. - Fuel efficiency standards at 40 to 45 miles per gallon will throw autoworkers out of work.

	• Waste recycling and clean water technology, and similar businesses will create millions of jobs. • Fuel efficiency standards should be raised, and more vehicles should be converted to natural gas to protect the environment. • Protecting the environment does more good than bad.	• Ona cannot comply with autoworkers and the environmental movement at the same time.
1996	Bill Clinton's Main Positions: • He will balance the budget and protect the environment while Dole will make cuts in environmental protection. • Dole let polluters rewrite environmental laws. • The Republican administration cut the environmental protection budgets, funds to clean up toxic waste dumps and ended the principle that the polluters should pay unless it was very recent. • He has invested in the environment and cleaning up toxic waste dumps as a priority. • The republican administration cut environmental enforcement by 25 per cent. And the Dole administration will cut make a 40 per cent cut in environmental budgets.	Bob Dole's Main Positions: • Bob Dole completely omitted the issue.
2000	Al Gore's Main Positions: • To invest in the environment is to invest in the U.S. • In the long term the U.S. should invest in cleaner domestic resources and renewable energy sources. • Will give tax credits and tax incentives for energy-efficient and low polluting cars, buildings, industries, etc. This will create millions of jobs.	George W. Bush Jr's Main Positions: • He is against removing hydroelectric dams in the northwest. • The U.S. can do a better job with clean coal technologies. He is going to ask for $2 billion to make sure the U.S. has the world's cleanest coal. • Less dependency on foreign oil is vital and can be done in an environmentally friendly way. • Texas has cleaned up brownfields and has cleaner water.

	• The Bush administration is proposing to open up wildlife areas to oil companies. • The U.S. needs clean coal technology, but not in protected areas. • The U.S. can be a global leader on the environment and in moving the world economy towards sustainability. • The 21st century will witness the consequences of global warming. • If the U.S. takes a leadership role in new technologies, it can create millions of jobs. • He is committed to clean water, clean air and facing global warming. • Houston is the smoggiest city in the U.S., and Texas is number one in industrial pollution, witnessing the Bush administration's interest in the issue. • Gore is a proponent of clean water and air and solving global warming. • We know the cause of global warming, and the world's temperature is rising. • The farmers are the first environmentalists, and the U.S. should expand its soil conservation program.	• Bush fought for emission standards in Texas. And has cleared up 450 brown fields. • Plants must conform to clean air standards, but collaboration is most important. • We don't know a solution to global warming and don't yet have all the facts. The U.S. is not going to carry the burden of cleaning up the world's air. • Land should be put aside for conservation purposes.
2004	John Kerry's Main Positions: • The Bush administration's record on the environment is one of the worst in history. • The Bush administration is going backwards in relation to wetlands, water quality and cleaner skies. • The Bush administration declared global warming dead and didn't believe in science.	George W. Bush Jr's Main Positions: • Has reached an agreement to reduce pollution by off-road diesel engines by 90 per cent. • Proposed a plan to increase wetlands and refurbish inner-city sore spots. • Proposed a plan to reduce sulfur dioxide, nitrogen oxide and mercury through the Clear Skies Initiative and has proposed a bill to protect forests.

	- Bush didn't give the Kyoto treaty a chance. - The environment should be left to our children in a better state than their parents left them it. - Environmental protection is also a question of faith and consciousness.	- Set aside millions of acres of land and improved wildlife habitats. - Technology is going to change the way of life and for the good of the environment. - He is a big proponent of coal, which can be used in a clean way. - The Kyoto treaty would have cost the U.S. a lot of jobs. - Under his presidency, the air and water quality are better, and more land is being restored.
<u>2008</u>	Barack Obama's Main Positions: - McCain voted against alternative energy 23 times. - There is a need for alternative energy sources, like solar, wind, biodiesel, nuclear energy and clean coal, and he plans to make a significant investment into this. - Climate change is one of the biggest challenges of our time but also an opportunity as an engine for economic growth. - It is vital that new environmental technologies are built in the U.S. American businesses can create the new energy economy of the future.	John McCain's Main Positions: - He is for a combination of renewable energy and offshore drilling and has voted for alternative fuel all his life. - Has a record of trying to address climate change through bipartisanship. - He has travelled the world and witnessed the impact of greenhouse gas emissions. - Is strongly against the Bush administration's policy on the environment. - The U.S. can clean up the climate, develop new green technologies and create millions of new jobs. - Nuclear Power is the solution to climate change and in eliminating dependence on foreign oil. - The key to heartland America is nuclear power, renewable energy but especially clean coal technology.
<u>2012</u>	Barack Obama's Main Positions: - There is a need for combining traditional sources of energy with clean energy production. - His administration has doubled fuel efficiency standards for cars. - New exploration of gas and oil can create new jobs and still be environmentally friendly. This contrasts to Romney, who does	Mitt Romney's Main Positions: - The Obama administration spent too much on tax breaks for the green energy sector. - He is going to make sure that the U.S. can continue to burn clean coal. - People in the coal industry feel like they are being crushed by the Obama administration's policies.

	• not include the environment in his policy. • Romney took pride in shutting down a coal plant in Massachusetts. • His administration made large investments in clean coal technology to increase production and produce it cleaner—the same with oil and natural gas.	
2016	Hillary Clinton's Main Positions: • Some country is going to be the clean-energy superpower of the 21st century. This can be the U.S. • Trump thinks climate change is a Chinese hoax. • Natural gas serves as a bridge to renewable fuels. Her energy policy also includes fighting climate change. • There is a need to move towards cleaner, renewable energy at a rapid pace as it can create millions of jobs.	Donald J. Trump's Main Positions: • The EPA is killing energy companies, and energy is under siege by the Obama administration. • There is a need for more than just renewable sources of energy. • The U.S. needs to utilize its energy resources, such as clean coal, which will last 1000 years in the U.S.
2020	Joe Biden's Main Positions: • Coal-fired plants are history in the U.S. as renewables are taking over. • The federal fleet should be electric vehicles and he will invest in charging stations, highways, and weatherized buildings. • The U.S. can create millions of jobs while also moving towards net-zero emissions. • The U.S. must re-join the Paris Accord as it falls apart without them. Rain forest degradation should be combated. • Investments in protection against climate change will pay themselves off due to the immense costs at the moment	Donald J. Trump's Main Positions: • He wants crystal clear water and air. He praises his own administration for doing well on the environment without destroying businesses. • There is a need for forest management due to fires. • They have initiated the Billion Trees Project. And we need to ha immaculate air and water. • Humans contribute to global warming to an extent. • Energy and car prices are more important than limitations on carbon emissions. • Suggests Biden has not heard of the term "Carbon Emissions." • The Paris accord was unfair, and he will not sacrifice millions of jobs for the environment.

	- from floods, hurricanes and the likes of it. - Global warming is an existential threat to humanity. The world's leading scientists say that we don't have much time (8-10 years). Every major environmental and labour group supports his plan for the environment. - There is a need to capture emissions from polluting industries such as fracking. - Pollution from industries is hitting certain groups harder than others; therefore, polluters should face restrictions. - He will transition from the oil industry because it has to be replaced by renewables over time.	- Bidens plan is the craziest plan anybody has ever seen. Ans is going to cost $100 trillion. Biden plans to knock down buildings and remove windows. - The U.S. was treated unfairly in the Paris accord, and he will not sacrifice millions of jobs for it. - Windmills kill birds and produce extreme amounts of "fumes". Natural gas is very clean. Solar power is not powerful enough to be competitive.

Appendix F: Initial and Discovered Frames

This Appendix list and briefly expands on the discovered frames and those based on Nisbets (2009) climate frames (see section 3.3.5). The description is based chiefly on Nisbet's (2009) work and common political frames but somewhat adapted to address unique frames and angles in the climate and environmental narratives of the presidential debates.

Frame	**Description**
Initial Frames	*Adapted from Nisbet (2009)*
Economic Burden[83]	The economic burden frame is based on the notion that climate mitigation or environmental preservation will lead to dire economic consequences.
Scientific Uncertainty	A matter of what is known or unknown. Suggesting that more information is needed before a choice can be made.
An Economic Opportunity rather than a Burden	Contrary to the economic burden frame, this frame focuses on climate mitigation or environmental preservation as a job-creating opportunity and a path to economic growth rather than an economic burden.
A Religious or Moral Call to Action	This frame focuses on narratives that link morality and religious references to environmental and climate action.
Pandora's Box of Looming Disaster	The pandora's box frame is based on the attempt to counter uncertainty frames. The frame is often using elements such as hurricanes, wildfires, drought, rising of sea-level, polar bears on lone ice floes and similar imagery to address the notion of looming disaster and the necessity of rapid action.
Public Accountability and "A war on Science"[84]	Reaching out to the voters, suggesting that they have to make a stand for the environment and/or climate by voting for the right candidate.
Issue Specific Frames	Issue-specific frames are related to issues that appear in the context of climate and environmental narratives that covers a specific event, such as an event at a single coal powerplant or a specific law.
Discovered Frames	*Adapted from Common Frames (Nisbet 2009, 52)*

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[83] Note that the Economic Burden frame and Scientific Uncertainty frame were split in two from Nisbets (2009) original mering of the two frames.

[84] Note that only narratives pertaining to the public Accountability frame were found, and none on "A war on Science".

Compromise and Cooperation	Finding compromise and working together across party lines to address the issue.
National Security	The national security frame entails that climate change is framed as a threat so existential that inaction verges on being suicidal.
Delusion (Sanity)	The sanity frame is related to candidates who question the sanity of their opponent or proposals in climate and environmental discourse.
Trust in Experts	The trust in experts frame entails a narrative that leans on expert advice or support.
International Leadership	Taking a global leadership role in addressing climate change or environmental concerns.
Policy Issue (Slogan)	The policy issue frame is connected to examples where candidates list their most important issues without further context.
Technological Optimism	Technological Optimism suggests a narrative that focuses on technological development as a solution for contemporary issues. Such as, technology will remove pollution from coal.
Natural Harmony (Environment)	Natural harmony as a frame entails a focus on biological preservation and attention to such items as wildlife, natural parks, soil quality, water quality, air pollution (smog), toxic waste.
Economic Development/Competitiveness	Economic Development/Competitiveness focus on how the U.S. can face international competition and which direction to follow to preserve or expand economic competitiveness.
Social Progress (Health)	Improving the quality of life. Climate change and environmental degradation might cause or imply health problems.
Conflict Frames	
Conflict (Defense)	Battle of Personalities. Defending their own record and previous statements or actions.
Conflict (Attack)	Battle of Personalities. Attacking the other candidate's record on the environment or climate.

Appendix G: Tables, Figures and Screenshots

Figure 1: *Dispersion and Mentions of Environment and Climate in the Corpus*
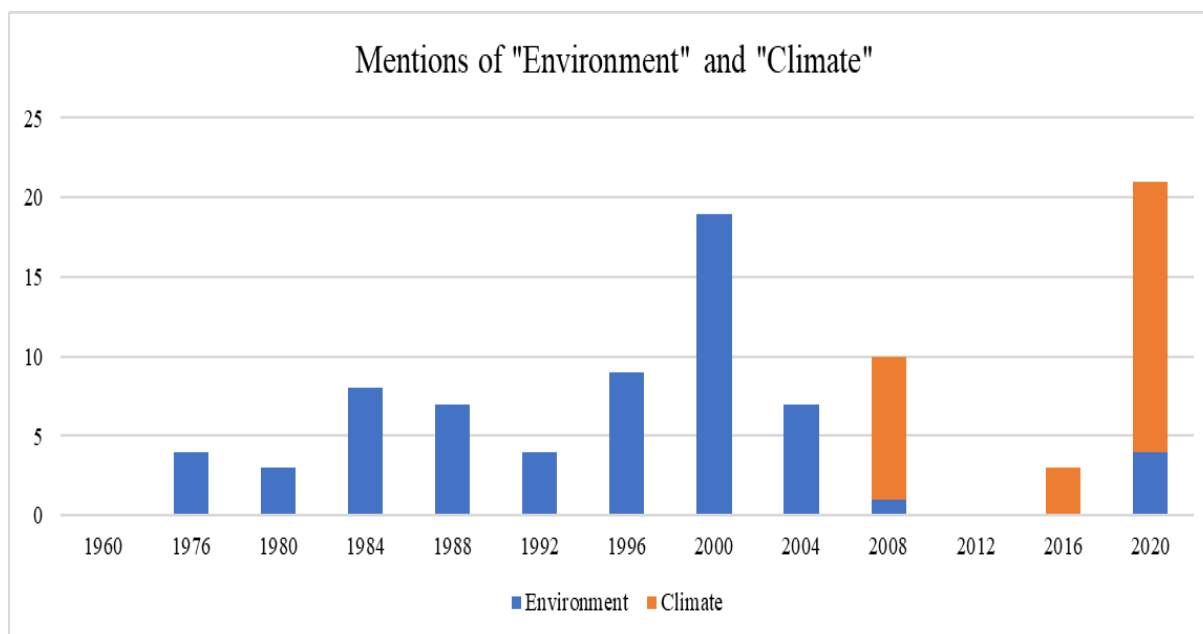
Table 1: *Categorizing of Themes in Debates by Epwene (2017)*

Main Categories (Epwene, 2017)		
Peace	**Politics**	**Science, Technology and Infrastructure**
Sub Categories		
Foreign and international affairs	Freedom, democracy and human rights	Computers and innovative technologies
Military matters	Constitutional matters	Modern roads and bridges
War and conflict intervention	Government, adimnstration	Newer and cheaper means of transportation
Terrorism and new threaths	Political authority, corrpution	Newer and user-friendly buildings
Modern warfare and modern weaponry	Laws, order and legal matters	Genetics
	Policy issues and legislation	American Reconstruction Act
Main Categories (Epwene, 2017)		
Economy	**Environment**	**Social and Welfare Policies**
Sub Categories		
Free market/enterprise and prtectionism	Natural resources and management	Social justice and prisons
Regulations	Sustainability and use of resources	Social welfare
Economic policies and planning	Energy and alternative energy sources	Social securit
Corporations and non-profits	Global warming and ozone depletion	Unemployment
Production and factors of production	Population numbers and control	Fabric of society and national way of life
Nationalization	Genetics and genetic engineering	Marriage, family and alternative life styles
Debt crisis	Resource management	Multiculturalism and diversity
Taxes and taxation issues	Energy and alternative energy sources	Poverty eradication, resource distribution
Trade	Resources such as water, air and parks	Immigration and border issues
Energy-cost	Population numbers and control	Care of veterans and military families
Employment and unemployment issues	Food	
Information	Genetics and genetic engineering	
	Natural disasters	
Main Categories (Epwene, 2017)		
Health	**Education**	
Sub Categories		
Health care policies	Education policies	
The Affordable Care Act	Schools at all levels	
Healthcare regulations	Regulations	
Modernizing the healthcare system	Global competitiveness	
Bio threaths	Innovations in teaching and learning	

Screenshot 1: *Initial Display of Word List in AntConc*

AntConc 3.5.9 (Windows) 2020
File   Global Settings   Tool Preferences   Help

Corpus Files
October 7^J 1960.txt
October 13^J 1960.txt
October 21^J 1960.txt
September 26^J 1960
October 06, 1976 - Sa
October 22, 1976 - WI
September 23, 1976 -
October 28, 1980 - Cle
September 21, 1980 -
October 07, 1984 - Lo
October 21, 1984 - Mc
October 13, 1988 - Un
September 25, 1988 -
October 11, 1992 - St.
October 15, 1992 - Un
October 19, 1992 - Ea
October 6, 1996 - Har
October 16, 1996 - Sa
October 03, 2000 - Bo
October 11, 2000 - Wi
October 17, 2000 - St.
October 8, 2004 - St. L
October 13, 2004 - Te
September 30, 2004 -
October 7, 2008 - Nas
October 15, 2008 - He
September 26, 2008 -
September 03, 2012 - De
16.10.2012 - Hempste
October 22, 2012 - Bo
October 09, 2016 - St.
19.10.2016 University
September 26, 2016 -

Total No. 33
Files Processed

Concordance   Concordance Plot   File View   Clusters/N-Grams   Collocates   Word List   Keyword List
Word Types: 12258   **Word Tokens:** 519585   **Search Hits:** 1

Rank	Freq	Word	Lemma Word Form(s)
1	25762	the	
2	17559	to	
3	14812	and	
4	12814	that	
5	12447	i	
6	11686	of	
7	10018	a	
8	9855	we	
9	9304	in	
10	7295	you	
11	6781	it	
12	5962	s	
13	5744	have	
14	5660	is	
15	4611	for	
16	3566	this	
17	3487	x	
18	3313	on	
19	3261	president	
20	3227	t	
21	3086	are	
22	3046	be	
23	2857	our	
24	2842	not	
25	2800	with	
26	2795	but	
27	2713	they	
28	2664	xa	
29	2644	mr	
30	2478	do	
31	2470	he	
32	2468	people	
33	2418	what	
34	2288	as	
35	2212	think	
36	2206	re	
37	2162	was	

Search Term ☑ Words ☑ Case ☐ Regex
Advanced
Hit Location   Search Only   1
Start   Stop   Sort
Lemma List ☐ Loaded
Word List ☐ Loaded
Sort by ☐ Invert Order
Sort by Freq

Screenshot 2: *Example of Display of Concordance List and Results in AntConc*

Concordance   Concordance Plot   File View   Clusters/N-Grams   Collocates   Word List   Keyword List
Concordance Hits 33

Hit	KWIC	File
1	for the people of this country for a prosperity that benefits all. MODERATOR: We will continue th	October 03, 2000 - Boston.txt
2	make the right choices, we can have a prosperity that endures and enriches all of our people.	October 03, 2000 - Boston.txt
3	e'll explore three topic areas tonight: Achieving prosperity; America's direction; and securing America. At th	September 26, 2016 - Hempstead New York.txt
4	we're still on the issue of achieving prosperity. And I want to talk about taxes. The	September 26, 2016 - Hempstead New York.txt
5	a plan to fight ISIS. HOLT:\xA0... achieving prosperity... TRUMP:\xA0No, no, you're telling the	September 26, 2016 - Hempstead New York.txt
6	, to make decisions that will further peace and prosperity, but also stand up to bullies, whether they'	September 26, 2016 - Hempstead New York.txt
7	willing to make those sacrifices for peace and prosperity in the next 4 years. MR. KRAFT. Could I	October 22, 1976 - Williamsburg, Virginia.txt
8	guys. And peace comes to the country, and prosperity. That's what's happening in Iraq, and	September 26, 2008 - Mississippi in Oxford.txt
9	, we can see the kind of peace and prosperity the world demands. Counterterrorism/Democracy Pro	October 22, 2012 - Boca Raton, Florida.txt
10	onsumer protections, let the market run wild, and prosperity would rain down on all of us. It	October 7, 2008 - Nashville Tennessee.txt
11	simplify the code, to be fair, to continue prosperity by sharing some of the surplus with the	October 03, 2000 - Boston.txt
12	t for our country. We have achieved extraordinary prosperity. And in this election, America has to make	October 03, 2000 - Boston.txt
13	world's strongest force for peace and freedom, prosperity and security. We have done the following things:	October 6, 1996 - Hartford.txt
14	on their own two feet and to get prosperity, so that they can have jobs for themselves	October 21, 1984 - Mondale in Kansas City, Missouri.txt
15	some progress, 22 million new jobs, the greatest prosperity ever. But it's not good enough. My	October 03, 2000 - Boston.txt
16	strengthen families because, you know, if we have prosperity that grows and grows, we still won't	October 03, 2000 - Boston.txt
17	because we have maintained freedom and increasing prosperity by relentlessly pushing the barriers of knowledge	October 6, 1996 - Hartford.txt
18	fork in the road. We have this incredible prosperity, but a lot of people have been left	October 03, 2000 - Boston.txt
19	a year, we can create an illusion of prosperity. But sooner or later that credit card mentality	October 13, 1988 - University of California, Los Angeles.txt
20	free enterprise system is the greatest engine of prosperity the world has ever known. I believe in	16.10.2012 - Hempsted New York.txt
21	means having intelligent decisions that keep our prosperity going and shepherds that economic strength so tha	October 11, 2000 - Winston-Salem, North Carolina.txt
22	do disagree. Because if we can keep our prosperity going, if we can continue balancing the budget	October 03, 2000 - Boston.txt
23	as for the surest way to threaten our prosperity, having a $1.9 trillion tax cut, almost half of	October 03, 2000 - Boston.txt
24	to do with building the surplus in our prosperity. MODERATOR: Three-and-a-half minutes is up.	October 03, 2000 - Boston.txt
25	make an important choice. Will we use our prosperity to enrich not just the few, but all	October 03, 2000 - Boston.txt
26	economy is going to add to the overall prosperity and wealth. I can't give you a	October 15, 1992 - University of Richmond.txt
27	we are well on the road to real prosperity in this country again. There has been a	October 22, 1976 - Williamsburg, Virginia.txt
28	and it has got to lead to reform prosperity and peace in the world. And I think	October 7, 2008 - Nashville Tennessee.txt
29	, to keep this country safe and secure. Reform, prosperity, and peace, these are major challenges to the	September 26, 2008 - Mississippi in Oxford.txt
30	more and more to the most, and somehow prosperity will trickle down. It hasn't worked. And	September 26, 2008 - Mississippi in Oxford.txt
31	in this election is will we use that prosperity wisely in a way that benefits all of	October 03, 2000 - Boston.txt
32	-class families and I want to continue the prosperity and make sure that it enriches not just	October 03, 2000 - Boston.txt
33	important decision to make. Will we use the prosperity to enrich all of our families and not	October 03, 2000 - Boston.txt

Search Term ☑ Words ☑ Case ☐ Regex
prosperity   Advanced   **Search Window Size** 50
Start   Stop   Sort   Show Every Nth Row 1
Kwic Sort ☑ Level 1 1L   ☑ Level 2 1R   ☑ Level 3 2R
Clone Results

Screenshot 3: *Example of Concordance Plot and Clusters in AntConc*

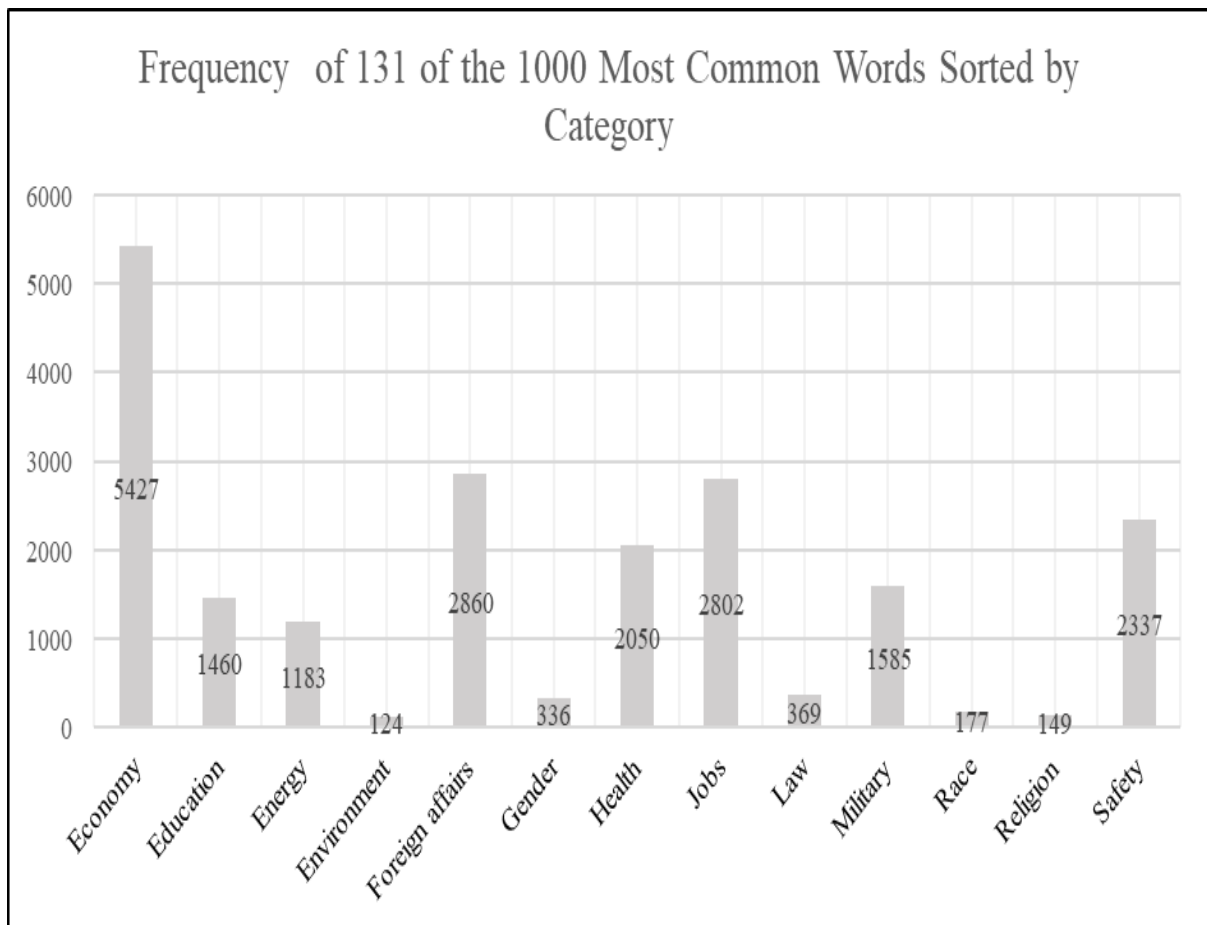Figure 2: *Frequency Hits from Common Keywords in the Corpus*

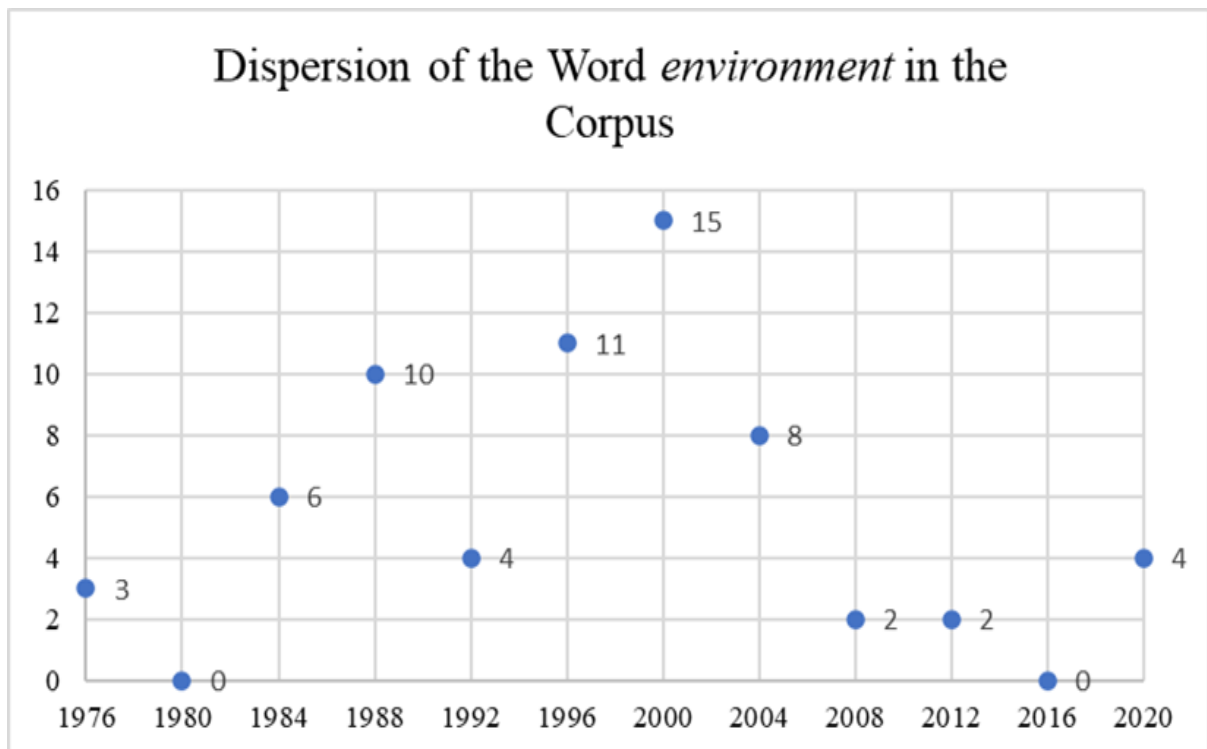Figure 3: *Dispersion of the word "environment" in the Corpus*
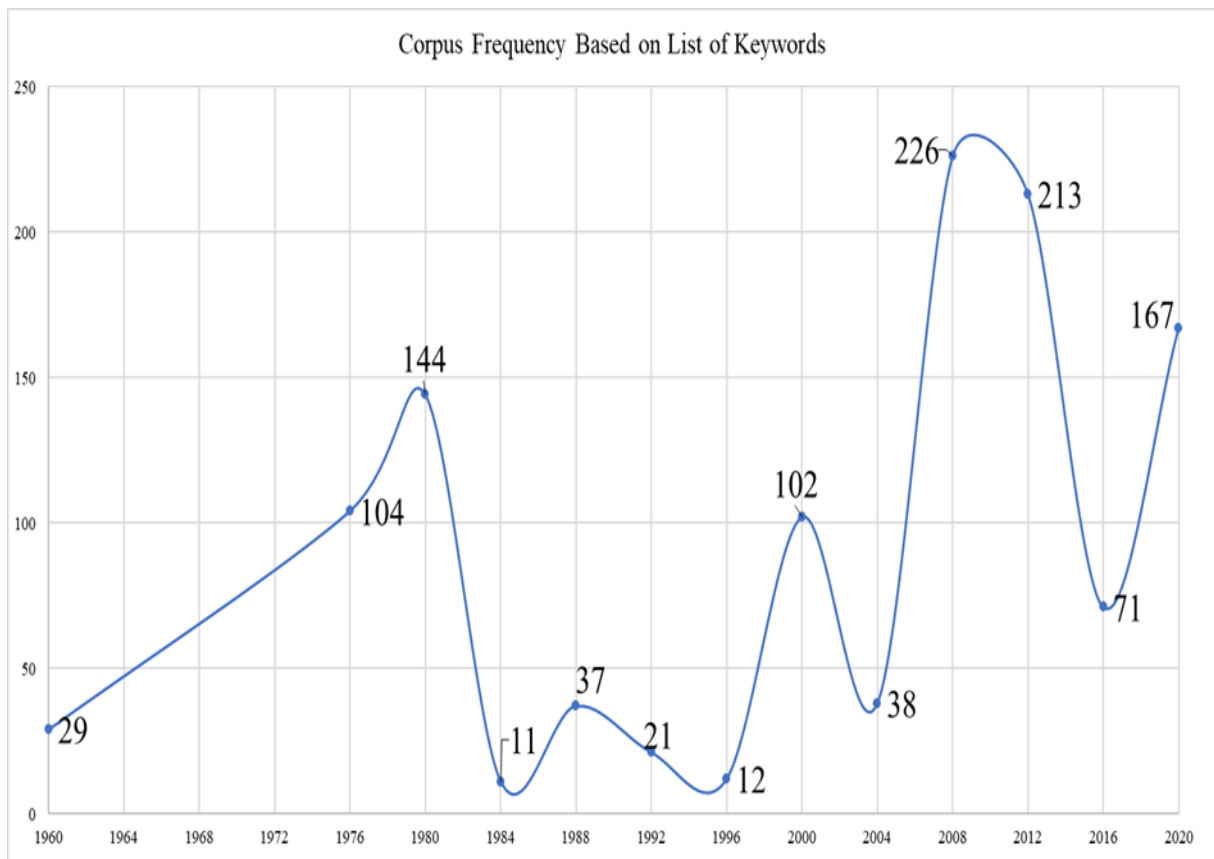
Figure 4: *Frequency Hits in the Corpus*

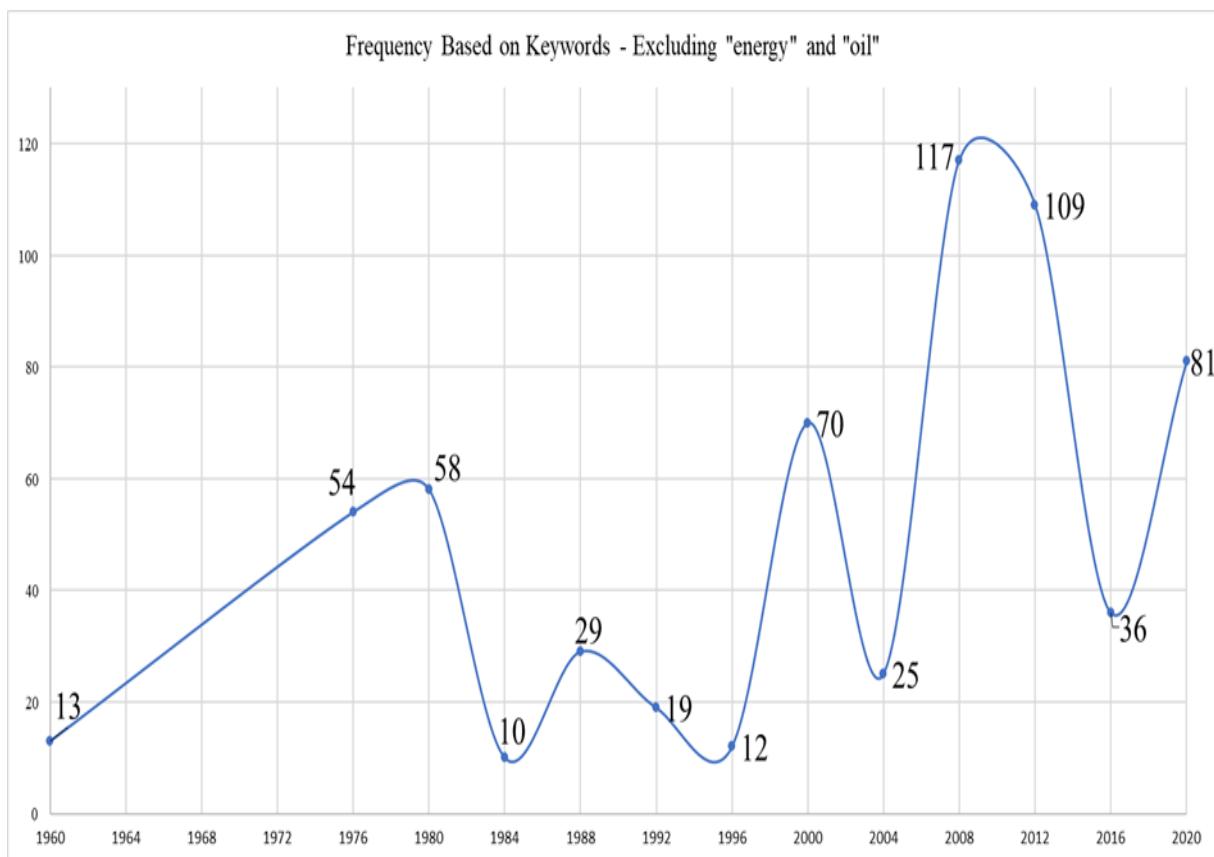Figure 5: *Frequency Hits Excluding the Keywords "energy and "oil"*

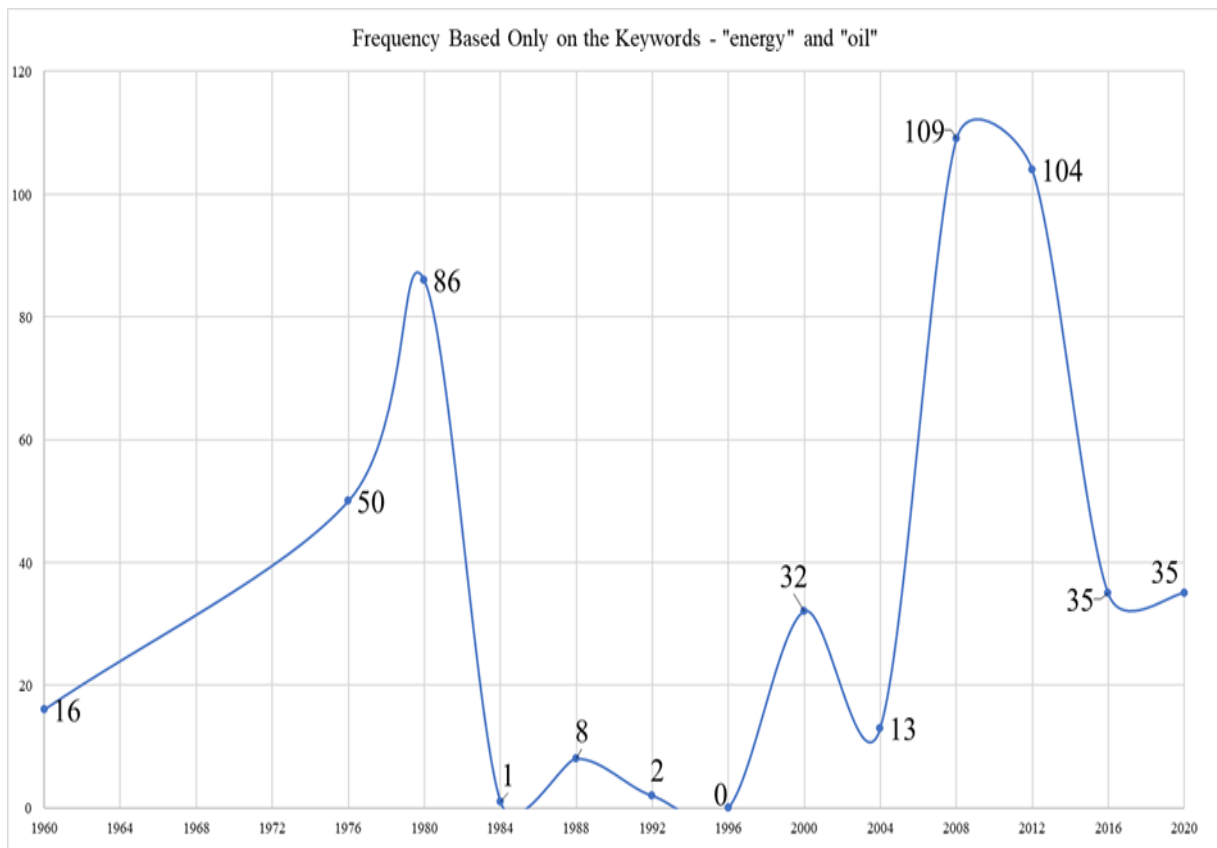Figure 6: *Frequency Hits Only the Keywords "energy" and "oil"*
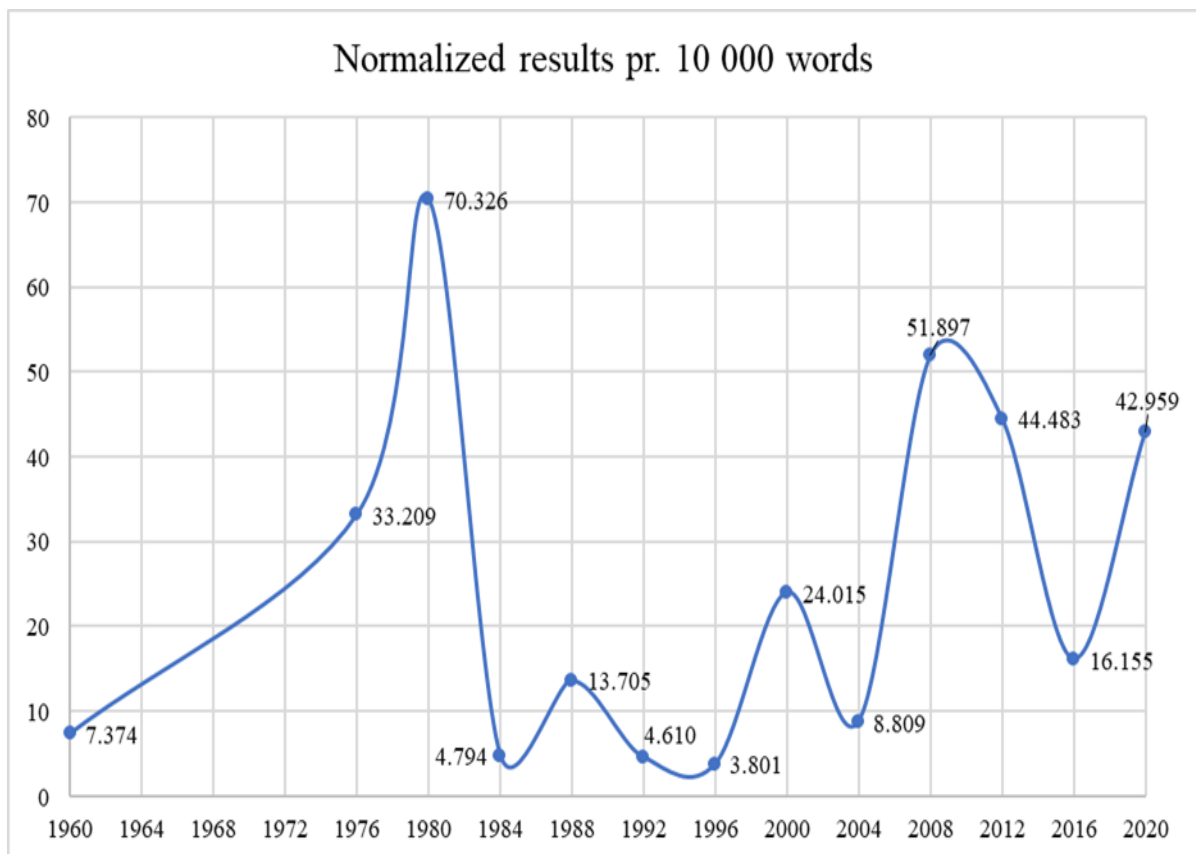

Figure 7: *Normalized Frequency Hits pr. 10 000 words*

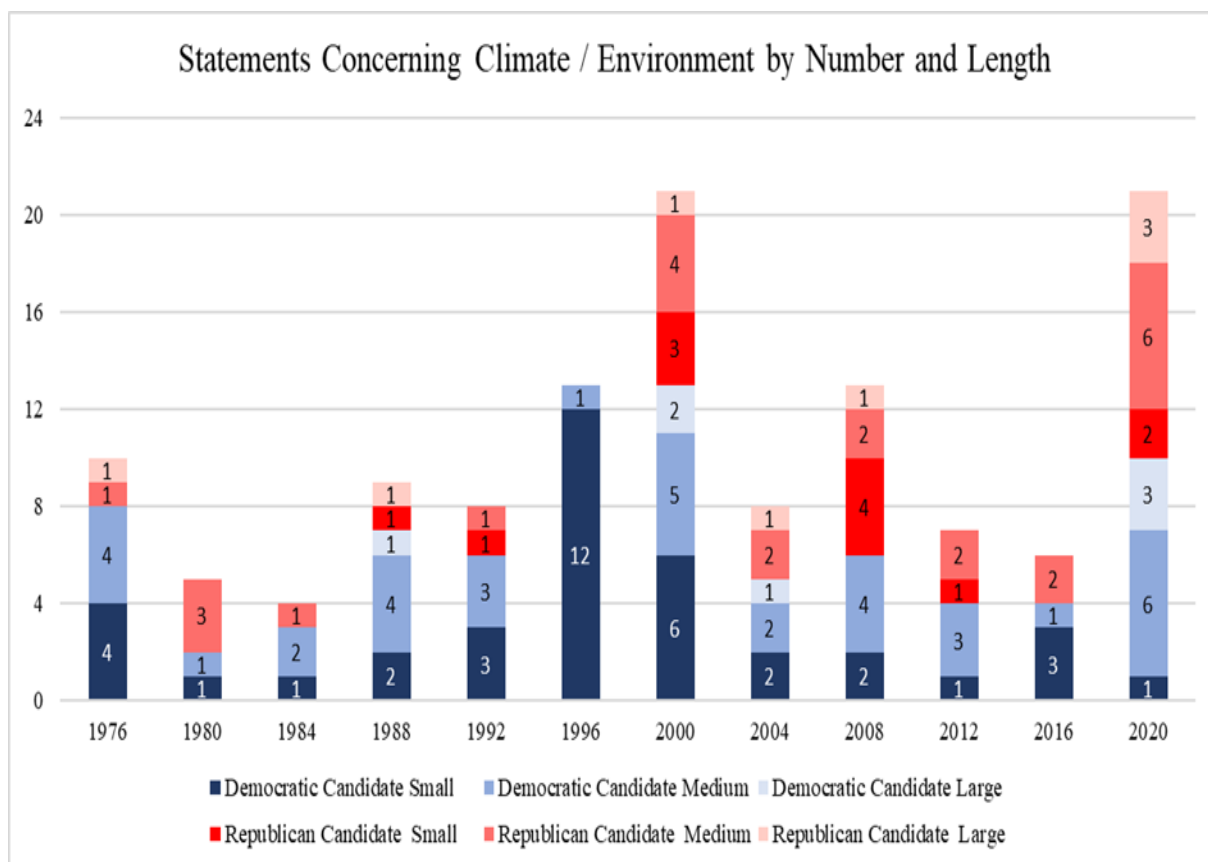Figure 8: *Statements Concerning Climate/Environment by Number and Length*

Table 2: *Number of Small, Medium and Large Utterances in the Debates*

	Democratic Candidate				Republican Candidate				Single Year
	Small	*Medium*	*Large*	*Sum*	*Small*	*Medium*	*Large*	*Sum*	
1976	4	4	0	8	0	1	1	2	10
1980	1	1	0	2	0	3	0	3	5
1984	1	2	0	3	0	1	0	1	4
1988	2	4	1	7	1	0	1	2	9
1992	3	3	0	6	1	1	0	2	8
1996	12	1	0	13	0	0	0	0	13
2000	6	5	2	13	3	4	1	8	21
2004	2	2	1	5	0	2	1	3	8
2008	2	4	0	6	4	2	1	7	13
2012	1	3	0	4	1	2	0	3	7
2016	3	1	0	4	0	2	0	2	6
2020	1	8	3	12	2	5	3	10	22
SUM	38	38	7	83	12	23	8	43	126

Figure 9: *Number of words on Environmental/Climate Discussion by Year*
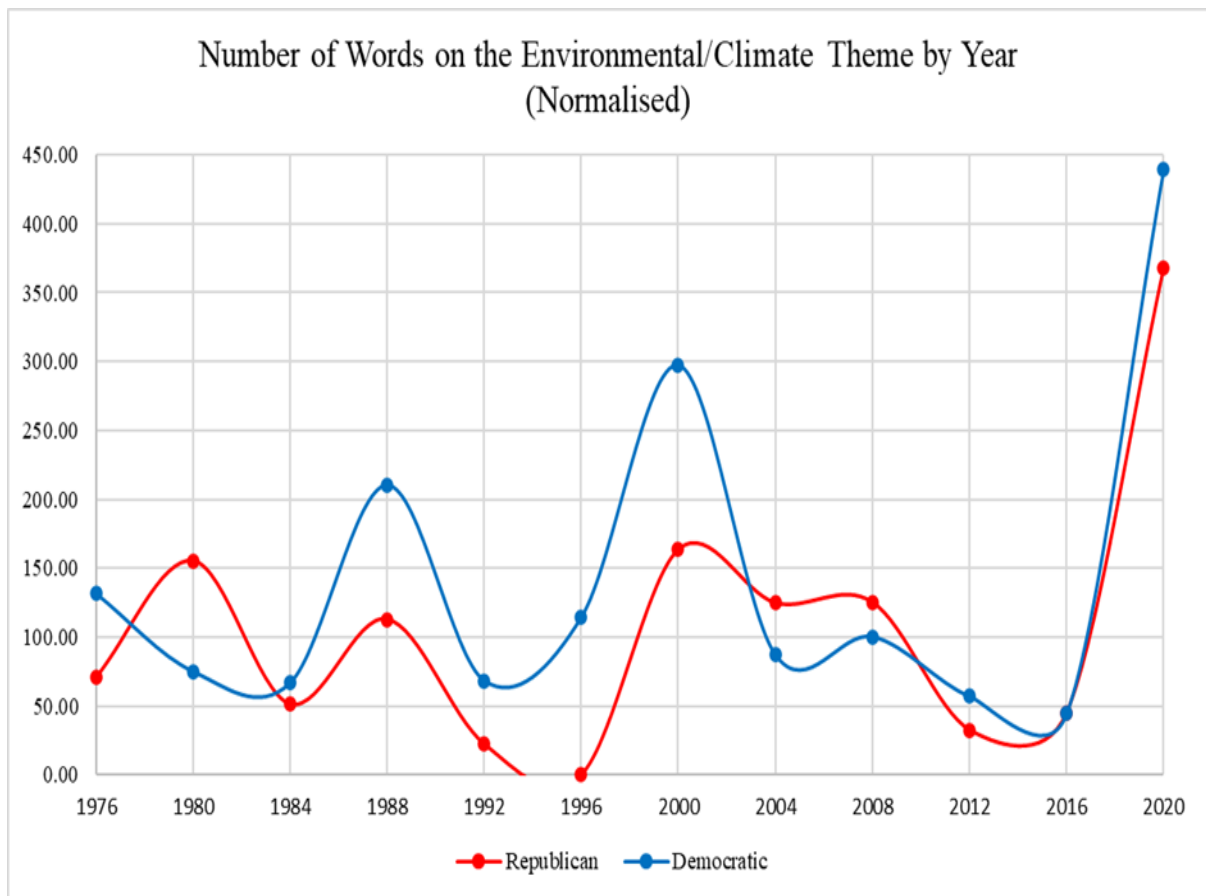

Table 3: *Table of Utterances Sorted by Election Periods and Total Size*

Year	Democratic (Raw)	Democratic (Normalised)	Republican (Raw)	Republican (Normalised)
1976	413	131.88	221	70.57
1980	154	75.21	318	155.30
1984	153	66.68	118	51.43
1988	568	210.39	305	112.97
1992	312	68.50	102	22.39
1996	361	114.35	0	0.00
2000	1263	297.37	694	163.40
2004	376	87.16	538	124.71
2008	437	100.35	545	125.15
2012	273	57.01	156	32.58
2016	195	44.37	199	45.28
2020	1400	439.00	1173	367.82
SUM	5905	1692.25	4369	1271.60
Average	492.08	141.02	364.08	105.97

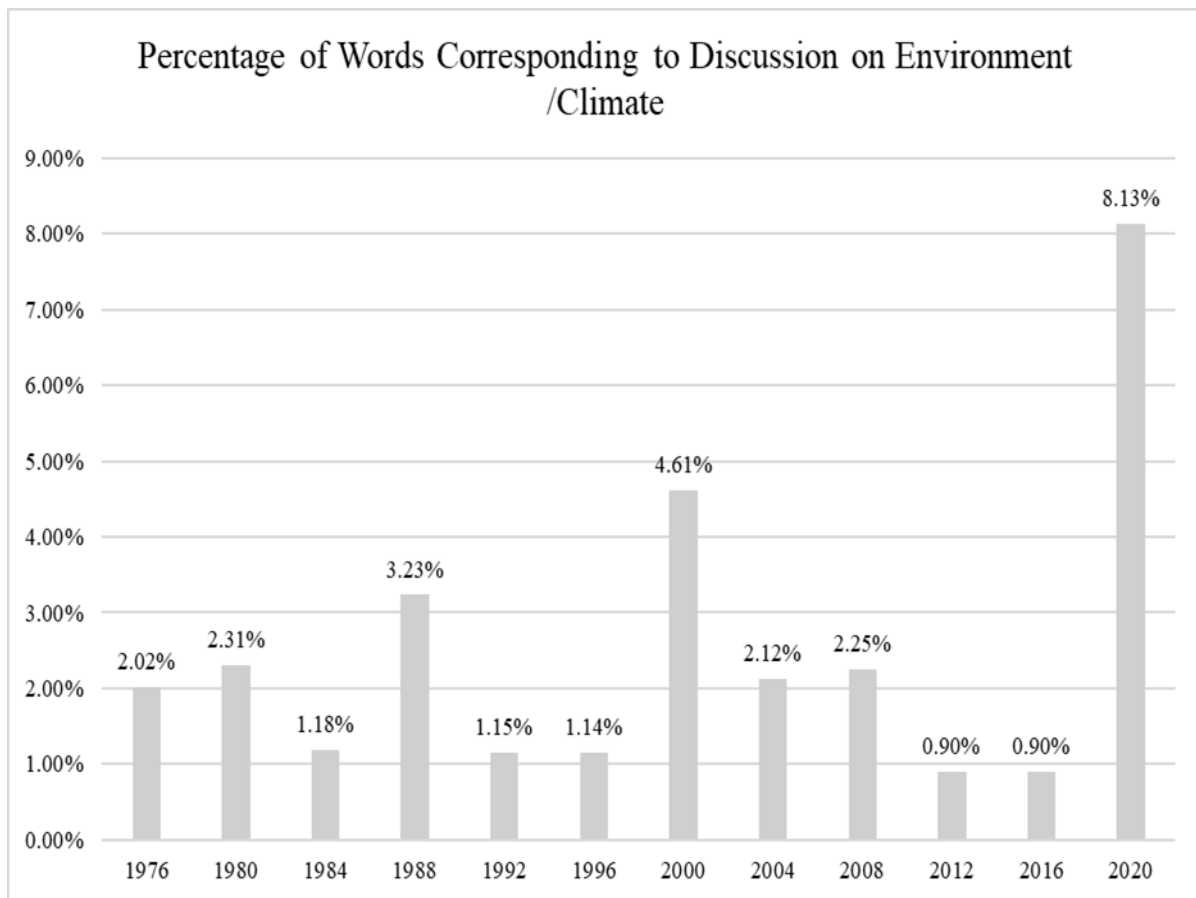Figure 10: *Percentage of Words on Climate/Environment Discussion*

Table 4: *Thematic Distribution in Presidential Debates*

Themes	Epwene (2017)	Themes	McKinney (2005) - 2004	Themes	McKinney (2005) - 1992
Economy	30.93%	Terrorism/homeland security	15.69%	Education	17.93%
		Iraq	13.14%	Health Care	16.82%
Peace	23.20%	Health care	11.08%	Budget deficit	13.34%
		Candidate character	10.59%	Jobs/unemployment	11.33%
Politics	19.88%	Environment	6.69%	Crime	10.89%
		Foreing policy	6.58%	Tone of campaign	8.95%
Social	14.36%	Draft	6.19%	Social security	8.09%
		Abortion	5.59%	Physical infrastructure	6.79%
Health	4.41%	Stem cell research	5.39%	Term limits	5.86%
		Economy/jobs	5.24%		
Environment	3.86%	Taxes	4.83%		
		Deficit	4.71%		
Education/Science and Technology	3.56%	Supreme Court	4.28%		

Figure 11: *Nisbet's (2009) Climate Frames in the Presidential Debates*
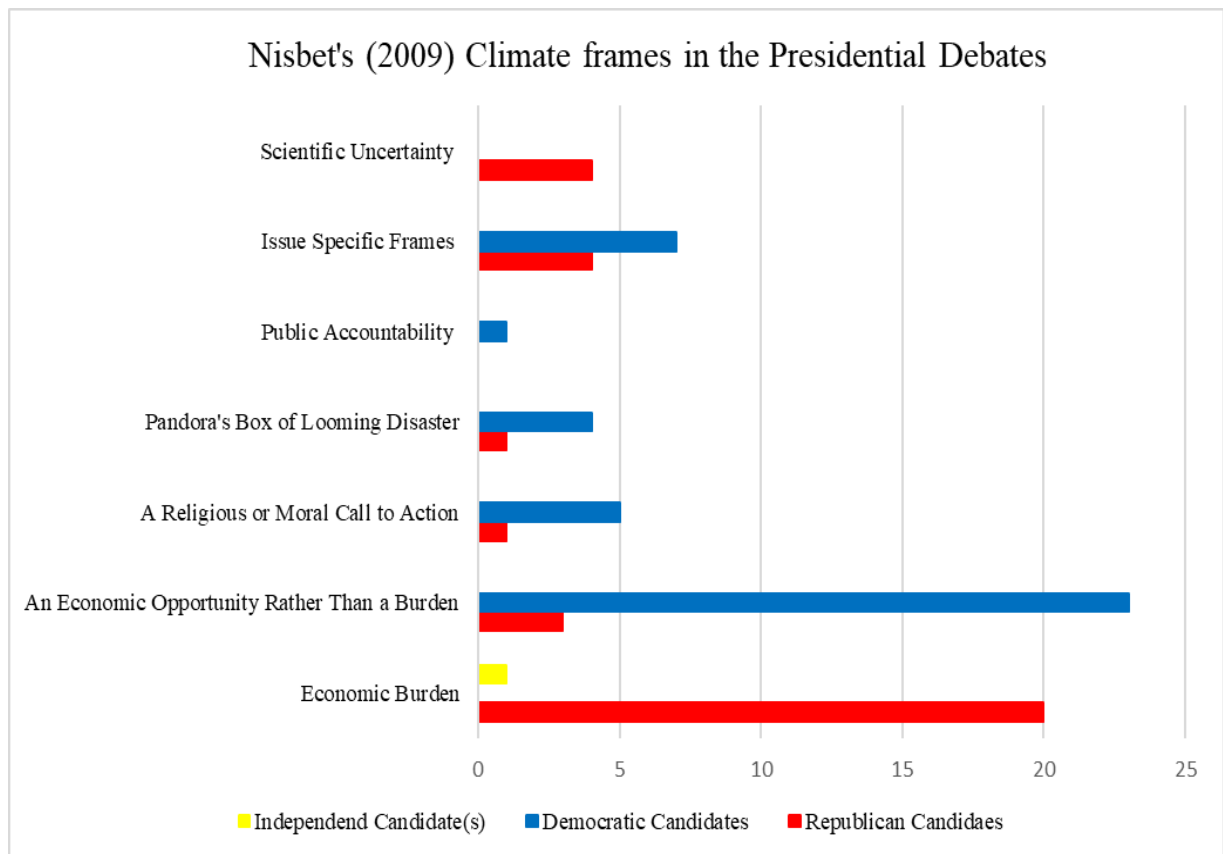
Figure 12: *Nisbet's (2009) and Discovered Frames in the Presidential Debates*
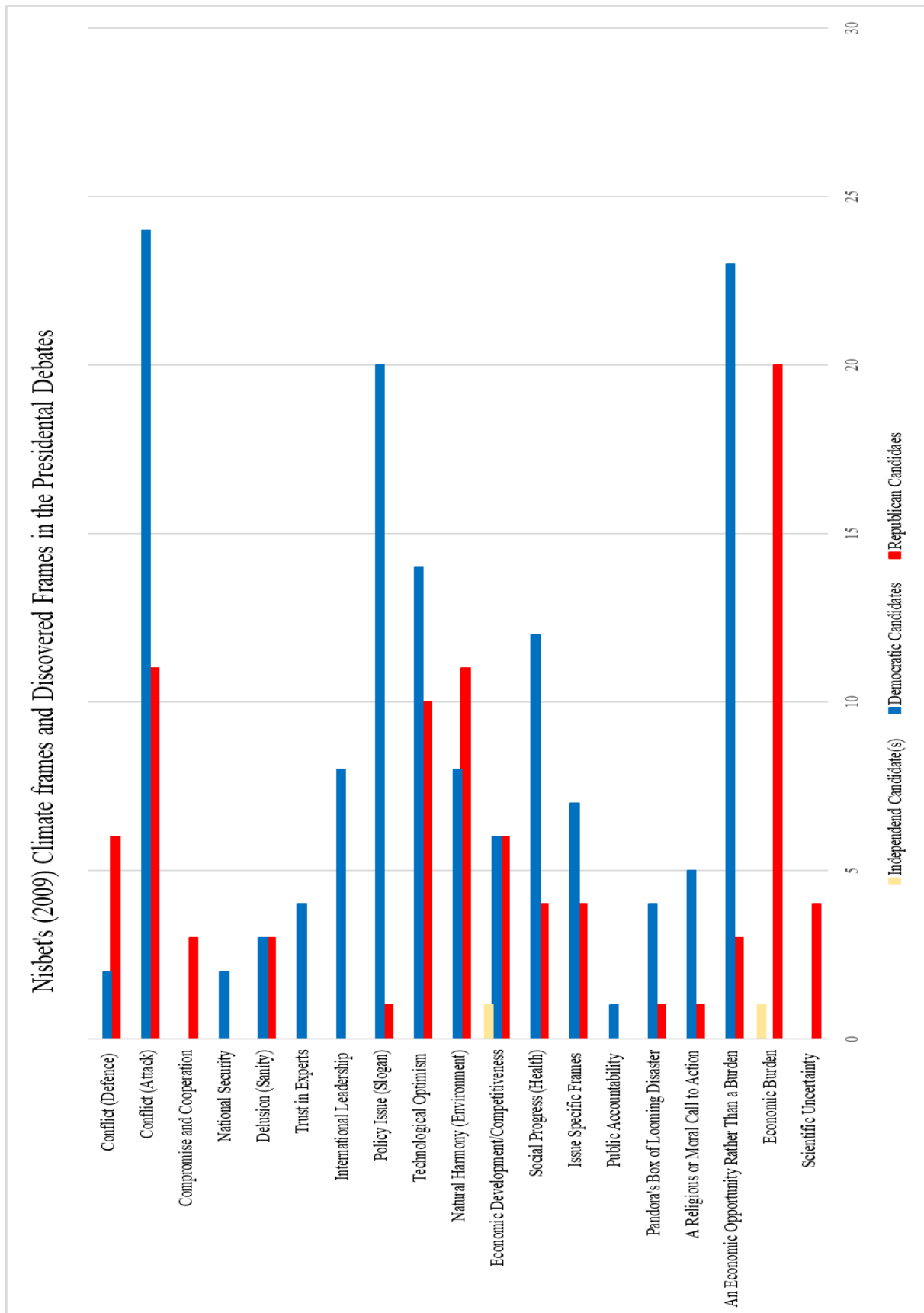
Table 5: *Republican Positions Towards Environmental and Climate Policies*

Year	Against	Mixed	Pro	SUM
1976	0	0	221	221
1980	215	0	103	318
1984	0	0	118	118
1988	0	268	37	305
1992	80	0	22	102
1996	0	0	0	0
2000	0	221	473	694
2004	0	134	404	538
2008	0	0	545	545
2012	86	70	0	156
2016	59	140	0	199
2020	596	532	45	1173
SUM	1036	1365	1968	4369
PERCENTAGE POINTS	23.71	31.24	45.04	100