

THE ECOLOGICAL DISCOURSE ANALYSIS OF DISCOURSES OF
ENERGY USAGE IN NEWS ARTICLES: *THE NEW YORK TIMES*
AND *THE WASHINGTON POST* AS EXAMPLES

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Tiivistelmä – Abstract <p>Tutkielman tarkoitus oli analysoida miten energiankäyttöön liittyvät ympäristödiskurssit ovat rakentuneet sekä kehittyneet kielellisesti amerikkalaisessa uutismediassa 2021 alkaneen energiakriisin aikana. Tutkimuksen teoreettisena viitekehystenä on kriittiseen diskurssintutkimukseen pohjautuva ekolinguvistinen diskurssianalyysi.</p> <p>Tutkielma vertailee neljää <i>The New York Times</i>issä sekä <i>The Washington Post</i>issa 2021 alkaneen energiakriisin eri vaiheissa julkaistua uutisartikkelia. Aineistoa lähestytään kolmen tutkimuskysymyksen kautta:</p> <ol style="list-style-type: none">1. Miten energiankäyttöä koskevat ympäristödiskurssit rakentuvat ja kehittyvät <i>The New York Times</i>issä sekä <i>The Washington Post</i>issa vuonna 2021 alkaneen maailmanlaajuisen energiakriisin eri vaiheiden aikana?2. Miten leksikaalinen toisto, leksikaalinen koheesio sekä modaalisuus vaikuttavat näiden diskurssien rakentumiseen?3. Ilmeneekö artikkeleissa ilmastoon liittyviä viivästysdiskursseja? <p>Tutkimustulokset osoittavat, että ympäristöä koskevat narratiivit amerikkalaisessa uutismediassa voidaan karakterisoida neljän eri diskurssin avulla. Leksikaalisen toiston sekä koheesio- ja modaalisuuden tutkiminen puolestaan osoitti, miten kyseiset kielelliset piirteet rakentavat sekä ylläpitävät hegemonisia, taloudellisesti motivoituneita sekä ihmiskeskeisiä ympäristödiskursseja amerikkalaisessa uutismediassa.</p>	
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TABLE OF CONTENTS

1. INTRODUCTION	1
2. BACKGROUND THEORY	3
2.1 DISCOURSE AND CLIMATE CHANGE	3
2.1.1 <i>Defining Discourse</i>	3
2.1.2 <i>Climate Change Discourses</i>	3
2.2 CLIMATE CHANGE AND SOCIETY	4
2.2.1 <i>Climate Change and Energy: 2021 Global Energy Crisis</i>	4
2.2.2 <i>Role of the Media and Language</i>	5
2.3 ECOLINGUISTICS	6
2.4 ECOLOGICAL DISCOURSE ANALYSIS	8
2.5 WORD FREQUENCY	9
2.6 LEXICAL COHESION	10
2.7 MODALITY	10
3. PRESENT STUDY	11
3.1 AIM AND RESEARCH QUESTIONS	12
3.2 DESCRIPTION OF THE DATA	12
3.3 METHODOLOGY	13
3.4 ETHICAL CONSIDERATIONS	17
4. ANALYSIS	18
4.1 DESCRIPTION	18
4.1.1 <i>Lexical Cohesion</i>	18
4.1.2 <i>Modality</i>	21
4.1.3 <i>Semiotic Modality and Reported Speech</i>	22
4.2 DISCURSIVE THEMES	24
4.2.1 <i>Erasure of causality</i>	24
4.2.2 <i>Push for non-transformative solutions</i>	25
4.2.3 <i>Emphasize the downsides</i>	26
4.2.4 <i>Surrender to climate change</i>	27
5. DISCUSSION	28
6. CONCLUSION	31
6.1 LIMITATIONS	31
6.2 FURTHER RESEARCH	32
REFERENCES	33
APPENDIX	42

1. Introduction

The increasing awareness of the media's impact on the societal attitudes towards environmental degradation and climate change has produced an influx of research examining the intersections between the media and climate change (e.g., Boykoff & Boykoff, 2004; O'Neill, 2020). As noted by Fleming et al. (2014: 407), while the influence of language on environmental communication is well known, this understanding is underemployed in understanding how ecological discourses may help or prevent action in response to climate change. Therefore, the research on ecological discourses concerning climate change has both theoretical as well as practical significance.

An increasing body of research has examined media discourses from an ecolinguistic perspective (e.g., Ponton & Sokół, 2022; Zhang et al., 2023). The narratives encased within these discourses may signal linguistic patterns that promote environmentally destructive or ambivalent framings that can provide insight into how we conceptualize and interact with the natural world (Osland, 2002; Stibbe, 2015). Notably, the corporate-centric discourses of neoliberal economics and pervasive financial growth is a principal scholastic focus when examining the linguistic practices of mass media when discussing the environment (Stibbe, 2020; Jacques & Knox, 2016).

This thesis will employ both quantitative and qualitative methods to investigate and analyze the linguistic choices made in American reporting regarding energy narratives throughout the ongoing 2021 global energy crisis. The study is done through a combination of ecological discourse analysis based on a critical reading of four news articles on energy usage and the environment published in *The New York Times* and *The Washington Post*, as well as how the discourses were constructed via word frequency, lexical cohesion, and modality (e.g., Xie et al. 2011; Pan & Kosicki, 1993; Wei, 2021). Quantitative measures are used to measure the word frequencies, and consequently the lexical cohesion, in the articles, indicating the occurrence and frequency of different types of motifs relating to energy usage, fossil fuels, as well as the environment. The qualitative method is used to analyze the ecological discourses in the samples with the support of the qualitative data as well as the pre-conceptualized discursive framework described by Lamb et al. (2020).

The paper is structured as follows. First, Section 2 will provide some background to the concept of discourse and its relevance to discussions of climate change. Furthermore, there will be a description of the energy crisis as a contextual factor as well as the societal role of media and

language in discussing environmental issues. Lastly, there will be an explanation of ecolinguistics as a paradigm and brief rationale for researchers taking an ecolinguistics approach to discourse analysis as well as an introduction to the linguistic concepts of word frequency, lexical cohesion, and modality. Section 3 will outline the methodology of this study, starting with the research aim and then describing in detail the means of data gathering and the process of applying an ecolinguistic perspective. Moreover, there will be a brief mention of the ethical considerations associated with the conducted research. Section 4 reports the analysis and some of the findings and discursive categories achieved using the described methods, and Section 5 will include the discussion of said findings. Finally, in Section 6, the article will be concluded with a final reference to the research aims with mentions of limitations as well as some suggestions for future research.

2. Background Theory

2.1 Discourse and Climate Change

2.1.1 Defining Discourse

In an attempt to construct a social theory of discourse, Fairclough (1992) outlined a three-dimensional framework for conceptualizing discourse. The first dimension is discourse-as-text, which encapsulates the linguistic organization and features of tangible occurrences of discourse. Various branches of linguistics, including grammar, choices and patterns in vocabulary, text structure as well as cohesion can be systematically analyzed for a more holistic understanding of different discourses (Blommaert & Bulcaen, 2000: 448). The second dimension is discourse-as-discursive-practice, which emphasizes how discourse is something that is produced, disseminated, and consumed in society. When framing discourse as a discursive practice, the analysis of concrete textual features should include notable attention to the three aspects that connect a text to its context - intertextuality, speech acts, and coherence (Blommaert & Bulcaen, 2000: 449). Fairclough's (1992: 93) third dimension is discourse-as-social-practice, which discusses the ideological effects and hegemonic processes in which discourse is a principal feature.

2.1.2 Climate Change Discourses

The term *climate change* commonly refers to changes and shifts in the global climate system that result in long term, often irreversible changes in weather patterns (Damico et al. 2020: 685). Even though the global climate system is continuously changing, climate scientists have demonstrated that current climate trends are explicitly tied to human activity, notably increased greenhouse gas emissions. Climate change has evolved into one of the most urgent issues facing humanity today, partly due to it developing from a predominantly physical phenomenon to being concomitantly a cultural, political, and social phenomenon (Fløttum, 2014: 7). The influence of language on climate change communication is well acknowledged, and numerous discourses of climate change are formulated within different social groups through the utilization of varying types of language and concepts (Fleming, 2014: 407-408).

Climate delay discourses encapsulate a variety of identifiable strategies, including individualism (Maniates, 2011), fossil fuel greenwashing and solutionism (Sheehan, 2018), as well as appeals to social justice, well-being, and economic factors (Bohr, 2016; Jacques & Knox, 2016). Lamb et al. (2020: 2) characterize discourses of delay as refutations of at least one of the following four questions: (1) Is it our responsibility to act? (2) Are transformative

changes required? (3) Given the potential costs, is it advantageous to mitigate climate change? (4) Is it still plausible to mitigate climate change? Based on the differing positions to these foundational questions, Lamb et al. (2020: 2) conceptualized four separate categories of discourses that either ‘redirect responsibility’, ‘push non-transformative solutions’, ‘emphasize the downsides’ of climate actions, or ‘surrender’ to climate change. Similarly, Fleming et al. (2014: 409) identified three primary discourses that have a significant role in constraining proactive social action for climate change: the ‘logical action discourse’ which encapsulates issues associated with a lack of information, the ‘complexity discourse’ which discusses the lack of conclusive and understandable science, and the ‘culture of consumption discourse’ which emphasizes the role of a consumerist society in the escalation of climate change.

2.2 Climate Change and Society

2.2.1 Climate Change and Energy: 2021 Global Energy Crisis

The reductions in economic activities and mobility during the COVID-19 pandemic heavily challenged the global energy sector, due to which an energy crisis began to unfold in 2021 (Zakeri et al., 2022: 1-2). In the process of recovering from the COVID-19 pandemic, governments had to make the choice between maintaining the fossil fuel reliant status quo or initiating energy transition by decarbonizing their economies through the increased use of renewable energy (New Climate Institute & Climate Analytics, 2022: 1). Long-term economic recession has imposed notable limitations on the availability of public funding for climate-related and green energy investments, with several governments predominately focusing on short-term solutions to achieving energy security, including coal revival and finding new fossil fuel supply routes (Zakeri et al., 2022: 6, 15). Although the crisis was initially sustained by the continuous attempts at global economic recovery from the pandemic, Russia’s invasion of Ukraine resulted in further price shocks in global energy markets due to low gas supplies (van Homeyer et al. 2022: 129). Consequently, concerns surrounding energy supply security grew on an international level, with numerous raised questions regarding whether the availability of sufficient energy was enough to satisfy demands. As energy is central to the functioning of modern human society and a variety of ecosystems (Perez & Perez, 2022: 1), such instability and unpredictability affects society as a whole, with different forms of media framing the issue differently and actively reshaping the contemporary cultural politics of climate change discourse. Within the context of this study, framing is conceptualized as the selection of specific aspects of a concept and emphasizing their salience in a communicating text (Entman, 1993: 52).

2.2.2 Role of the Media and Language

Within the context of examining the media's impact on the attitudes towards environmental matters, mass media can be defined as a heterogeneous and influential set of non-state actors that operate as central channels to both formal and informal discourses regarding various topics, including geopolitics and cultural politics (Castree, 2006; Dalby, 1996). Pioneering research by Trumbo (1996) & Weingart et al. (2000) outlined the influence of the news media in, respectively, the framing of climate change as an issue in the United States as well as in shaping discourses regarding climate change in Germany. Additionally, numerous studies have examined the role of mass media in accurately and adequately reporting climate-related scientific findings (Bell, 1994; Dunwoody & Peters, 1992; Nissani, 1999; Boykoff & Boykoff, 2004), the ways in which environmental communication can be emotionally anchored (Höijer, 2010), the influence of political actors (Carvalho, 2005) as well as the political stances of journalists (Elsasser & Dunlap, 2012) in framing climate change risks and the varying levels of expertise regarding climate change issues among journalists (Brüggemann & Engesser, 2014). Moreover, a series of research has discussed the potentially destructive influence of the journalistic norm of balance in the coverage of climate change and 'global warming' in prestigious U.S. newspapers which may lead to significant bias (Boykoff & Boykoff, 2004; Boykoff, 2007; Boykoff, 2008; Boykoff & Rajan, 2007).

Media plays a central role in the way climate change and practices of sustainability are discussed, debated, and contested (O'Neill, 2020: 10). Not only does media coverage act as a key agent in raising awareness and disseminating information to a broad audience, it also provides a central forum for the discussion and legitimization of climate governance (Schmidt et al. 2013: 1233). Numerous people become inescapably engaged in the media-presented narratives of the ongoing environmental crisis through daily media reports of global events (Ponton & Sokół, 2022: 446). Mass media have framed the issues of climate change and consequent environmental degradation in ways that underline the potential causes for it as well as the factors that may be responsible for it and ways in which problems can be addressed (Kaushal et al., 2022: 3582). However, a vast number of prior framing research has predominately focused on conceptualizing frames as pre-arranged narratives or whole perspectives on specific news topics, whilst giving minimal scholastic attention to how individual linguistic attributes, such as altering word choices, may shape audience perceptions (Zhang & Borden, 2023: 3).

Despite the overall limited amount of research on news media that incorporates linguistic analysis, some prior definitions of news frames have noted the importance of grammatical and linguistic factors (Sambre, 2010) as well as lexical choice (Villar & Krosnick, 2011). Driven by a constructivist approach, lexemes can be considered a significant tool in constructing news frames in which newsmakers give them meaning by how they contextualize and represent them (Hall, 1997: 3). These studies provide a strong foundation for conceptualizing how issue frames can be examined from a linguistic perspective.

In describing the role of mass media in affecting public perceptions and attitudes, the agenda-setting theory (McCombs & Shaw, 1972) states that as opposed to passively transmitting information and selecting and rejecting a day's news with regard to reality, news media focus attention and influence the public perceptions of what are the most salient issues of the day (McCombs & Bell, 1996: 93). The effects of intermedia agenda-setting are significantly influenced by a group of agenda setters which encapsulate various elite news organizations, including *The New York Times* and *The Washington Post* (Mathes & Pfetsch, 1991: 36). These organizations both affect the salience of specific issues on the agendas of other media institutions and sustain the news norms among journalistic communities (Nygaard, 2020: 767). In a content analysis of 636 news articles from *The Los Angeles Times*, *New York Times*, *Wall Street Journal*, and *The Washington Post*, Boykoff & Boykoff (2004) found a notable divergence between the coverage of climate change in American mass media and scientific publications. Moreover, Nelkin (1995) notes that the general public understands the science of climate change less through past education and personal experience than through the filter of journalistic language and linguistic framing. The study described in this paper is based on the premise that the language used in climate change stories and narratives that are presented by the media heavily influence how individuals think and act in response to anthropogenic climate change (Weingart et al., 2000; Corbett & Durfee, 2004; Hart, 2011).

2.3 Ecolinguistics

Emerging as a part of a broader ecological turn within the humanities and social sciences (Stibbe, 2015: 7), ecolinguistics focuses on the relationship between language and the environment, as well as the way in which they mutually influence one another. As defined by Ainsworth (2021: 390), within the context of ecolinguistics, ecology is how humans treat one another and the natural world, while language comprises of how our ideas, ideologies, thoughts, and worldviews affect how we treat others and nature. Fundamentally, ecolinguistics aspires to examine linguistic phenomena found in inter-language, inter-human, and human-nature

relationships within the normative framework of a specific ecological philosophy (S. Chen, 2016: 109). Principally, these frameworks, or “ecosophies”, are based on the notion of ecological equilibrium, which, unlike positivist perspectives, reject the separation between nature and humanity defined by Cartesian dualism, instead proposing that ecological crises require both scientific solutions as well as ethical introspections of anthropocentric activities (S. Chen, 2016: 109). In doing this, ecolinguistics concerns itself with questioning the narratives that underpin our current unsustainable way of living, aiming to expose the discourses that are either implicitly or explicitly encouraging ecological destruction and social injustice (Stibbe, 2014: 117).

According to LeVasseur (2015: 22), there are currently three distinctive yet interrelated schools of thought in ecolinguistics: the Haugenian tradition, Hallidayan tradition, as well as the biolinguistics tradition. The Haugenian approach, also known as language ecology, is mainly concerned with the study of the effect of the environment on language (Haugen, 1972). Steffensen & Fill (2014: 7) further elaborated on the Haugenian tradition by defining four subtypes of ecologies that language can be situated in, including symbolic ecology, natural ecology, socio-cultural ecology, as well as cognitive ecology. Similarly to the Haugenian approach, the biolinguistic tradition adopts a more practical understanding of language and ecology by conceptualizing the existing global multilingual system as a single ecological system, with the extinction of minority languages resembling the loss of biodiversity on Earth (S. Chen, 2016: 110).

Inversely to the two other theoretical strains, the Hallidayan approach, often referred to as ecological linguistics, studies the effect of language on the environment (Halliday, 1990). Halliday adopts a functional approach toward language research, due to which the anthropocentricity of human language gives it partial accountability for human being’s unecological practices (S. Chen, 2016: 110). Researchers utilizing the Hallidayan framework commonly situate their research in the intersection between ecolinguistics and critical discourse studies (Stibbe, 2014; Stibbe, 2015). As further noted by Stibbe (2014: 122), as the contemporary media landscape is heavily dominated by discourses encouraging and glorifying material growth and consumerism, ecolinguistics can provide insightful theoretical and methodological contributions in raising ecological awareness among varying groups of people.

Various scholars have examined several discourses from an ecolinguistic perspective, including narratives about economics (Halliday, 2001; Stibbe, 2005), natural resources (Kurz,

Donaghue & Rapley, 2005; Meisner, 2007), climate change (Doulton & Brown, 2009; Ihlen, 2009), and energy (Russell et al., 2011). According to Stibbe (2015: 24-33), discourses can broadly be categorized into three subtypes: beneficial, ambivalent, and destructive discourses. From an ecolinguistic perspective, the narratives encapsulated within these discourses may reveal habitual, anthropocentric patterns of thought that both affect and explain our interaction with the natural world (Goatly, 1996; Osland, 2002; Stibbe, 2015). For instance, when examining economics textbooks commonly used in higher education institutions, Stibbe (2020: 2-3) noted that one highly prevalent discourse, the discourse of neoliberal economics, was a particularly common destructive discourse. Neoliberal economical discourses utilize particular word clusters, including *consumer*, *efficiency*, and *utility*, in aiming to shape how humans regard the environment as a source for economic growth. According to Mühlhäusler (1996), the explicit critique of linguistic practices that institute the degradation of the natural environment is a principal feature of any eco-critical analysis. Consequently, ecolinguistics is a central discipline in the field of ecocriticism, which employs ecological attitudes in the examination of literary texts (Garrard, 2012; Glotfelty & Fromm, 1996). Stibbe (2017: 170) further argues that the underlying narratives maintaining the current industrial civilization are steering toward a future of escalating ecological destruction and increasing social injustice. Therefore, the critical examination of narratives propelled by influential actors, including mass media, is crucial in the resolution of the current environmental crisis, particularly in terms of circulating narratives that do not portray the environment as an inexhaustible resource for unrestrained human exploitation (Ponton, 2022: 489).

2.4 Ecological Discourse Analysis

As an independent paradigm, ecological discourse analysis (EDA) is an ecologically oriented analytical framework that examines linguistics based on a specific ecosophy (He & Wei, 2018: 66). Primarily drawing from function-orientated theories of linguistics, EDA aims to expose the effects of language use on the environment (Cheng, 2022: 189). Prior research utilizing EDA has examined the involvement of the language system in constructing or influencing a viewpoint on ecological issues (Alexander & Stibbe, 2014: 107). Numerous of these studies have focused on lexical choices and their discursive implications.

Studies employing ecological discourse analysis vary in purpose and depth of analysis, but many of them share a set of general characteristics that define their ecolinguistic approach (Stibbe, 2014: 118). Notably, the focus of these studies is on discourses that have a consequential effect on how people treat the ecological systems that life is built upon. Such

discourses are examined with reference to how clusters of linguistic features represent shared values, norms, and social beliefs, which are in turn examined through the employment of a particular ecosophy. Overall, such studies aim to either expose discourses which are deemed ecologically destructive or ambivalent, or bring attention to discourses which appear as ecologically beneficial. Aside from its ecological dimension, the central characteristics of EDA are similar to those of traditional critical discourse analysis (Stibbe, 2014: 119).

Employing the method of description-explication-explanation, ecological discourse analysis can be utilized to provide an in-depth analysis of the attitude resources as well as the intended information conveyed in news discourses discussing climate change (Zhang et al. 2023: 5). Notably, the descriptive dimensions of ecological discourse analysis refer to the examination of language features in such news discourses, while the explication approach describes the processes of discourse production, and the explanative perspective aims to rationally explore the abstract cultural and social factors of discourse (Zhang et al. 2023: 5). Applying these three dimensions in examining news discourses within the context of this study will aid in conducting a detailed ecological discourse analysis of the news samples and provide more thorough overview of the types of linguistic features that may be used in constructing environmental discourses.

2.5 Word Frequency

Frequency-sorted word lists have been a standard methodological practice for exploiting corpora (Baron, Rayson & Archer, 2009: 41). As defined by Baker (2010: 19), at its simplest level, frequency denotes the number of times a linguistic marker occurs in a text or a corpus. Typically, the use of language involves a few high frequency words and numerous low frequency words (Burch & Egbert, 2020: 338). The use of words in news publications will vary according to numerous social, political, and cultural factors, as topics become more or less salient in public discourse (Holdaway & Piantadosi, 2022: 2). As a quantitative measure, frequency analysis can provide functional interpretations of linguistic patterns (Halder, 2017: 2). In terms of producing discourses, word frequency can be an indicator of markedness or a representation of an exposure rate (Baker, 2010: 125; Wallis, 2012). Notably, when a language user is frequently exposed to a given linguistic feature, the cognitive activation associated with that feature becomes increasingly entrenched or routinized (Schmid, 2007: 119-120). In examining how patterns of particular words collocate together, frequency can expose associations between words and the broader themes behind them (De Simoni et al. 2014: e178). Furthermore, frequency of words or sequences of words can be examined to identify the

specific foci of a corpus or text (Baker, 2010: 127). This claim would apply to how readers perceive and internalize the media-driven linguistic framings or stories regarding the environment and energy usage.

2.6 Lexical Cohesion

There are four ways by which cohesion is expressed in English: by conjunction, reference, ellipsis, and lexical organization (Halliday & Matthiessen, 2004: 532). Whilst conjunction, reference, and ellipsis are considered grammatical cohesive resources, lexical cohesion is created through the choice of lexical items (Halliday & Matthiessen, 2004: 535). As further defined by Widdowson (1978: 31), as “the linguistically signalled relationship between propositions”, lexical cohesion is a textual attribute that examines the methods by which the words in a given text are connected with one another in order to attain textual coherence. As noted by Pan & Kosicki (1993: 62), lexical choices represent a principal aspect of news discourse construction and are habitually made in concordance with syntactic or scriptural rules. In establishing correspondence between a lexical signifier and signified, newsmakers categorize and label various topics of coverage based on pre-existing frames. Repetition, for instance in the form of co-occurrence, of words is the most common form of lexical cohesion (Xie et al. 2011: 2875). Measuring word frequency and assessing the level of lexical cohesion can provide insight into how specific discourses are presented to readers as newsworthy through phrases that are repeated often in a single article.

2.7 Modality

In linguistics, modalities can be understood as structures that in some way evaluate the state of affairs (Sulkunen & Törrönen, 1997: 45). Similarly, Bundsgaard & Steffensen (2002: 443) define modality as the examination of the attitudes of the communicating subject towards the produced dialogue and its subjects, co-subjects, and objects. No text functions without a textually constructed narrating subject and a receiving reader (Sulkunen & Törrönen, 1997: 51). Even forms of text conceived as transparent and predominately objective, such as news reports, imply the existence of a narrator. As further described by Fairclough (1992: 158), modality encompasses any linguistic unit that expresses the producer’s opinion, or affinity with the proposition, including modal verbs and adverbs, hedges as well as epistemic verbs. In reporting, modal aspects of the morphemes can be one of the ways in which newsmakers indicate their systems of belief and knowledge (Bundsgaard & Steffensen, 2002: 444). Therefore, we can assess and criticize broader socio-, bio-, and ideological practices by examining the modality of linguistic constituents, including morphemes. From an ecolinguistic

perspective, ecological modal commitment is the degree to which individuals pledge themselves to the ecological validity of their speech (Wei, 2021: 316).

In news reporting, semiotic modality is concerned with the perceived factual truth of a given news piece (Holt & Schirmacher, 2021: 91). Moreover, examinations of semiotic modality often include discussions of facticity, which refers to the degree to which a claim or a description is presented as an established, certain truth through the use of high modality as well as calls to authority, for instance by the use of direct quotes (Stibbe, 2015: 202). The truth claim associated with a media narrative presented as factual emphasizes the indexical function of written quotes of sources that are integrated into journalists' personal framings of events. Additionally, as modifying written text is semiotically unlimited, journalists may often freely select discourse to be quoted in the finished media item (Haapanen & Perrin, 2017: 431). Whilst quotes in news articles are inherently multifunctional, this study will focus on how quotes function in adding credibility as well plausibility to different narratives.

3. Present Study

3.1 Aim and Research Questions

The aim of this study is to analyze how energy narratives are constructed in news discourses. Specifically, this paper combines ecological discourse analysis with prior research on energy usage narratives as well as climate consciousness in the media to analyze the discursive choices and stance-taking in a selection of four American broadsheet articles published prior to as well as throughout the 2021-present global energy crisis. In concentrating on the discourses present in the examined newspapers, the study seeks to investigate how the selected articles in *The New York Times* and *The Washington Post* portray the use of fossil fuel-based energy sources throughout the different stages of the evolving energy crisis with reference to word frequency and lexical cohesion as well as modality.

With Stibbe's (2014: 117) definition of ecolinguistics as well as Fairclough's (1989) three-dimensional model as the theoretical foundation, this study utilizes ecological discourse analysis to analyze the climate-related narratives in the news coverage of the 2021-current global energy crisis in *The New York Times* and *The Washington Post*, with the aim of addressing the three following research questions:

1. How are fossil fuel-based energy sources represented in the two newspapers throughout the four stages of the 2021-present global energy crisis?
2. How do word frequency, lexical cohesion and modality contribute to the construction of these representations?
3. Was there evidence of delay discourses in the sampled articles?

The present study focuses on the current global energy crisis as it marks numerous significant events in climate change history. Additionally, due to the crisis being timely, the news media narratives regarding the ecological dimension of the crisis have not been extensively studied, specifically from an ecolinguistic framework. Furthermore, analyzing broadsheet articles can provide insight into how the language use in news reporting can steer us to either protect or destroy the world that we live in and that sustains us.

3.2 Description of the Data

The study encompasses the identification and analysis of four news articles published in *The New York Times* and *The Washington Post* during the 2021-present global energy crisis as well as the 2019 post-COVID recession that preceded it. These two newspapers were chosen as they are some of the highest circulation papers in the United States (Stecula & Merkley, 2019: 5).

Additionally, they have a significant digital presence, with *The New York Times* ranking as the 3rd and *The Washington Post* as the 7th most prominent news websites on the Internet (Stecula & Merkley, 2019: 5). Furthermore, they have also been the focus of a large body of scholarly literature in communication research, as they are considered as influential agenda-setters for other news media publications as well as their readership (Golan, 2006; Zhang, 2018). The two newspapers were selected to provide a comparison between America news media with different target audiences. While the *New York Times* appeals to a general educated readership, the *Washington Post* specifically interests those involved in American politics (Meyer, 2018: 4). The reporting of climate-related news stories in such broadsheets may play a central role in shaping public perceptions and influencing climate change as well as representing the larger perspectives of the press industry in the United States.

As this paper aims to explore the environmental and energy-related discourses in *The New York Times* and *The Washington Post*, the news reports were collected based on how central these topics were in the provided narratives by typing in a set of key words in the searching bars of the websites of both of mentioned newspapers (e.g. Zhou & Qin, 2020). The chosen articles were filtered using the keywords (*global energy crisis, climate change, sustainable energy, and fossil fuels*). The calendar years chosen, 2019, 2020, 2021 and 2022 were identified as major years for climate change events within the context of the current global energy crisis. Such notable events are more likely to trigger an influx of coverage in news media (Legagneux et al., 2018). The timeline of the energy crisis was further divided into four subcategories: the starting stage, pre-escalation stage, escalation stage, and the present. As the chosen data set is non-randomized and it focuses principally on the ongoing energy crisis, the study has inherent limitations regarding its generalizability. However, as the economic properties of climate change discourses have been previously studied, the methods and findings allow for some generalizability.

3.3 Methodology

Critical discourse analysis (CDA) focuses on the production of meaning in texts as well as the linguistic features of language which can construct a relation between discourse and specific cultural, social, and political contexts (Carvalho, 2007: 227). Ecolinguistic discourse analysis (EDA) is a recently emerged form of CDA that relates the study of language with ecology (Fill, 1996). This paper draws on Stibbe's (2014: 117) definition of ecolinguistics as a tool for questioning the narratives that maintain our current unsustainable way of life. However, unlike a variety of prior ecolinguistic research, this thesis does not aim to judge broadsheet articles

according to a specific ecological philosophy, or “ecosophy” (Stibbe, 2015: 10). Rather, the study will, in a deductive manner, reflect the discursive findings on pre-established categories of climate discourses conceptualized by Lamb et al. (2020), expanded upon further later in this section. For the purpose of making a methodological distinction, Tognini-Bonelli (2001: 65) makes a distinction between a *corpus-based* approach and a *corpus-driven* approach. According to them, the concept of *corpus-based* is used to refer to a methodology that exploits a corpus to test or exemplify the validity of existing linguistic concepts and theories, whilst in *corpus-driven* research the examined linguistic construct inductively emerge from the analysis of a given corpus (Tognini-Bonelli, 2001: 65, 84). As the focus of this study is analyze data extracted from a small corpus as examples with reference to pre-existing theoretical statements and categorizations, the methodology is notably corpus-driven and deductive.

The study described here utilizes both quantitative and qualitative approaches to EDA. The broadsheet articles are defined and analyzed with the adaptation of the first level of Fairclough’s three-dimensional model (1989, 1992), which consists of three interconnected stages of analysis tied to three dimensions of discourse. The first stage, description, examines the formal features of the text, including grammar, vocabulary, and larger textual structures (Fairclough, 1989: 26). The second stage, interpretation, is concerned with the association between interaction and text (Fairclough, 1989: 26). This process highlights that the interpretation of textual analysis should be produced with respect to the production, distribution, and consumption of the text. The third level is explanation, which aims to describe the relationship between social context and interaction by inspecting the analyzed discourse within a wider social practice (Fairclough, 1989: 26). As noted by Fairclough (2003: 2), critical discourse analysis is based on the assumption that language is an essential part of social life, which justifies the use of CDA as a valid methodology in examining language use. Furthermore, CDA, as opposed to systemic functional linguistics (SFL) and corpus linguistic, was deemed a fitting method as this study predominately focuses on the interconnectedness of language, institutional power, and ideology within the context of American mass media. Whilst sharing a common research interest in society and language, CDA and SFL have different scholastic emphases with SFL focusing more on the social and informative functions of language usage (Le & Wang, 2009: 27). The value these different methodologies can bring to the research topic will be further expanded upon in Section 5.

To identify and examine the common linguistic features and fundamental logic of environmentally destructive discourses as they appear in news articles, the analysis detailed in

this paper will refer to a typology of discourses conceptualized by Lamb et al. (2020: 3). The differentiation of these discursive categories is based on the set of foundational questions outlined earlier in Section 2.1. Based on an extensive review of prior research as well as a systematic content analysis of news articles published in the US and Europe, they identified and categorized a set of climate delay discourses, which are utilized as a tool to disorientate and disincentivize climate action (Lamb et al. 2020: 2-3). In doing so, this study aims to contribute to prior research by examining whether such discourses are present in American news media and whether they constrain public understanding of climate change. Moreover, as such discourses have not been priorly studied within the context of the ongoing energy crisis, the data analyzed in this paper may provide new insights into how ecological narratives develop throughout varying stages of such a crisis.

As noted by Biber and Finegan (1991: 209), studies examining collections of text tend to utilize the corpora as a resource for analyzing specific lexical items, grammatical constructions, or phrases within their sentential context. Such research is significant in its ability to inspect particular linguistic constructions in naturally occurring discourse rather than in made-up contexts. The following study will predominately focus on Fairclough's first dimension as a means to identify linguistic patterns in discourses to determine their overall purpose or theme. Notably, the study will examine word frequency and modality, with significant focus given to the semiotic modality of reported speech. In outlining how particular clusters of linguistic features within news narratives combine in discourses to frame specific worldviews, the study aims to identify how potential neoclassical economic discourses attempt to justify the actors of energy corporations and state actors in promoting ecologically destructive narratives regarding the promotion of non-sustainable energy sources as a solution to the energy crisis.

When calculating word frequency, the seven most commonly occurring words were listed in a table in descending order. As grammatical words such as *the*, *to*, *and*, *in*, *a*, etc. take up a notable percentage of the word frequency of texts written in English, these stop words were disregarded in the measuring process. Additionally, image captions and headlines were also ignored due to the focus of this study being on the news texts specifically. As noted by O'Neill (2020: 11-12), in news media, numbers and words require the utilization of the rational processing system, whilst embedded images and complementary captions can be processed quicker through using the more affective experiential processing system. As climate change imagery is processed differently and prompts readers to engage divergently with a given news piece, the analysis of the press photographs accompanying the sampled news stories is beyond

the scope of this study. These factors were noted when listing the overall word counts from which the word frequency was calculated, which are shown in brackets in the titles of the tables displayed in Section 4.1.1. To determine the statistical significance of word frequencies between the various samples, the data sets will be examined with the log-likelihood test, which compares the frequency of a specific word between two corpora with regards to the total number of words in each text (Paquot & Bestgen, 2009: 252). If the log likelihood of the result is greater than 6.63, the probability of the result occurring by chance is less than 1%, which is expressed as $p < 0.01$, meaning that we can be 99% certain of potential statistical significance. If the log likelihood is 3.84 or more, the probability of it being a coincidence is below 5%, meaning that certainty of significance is 95%, or $p < 0.05$.

Cohesion analysis is one of the methodological approaches associated with CDA (Malah, 2015: 291). As lexical cohesion is established through the structure of a text's vocabulary by means of how different vocabular elements are connected to one another, the repetition of words is a significant constituent in creating lexical cohesion. Halliday and Hasan's (1976: 340-455) model of lexical cohesion is grounded in the idea that lexical cohesive devices are separated into two main categories, reiteration and collocation. Whilst collocation discusses the lexicosemantic associations between different lexical items, this study will focus on the concept of reiteration, which includes the repetition of the same word, the use of a synonym, the use of a general substitutive word as well as the use of a superordinate (Tanskanen, 2006: 32). Similarly to a study conducted by Malah (2015: 296), this study employs a mixed-mode design. The types of word frequencies are quantitatively measured, after which the data is examined to show how the attainment of coherence through repetition aids in identifying discourses. To examine the level and significance of the lexical cohesion in the articles, the semantic links formed through the use of lexicon were identified with reference to word frequency and repetition, after which they were analyzed as factors contributing to the overall meanings of the sampled texts.

A pilot study was performed in order to assess and validate the purpose, methodology, as well as the procedures of the research. Furthermore, the pilot study aimed to test the suitability of the method of data collection as well as the chosen means of analysis. The pilot study was carried out by determining the set of analyzed discursive features associated with written texts and measuring how much time it took to achieve a satisfactory level of analysis of four separate articles. When analyzing the word frequency, modality as well as the semiotic modality of reported speech of the four editorials included in the data set, it was concluded that given the

temporal frame allowed for the thesis, it would be most productive to predominately focus on one of Fairclough's dimensions in identifying and conceptualizing discourses. The conducted pilot study ensured that the research can be completed within an appropriate time frame for the purpose of a thesis.

3.4 Ethical Considerations

The author acknowledges and adheres to the principles of good scientific practice and sustainable research ethics. As mandated by the National Advisory Board on Research Ethics in Finland, the present study complies with relevant discipline-specific procedures and practices. None of the ethical risks as described by the National Advisory Board on Research Ethics are present in this study.

4. Analysis

4.1 Description

Adapting from Fairclough's (1989) three-dimensional framework, the analysis detailed in the following section will focus predominately on the in-depth analysis of the formal features of text, principally word frequency, lexical cohesion, and modality, in the sampled articles listed in Table 1. The first part of the analysis will feature both quantitative and qualitative methods. First, there will be examinations of word frequency as well as the repetition of different modal forms as pointers of lexical cohesion with reference to log likelihood as an indicator of statistical significance. After that, the discursive findings will be considered in relation to Lamb et al.'s (2020) four categories of delay discourses. In discussions of modality, the analysis will expand upon the significance of semiotic modality as well as reporting modes in the construction of discourses as well as in the establishment of facticity specifically in the context of news media.

Table 1. Samples in the Study

Sample	Newspaper	Date	Headline
1.1	<i>The New York Times</i>	Mar 20, 2020 (Starting stage)	American Oil Drillers Were Hanging on by a Thread. Then Came the Virus
1.2	<i>The New York Times</i>	Feb 2, 2022 (Pre-escalation stage)	How Spiking Energy Prices Complicate the Fight Against Global Warming
1.3	<i>The New York Times</i>	Feb 23, 2022 (Escalation stage)	Climate Fears on Back Burner as Fuel Costs Soar and Russia Crisis Deepens
1.4	<i>The Washington Post</i>	Aug 17, 2022 (The Present)	As Europe Burns, Europeans Search for Firewood

4.1.1 Lexical Cohesion

The description of linguistic features involves lexical classification, as lexical choice can be a common presentational feature used to construct social reality in news reporting. As presented in Table 2, the lexical items utilized by *The New York Times* and *The Washington Post* throughout the different stages of the energy crisis represent varying ideological positions on the issues of climate change, fossil fuels, as well as the role of oil and fuel corporations.

Table 2. Top 7 Content Lexemes in Samples 1.1 (839) and 1.2 (1054)

Sample 1.1			Sample 1.2		
Rank	Keyword	Frequency	Rank	Keyword	Frequency
1	oil	24	1	gas	27
2	companies	19	2	prices	18
3	energy	16	3	energy	17
4	debt	13	4	oil	14
5	prices	10	5	global	13
6	billion	9	6	coal	12
7	bonds	7	7	natural	11
-	capital	7			

The two samples from the earliest stages of the energy crisis have numerous similarities in which words appear to have high lexical frequency. However, between Samples 1.1 and 1.2, the log likelihood (LL) value for oil is 5.44 ($p < 0.05$), meaning that the first article centers its environmental discourses more heavily on oil relative to the second article. Lexemes related to the commodification of energy – “prices”, “companies”, and “bonds”, appear in both samples. Additionally, the two articles actively repeat and reiterate similar words or quasi-synonyms, a process described by Fowler (1991: 85) as overlexicalization, a pragmatic strategy aiming to encode specific ideology in news discourse.

However, the articles also differ in various ways. Sample 1.1. holds a highly anthropocentric tone, as it describes the effects of the energy crisis through portraying American oil companies as being on the brink of financial collapse. Additionally, the article shapes a victimized image of the American oil and gas industry by stating that the energy sector has “buckled” and that the crisis has been a “body blow” to the industry. The most common keyword phrases repeated in the sample are “oil prices (8), “energy companies” (6), “junk bonds” (4) and “oil companies” (3), which are all related to finance and economy or energy. Similarly, in Sample 1.2, the most frequently appearing phrases are “natural gas” (10), “gas prices” (6), “fossil fuels” (6), and “oil prices” (5), echoing the anthropocentric and neoliberal focus of the first sample. The lack of lexical items discussing action for renewability is helpful in revealing the thematic priorities of the two samples.

Table 3. Top 7 Content Lexemes in Samples 1.3 (878) and 1.4 (733)

Sample 1.3			Sample 1.4		
Rank	Keyword	Frequency	Rank	Keyword	Frequency
1	energy	16	1	European	11
2	coal	12	2	Europe	10
3	gas	12	3	gas	8
4	said	10	4	winter	8
5	Europe	9	5	energy	8
6	Russia	9	6	more	7
7	climate	8	7	continent	7
-	more	8	-	countries	5
-	oil	8	-	last	5
			-	Russian	5

Sample 1.3 was published during the escalation phase of the crisis, which coincides with the 2022 Russian invasion of Ukraine. In attributing the inflated costs of various energy sources as the “Russia Crisis”, the article effectively frames Russia, and its current president Vladimir Putin, as the primary causes in the ongoing crisis. In doing so, the linguistic framing promotes discourses of climate delay by redirecting responsibility to a singular antagonist. The increased frequency of terms such as “Europe”, “Russia”, “European” and “Russian” when compared to Samples 1.1 and 1.2 point to a shift in the increasingly Eurocentric tone regarding how the crisis is discussed in these news sources.

Sample 1.3 simultaneously acknowledges the harmfulness of specific fossil fuels by employing descriptors such as “dirty” whilst also establishing fossil fuels, namely gas and oil, as the best sources of energy with no better alternatives (Example 1).

- (1) Europe’s transition to sustainable energy has always been an intricate calculus, requiring it to back away from the dirtiest fossil fuel like coal, while still working with gas and oil producers to power homes, cars and factories until better alternatives are available. (New York Times 23/02/2022)

Viewed through an ecolinguistic lens, the minimal frequency by which the samples discuss climate change with terms relating to nature may reflect harmful discourses of ecological degradation. As lexical classification can be used as a linguistic indicator of the ideological stances embedded in news discourse (Y. Chen, 2016: 137), the overall conclusion is that all four of the samples demonstrate a predominantly corporate- and fossil fuel-centric perspective.

4.1.2 Modality

Modality in the selected editorials were expressed through varying linguistic forms, including modal adverbs, modal auxiliary verbs, and evaluative adverbs.

In Sample 1.1, the writer indicated a degree of evidentiality using the modal adverb “likely” (Example 2).

(2) The job losses that follow will likely be significant, worsening what’s expected to be a deep recession in the United States. (New York Times 20/03/2020)

Moreover, the writer expressed their own evaluation of the severeness of the situation by employing evaluative adverbs such as “heavily” and “sharply”. The use of evaluative adverbs provides very little to no specification for the stances of the authorial voice regarding their proposition or statement, which leaves it open to interpretation and vague to whether the reporter is aligned or disaligned with the propelled narrative.

All of the samples frequently utilize some of the modal auxiliary verbs, which include “shall”, “should”, “can”, “could”, “will”, “would”, “may”, “must” and “might”, as stance markers. The predictive modal “will” is used across the samples to make futurological statements and predictions that go beyond the reporter’s knowledge, for instance suppositions about the extent of the economic damage caused by the lessened use of non-renewable energy sources.

Table 4. Modality Through Modal Auxiliaries in the Samples

Auxiliary Modals		N	%
Prediction	will, would, shall	23	47.92
Possibility	can, could, may, might	25	52.08
Necessity	must, should	0	0

Based on the information provided in Table 4, the editorials were more inclined to use possibility and prediction modals, signaling that reporters were predominately concerned with making predictions and implying possible outcomes as opposed to inciting feelings of obligation in readers by using necessity modals. The statistical frequency of necessity and obligation modals is negligible.

Sample 1.3 displays the use of such modal verbs as low median probability markers in indicating the author’s degree of certainty in the proposition they were making or promoting

regarding the renewed interest in fossil fuels during the escalation stage of the crisis. (Examples 3 and 4).

(3) The renewed emphasis on energy independence and national security may encourage policymakers to backslide on efforts to decrease the use of fossil fuels that pump deadly greenhouse gases into the atmosphere. (New York Times 23/02/2022)

(4) The climate policy “is a suicidal mission” that could leave the entire region overly dependent on Russian fuel, Mr. Siekaniec said last week as American troops landed in his country. (New York Times 23/02/2022).

The facticity patterns in Sample 1.2 aim to convince the reader that climate policies that denounce the use of fossil fuels are regressive due to high energy demands that green energy systems would not be able to fill. However, the claim to truthfulness in these discourses are highly mixed, as the use of modals “may” and “could” are markers of low modality statements.

(5) There’s a broader lesson here, energy experts said. Even as governments and businesses invest in low-carbon energy sources like wind and solar power, the world will remain deeply reliant on fossil fuels for years to come.

High modal assumptive verbs such as “will remain” are used to convey that due to current energy demands, the increasing burning of fossil fuels is not only inevitable, but favourable within the context of the crisis (Example 5). From an ecolinguistic perspective, the discourses surrounding energy usage present in the sampled articles often introduce the discussed issues with low modality, often framing them as tentative assumptions. However, after initial hesitancy in making statements with high modality, as the articles progress, most contentiousness evident in the language use is minimized and the neoliberal perspectives of consumption and financial growth become more evident and certain.

4.1.3 Semiotic Modality and Reported Speech

By utilizing quotes attributed to authority figures and experts, journalists can establish the newsworthiness of the discussed issue and perceivably verify the claims presented in the news piece as facts (Haapanen & Perrin, 2017: 428). Predictions and other quotations from voices presented as experts in their respective fields solidify the perceived reliability and authority of the insecurity surrounding energy transition, which further consolidates the message that an

increased production of fossil fuel-based energy is an integral part of the solution to the ongoing energy crisis.

Sample 1.1 reflects some of the predominant ecology-related discursive patterns commonly attributed to the COVID-19 pandemic. The article emphasizes an anthropocentric approach to the crisis by referring to a direct quotation portraying fossil fuel-based companies as the protagonists whilst framing the virus as the main antagonist with reference to the corporations (Example 5).

(5) “The shale players were already stretched to their limits, and the virus has just broken every thread they were holding on by,” said Ed Hirs, an energy economics lecturer at the University of Houston. (New York Times 20/03/2020)

In using devices such as reporting clauses and quotation marks, the article aims to represent this specific discourse as being of considerable social importance. Additionally, the article forgoes attributing the causes of climate change to human actors and focuses on outlining the negative societal and economic impacts of weakened fossil fuel corporations. Furthermore, the framing of oil companies and fossil fuels as economical benefactors overshadows most of the other themes in Sample 1.1. This makes the coverage of the environmental dimensions of the crisis one dimensional, as there is no explicit mention of nature or the environment in the publication. Excluding the environment in widespread discussions about the use of fossil fuels may promote discourses of fossil fuel solutionism and ecological erasure. From an ecolinguistic perspective, such discourses about nature can commonly lead to harmful behaviors and societal shifts in how we frame ecologically destructive actions.

Similarly to Sample 1.1, Sample 1.2 favors neoliberal discourses by advocating for the importance of economic factors over the environmental effects of depending on non-renewable energy sources (Example 6).

(6) “Overall, we still expect coal to decline further in the years ahead, but unless there are new policies put in place to clean up the power sector, the coal industry could see a bit of a lifeline if there are big swings in the gas market.” (New York Times 02/02/2022)

As direct quotes exert notable influence on audiences, readers are prone to adopting a quoted position as opposed to the paraphrased one (Haapanen & Perrin, 2017: 430). In emphasizing the extent to which the transition to renewable energy sources will disrupt the global economy,

the article promotes discourses favoring non-transformative solutions as well as valuing energy demands over environmental factors. The narratives presented in both Sample 1.3 and Sample 1.4 lean nearly exclusively on quotes (e.g., Examples 7 and 8) Due to the space limitations of mediatized public discourse, many of the quotations are condensed and consequently modified, which may shape the function of the quotes to better fit the predefined function of the article as well as ideological values of the journalists. Moreover, as shown by Example 7 being immediately followed a claim in the article that “Europe’s transition to sustainable energy has always been an intricate calculus”, as a broader trend in the examined articles, numerous environmentally beneficial discursive constructions were immediately followed by a contradictory, often corporate-centric statement which undervalued the significance of an energy shift to renewable and sustainable sources and invoked commercial frames (Stibbe, 2015: 47).

(7) Ian Goldin, a professor of globalization and development at the University of Oxford, warned that high energy prices could lead to more exploration of traditional fossil fuels. “Governments will want to deprioritize renewables and sustainables, which would be exactly the wrong response”, he said.

(8) “The energy crisis is being exacerbated by very low water levels at key waypoints on Europe’s rivers that are making it difficult for diesel, coal and other commodities to be transported through the continent,” reported Bloomberg News. “Utilities could end up using more gas as an alternative.” (The Washington Post, 17/08/2022)

However, meaningful interpretation of word frequency, lexical cohesion, modality, and semiotic modality requires critical analysis through separate analytical frameworks; within the context of this study, the preoccupation with specific terms will be considered through the lens of ecolinguistic discourse analysis.

4.2 Discursive Themes

4.2.1 Erasure of causality

Media texts can become discourses of delay if they purposefully redirect responsibility from a specific agent for mitigating climate change. In view of causality, the editorials often avoided underlining human actors by disassociating them from non-human causes, such as coal, oil, and greenhouse emissions. Notably, whilst some of the samples have a more anthropocentric focus, none of them emphasize the impact of anthropogenic factors on the global climate.

Moreover, living beings and the environment are portrayed as either objects that can be viewed and treated in line with their human-assigned ideological or technological value, or sidelined as non-factors.

Furthermore, the sample promotes a discourse of individual responsibility over policy changes encouraging the adaptation of alternative energy sources by noting that “the Dutch, for example, have been urged to limit showers to five minutes and forswear using air conditioning or clothes dryers”. As noted by Maniates (2001: 33), when responsibility for environmental degradation and destructive practices is individualized, the role of institutions, political actors, as well as the distribution of societal influence and power is deliberately disregarded. Such practice not only legitimizes the current neoliberal dynamics of production and consumption, but also publicly externalizes the culpability of environmental deterioration to those with the least institutional power.

4.2.2 Push for non-transformative solutions

Media representations and policy statements can become discourses of delay when they draw focus away from potentially effective solutions by endorsing non-optimal measures (Lamb et al. 2020: 3). A fossil fuel savior frame aims to minimize the severity of anthropogenic climate change and consequently justify the continued use of non-renewable energy sources (Supran & Oreskes, 2021: 712). In the analyzed articles, solutions to environmental degradation were largely constructed around the portrayal of alternative solutions as threatening to existing physical structures and institutions, societal well-being, and economic security. Financial impacts, and the groups that are associated with responding to them, were evidently prioritized in the media reports produced throughout the temporal periods of the energy crisis.

In the early stages of the crisis, *The New York Times* focused heavily on financial and economic dimensions by indicating that “the crisis has been a body blow to the American oil and gas industry”. In its framing, the article relays that narratives that deviate from neoclassical economic discourses will be societally disruptive and that upholding the fossil fuel industry is part of the solution, which is commonly associated with industry pushback against regulation (Lamb et al. 2020: 3).

Similarly, Sample 1.4 notes that “the energy crisis is being exacerbated by very low water levels at key waypoints on Europe’s rivers that are making it difficult for diesel, coal and other commodities to be transported through the continent”, avoiding mentioning the environment itself and implying that the forementioned non-renewable energy sources are the primary

solution to the energy shortage in Europe. The article only makes note of non-transformative solutions for the energy shortage, effectively framing ecologically destructive practices as potential solutions for the crisis.

Throughout the pre-escalation and escalation stages as well as the present, economic solutions were prioritized despite many of the articles making note of the environmental impacts of non-renewable energy sources. The intersections of the dualisms that simultaneously centralize economic narratives whilst acknowledging the destructive effects of inefficient and timely climate responses are demonstrated in both the quantitative and qualitative findings. These intersecting dualisms discursively reproduced neoclassical economic and anthropocentric framings of the environment.

4.2.3 Emphasize the downsides

The facticity patterns in the editorials convince the reader that climate policies that aim to minimize the use of fossil fuels are not beneficial for development due to high energy demands that renewable sources would not be able to achieve. The narratives that highlight the shortcomings of alternative energy sources and consequent climate action focalize increasing energy consumption and the lack of diversification in existing energy structures as the principal issues of climate change. However, as demonstrated in the samples, these perspectives are often inconsistent in how they portray alternative energy sources in comparison to fossil fuels, particularly in times of energy crisis.

The general narrative promoted in all four of the articles display messages with a notable lack of specificity regarding how non-renewable energy sources are better suited at meeting current energy demands as opposed to renewable energy sources. In doing so, the articles demonstrate the beneficiaries of oil, gas, and coal to support the credibility of their claims. Discourses of energy poverty and prosperity work to affirm the moral evaluation that continued fossil fuel usage is reasonable and principled within the context of an ongoing energy shortage. Such narratives also fail to provide alternative perspectives by either emitting discussions of other energy sources or by insinuating that they are inherently worse, less efficient, or comparatively difficult to establish when compared to energy infrastructures based on fossil fuels.

Similarly to discourses of erasure of causality, discourses emphasizing the downsides can be categorized as ambivalent discourses, as they may include discussions of ecological problems, but they predominately emanate from organizations associated with destructive discourses and are heavily influenced by commercial or political interests (Stibbe, 2015: 29). Furthermore,

individual behaviors, such as driving a polluting car or leaving electronic devices on standby, are often framed as the principal cause of increasing demands. The popular framing of demand reduction as an issue of individualized responsibility supports the neoliberal narrative of market-efficiency, as it minimizes the role of institutional and corporate actors.

4.2.4 Surrender to climate change

In continuation of discourses that emphasize the downsides of climate action and alternative energy sources, some narratives surrounding climate policies highlight that such implementations are inherently doomed to fail due to the way they would affect politics, society, and overall way of life. Furthermore, an emphasis on adaptation and anticipatory efforts may delay mitigation actions by implying that the risks associated with climate change are not threatening enough require immediate attention. In all the presented articles, the risk-framing of climate change is characterized as uncertain.

Similarly, discourses of change being impossible suggest that society should surrender to climate change and avoid transformative solutions due to the improbability of large socio-economic change. These discourses as they appear in the media have a notable effect on audiences, as they reduce the future to being defined solely by the climate by fabricating an arbitrary deadline often disseminated through the framing of a singular journalist (Hulme, 2019: 5). The publicly set rhetoric of climate deadlines voiced by politicians, commentators, and journalists are often destructive, as they sensationalize climate-related narratives and disincentivize effective climate action by inducing a state of terror and doomism.

Doomism facilitates the argument that any climate-related actions taken on a societal level will always be ineffective given how far climate change has advanced (Lamb et al. 2020: 4). Doomist narratives frame climate change as unmanageable and locked-in: “Waves of extreme heat, compounded by widespread drought conditions, provoked a summer of devastating blazes”. Additionally, sensational statements, such as “It’s really a dragon spitting its fire . . . It’s devouring my forest”, may evoke feelings of resignation in readers. Narratives geared toward spreading hopelessness and doomism among audiences lead to discourses of delay and disempowerment, which do not increase the appeal of working on effective renewable solutions.

5. Discussion

Based on the present study, the intersections between press media and climate change are defined by neoclassical economic discourses which are conveyed through the choice of grammatical constructs, lexical items as well as other linguistic features. One of the aims of this research was to examine how fossil fuel-based energy sources are represented in the samples collected from *The New York Times* and *The Washington Post* throughout the four categorized stages of the 2021-present global energy crisis. The sampled texts are predominately consistent in their framing of climate change-induced energy transition as being insecure and unreliable, which consolidates the idea that the ongoing production and use of fossil fuel-based energy is a central component of the solution to the ongoing energy crisis. Moreover, the data extracted from *The New York Times* often emphasized the negative societal and economic impacts of weakened fossil fuel corporations by focusing on the conceivably harmful effects of alternative energy sources.

As noted by De Simoni et al. (2014: e179), word frequency provides markers of how salient certain concepts and themes are within a given context. The key vocabulary items that are significant to the sampled articles are presented in Table 1 and Table 2. The three most frequently appearing words, *oil*, *energy*, and *gas*, are significant in that they are central to both ecolinguistic vocabulary as they are to the data examined in this study. However, as the detailed research included only news sources as data, it is expected that the level of lexical repetition is high due to word frequency being one of the principal tools in establishing and communicating the central foci of a text to an audience (Baker, 20120: 127). In spite of this, the examined articles are a useful means to garner a better understanding of how environmental issues are discussed by market-oriented news organizations.

The examination of lexical cohesion in the articles shows that all the editorials primarily promoted profit-focused economic discourses that conceptualized the natural environment as either a non-factor or as a resource for profit-generation. The lexical cohesion examined in the samples mostly consisted of simple repetition, which occurs when a lexeme is repeated in an identical form or with no significant grammatical changes (Tanskanen, 2006: 50). As previously examined by Malah (2015), journalists reporting for newspapers may often rely on repetition as a tool to achieve clarity, precision, and cohesiveness in their writing. Moreover, the writers may repeat important words to avoid ambiguity in their messaging. In line with Halliday & Matthiessen's (2004: 535) observations on word choices and repetitions as tools

for lexical cohesion, there are a set of verbal motifs that are identifiable in the samples. As mentioned previously, the major lexical motifs in the texts were *oil*, *energy*, and *gas*. Whilst all the motifs were not the lexemes with the highest frequencies in all the articles, they played a central role in the establishment of cohesion and the predominant discourses as identified in the analysis.

Comparably to prior ecolinguistic research on the use of modals in written texts, the claims to truthfulness in the samples are inconsistent (Stibbe, 2015: 39), with the sampled articles presenting mixed uses of both low modal and high modal statements. Moreover, the utilization of utterances with high modality influences the perceived facticity of the articles, as the use of evaluative adverbs as well as modal auxiliaries expresses implausibility and a low degree of commitment to the propelled narratives. Overall, in line with findings discussed by Stibbe (2015: 130), even though the modal patterns examined in this study are local patterns in a numerically sparse set of news articles, modality enacts a significant role in the construction of the neoclassical economic discursive patterns as well as the levels of facticity expanded upon in Section 4. Moreover, the high prevalence of modals when discussing the potential downsides of energy transition and when pushing for non-transformative solutions also vivifies discourses of erasure of causality, as it minimizes the agency of oil and gas companies in the texts as well as generalizes the growing attractiveness of fossil fuels throughout the energy crisis as a mainstream phenomenon, as opposed to an insulated, predominately financial interest of corporate actors with high media interest.

As noted by Blackmore et al. (2013: 13), popularized texts which appeal to economic gain can minimize our concern for the environment, as such forms of communication can make audiences more materialistic and less motivated to act environmentally. Such narratives can encourage both individuals as well as larger organizations to act in ways that are ecologically destructive as well as justify the behavior of fossil fuel companies by omitting ecological consideration (Stibbe, 2014: 118). As classified by Stibbe (2015: 24-33), discourses that incentivize people to destroy environmental systems that life depends on, including discourses of economics, consumerism, and anthropocentricity, are classified as destructive. All four articles propelled discourses of fossil fuel solutionism by framing non-transformative resolutions to the energy crisis as potential solutions. Moreover, the language employed in the articles devolves responsibility of climate change to non-human actors, primarily the environment itself. Additionally, instead of portraying extreme weather conditions as disastrous effects of anthropogenic climate change, the publications present climate-related

phenomena as separate from climate change. As enquired by the third research question detailed earlier in the paper, these findings point towards the prevalence of discourses of delay in the sampled articles.

The discourses identified in the samples had similar core key messages as Lamb et al.'s (2020) four discourse categories. Notably, the examples provided in the analysis principally reaffirm what Lamb et al. (2020: 3) describe as fossil fuel solutionism, which construes fossil fuels as a cause of social benefit as opposed to environmental degradation. Such solutionist approaches to the use of non-renewable energy sources promoted all throughout the energy crisis are oxymorons, as they aim to naturalize consumerism, economy, and continuous capitalistic growth. As demonstrated in the study, the linguistic devices used to construct these discourses frame fossil fuel companies in an advantageous manner by portraying them as benefactors in the ongoing energy crisis. Moreover, in line with the research conducted by Lamb et al. (2020), such discourses can take form both maliciously as well as with good intentions – however, regardless of authorial intentions, they meaningfully delay or completely prevent significant climate action.

The discussion here points to the existence of climate delay discourses in the examined data, notably discourses of fossil fuel solutionism. Whilst there were no significant discursive developments throughout the four identified stages of the energy crisis, the articles were consistent in their corporate-centricity and economically motivated narratives. As noted in prior research (Jacques & Knox, 2016; Stibbe, 2020)), messages embedded in news media indicating the public support for the hegemony of neoliberalism as well as its support of conventional, environmentally destructive energy sources reflects the power structures of modern industrial capitalism. However, despite enacting a significant role in eroding political and public support for climate action, these four discourses should be distinguished as separate from explicit climate skepticism or denial, as they accept climate science but direct attention to the negative consequences of climate efforts and intensify doubts regarding the effectiveness of mitigation policies (Lamb et al. 2020).

6. Conclusion

The thesis identifies the principal ways in which conventional energy sources are represented in *The New York Times* and *The Washington Post* throughout the 2021-present global energy crisis by predominately focusing on word frequency, lexical cohesion as well as modality. In doing so, the analysis further examines the discursive structures of the sampled articles by comparing them with the discourses identified by Lamb et al (2020). In addition to the lexical and modal qualities of the language employed in the examined articles, the extent to which the discourses described in this study are reflective of Lamb et al.'s (2020) discourses of delay are further drawn upon the combinations of arguments as well as underlying logic of the energy-related narratives in the articles, notably in terms of the overall economic orientation of the texts. The deconstruction of such discourses may aid in distinguishing misleading and deceptive environmental communication which may induce false positive perceptions of an organization's environmental contribution through ingenuine reporting as well as normalization processes in media coverage. Despite the particular focus given to the 2021-global energy crisis, the discourses identified here can be extrapolated to other, non-temporally limited media discussions of climate change. Notably, the examined discourses are categorized as environmentally destructive and/or ambivalent and linked to the misrepresentation of climate issues in the media, which are features that can be connected to other neoliberal framings of environmental degradation.

6.1 Limitations

In terms of the data, it is important to note that a notable majority of American news media, including *The New York Times* and *The Washington Post*, are market-oriented private corporations (Mu et al. 2021: 13). To obtain optimal profits, the language employed in news reports will be affected by commercial factors, such as the circulation of newspapers. As noted by Stibbe (2015: 29), discourses which genuinely advocate for a reduction in consumption are unlikely to be promoted in any newspapers which are dependent on consumption and advertising to generate monetary profit. However, as these sources ostensibly aim for perceived impartiality, the discursive framings identified in this study may occur unconsciously or implicitly. Due to this, it is suggested that future research should compare similar results with other analyses of adjacent texts containing more explicit framing and linguistic constructions, for instance opinion columns and letters to editors.

Furthermore, as the study described in this paper is principally deductive, it is limited to the premises conceptualized by the research conducted by Lamb et al. (2020). As the sampled texts were coded based on pre-established discursive categories, divergent perspectives were overlooked. Moreover, as the scope of the study does not allow for the analysis of a broader and more varied set of data, the statistical analysis of the prevalence of specific words as well as modal forms is not highly extensive.

6.2 Further Research

Further research should be done to account for all three dimensions defined in Fairclough's model of discourse analysis with a larger sample size to provide a more holistic overview of how environmental issues are discussed in broadsheet newspapers. Notably, as discourses are commonly multimodal, future analysis should incorporate consideration of other modes, such as images, videos, and music. Additionally, a broader study that compares articles published during the energy crisis with publications from before the energy crisis would provide a more detailed examination of how energy discourses have developed throughout time in news media. Moreover, other methods, including systemic functional linguistics, could be applied to examine textual function as well as modality from different perspectives. As a methodology, systemic functional linguistics could also provide deeper insight into the function of the language employed in media discourses regarding environmental degradation and popular attitudes regarding the fossil fuel industry. Additional research should be conducted on how such issues are framed in other geographical contexts, as the articles cited in this study have a notably Western and Eurocentric approach on the energy crisis. Lastly, as ecolinguistics has predominately focused on the negative and destructive aspects of environmental discourse in media, future research should also focus on what Stibbe (2017) describes as positive discourses, which promote holistic wellbeing and a more ecological worldview.

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Appendix

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