From Environmental Discourses to Environmental Policies

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To my friends, the new, the old and the ones that became family.

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Introduction

"Climate change is a global challenge that requires local initiatives. [Even though]the challenge is huge, doing nothing is a risk we cannot afford." [1]

There is no doubt that the climate is changing and that this will have catastrophic consequences if international institutions and national governments do not take actions to tackle this problem properly. Given the tremendous size and heat capacity of the global oceans, it takes a massive amount of heat energy to raise Earth's average yearly surface temperature by even a small amount.[2] While it is true that Earth's climate has changed throughout its history, currently its temperature is rising at a rate never before. The evidence we have reveals that most of the warming occurred in the past 40 years, with the 12 most recent years since 2010 being the warmest years in the historical records.[3] According to the 2022 Global Climate Report from National Centers for Environmental Information (NOAA), every month of 2022 ranked among the ten warmest for that month.[4] Over the last century, the burning of fossil fuels like coal and oil and, to a lesser extent, the clearing of land for agriculture, industry, and other human activities have been the main causes of the increase in the concentration of greenhouse gases in the atmosphere. It is therefore evident that these human

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[1] Gerència d'Àrea d'Ecologia Urbana, 'Climate Emergency Action Plan for 2030' (Barcelona: Ajutament de Barcelona, 2021), 184, http://hdl.handle.net/11703/123710, p.10-60

[2] Rebecca Lindsey and Luann Dahlam, 'Climate Change: Global Temperature | NOAA Climate.gov', https://www.climate.gov/, 18 January 2023, http://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature

[3] NOAA National Centers for Environmental Information, Monthly Global Climate Report for Annual 2022, published online January 2023, retrieved on July 17, 2023 from https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202213.

[4] NOAA National Centers for Environmental Information, Monthly Global Climate Report for Annual 2022.

activities have unequivocally caused global warming, with the global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020.[5]

Since the late 70s, scientists have been sending warning signals about the effects of human activities on the environment and the possible consequences of this degree of change in global temperatures. The term "global warming" made its first appearance on August 8, 1975, with the publication of Wallace Smith Broecker's paper "Climatic Change: Are We on the Brink of a Pronounced Global Warming?" in the journal "Science". Since then, the term and the topic have gained more and more attention, both from an academic and a political point of view. Later on, following the record-breaking summer of 1988, the Intergovernmental Panel on Climate Change (IPCC) was founded in order to offer policymakers with periodical scientific evaluations of the most recent state of knowledge concerning climate change. And that was a turning point. The concept of climate change gained currency as a real phenomenon and more research of the possible consequences of a warmer planet started to be conducted. Among the scientific community, some fundamental knowledge about recent climate change gained an increasingly broad consensus. The first basic fact that was starting to be recognized was that the Earth's average temperature was rising at an unprecedented rate. Second of all, human activities, namely the use of fossil fuels – such as coal, oil, and natural gas - were starting to be universally recognized as the primary drivers of this rapid warming and climate change. Finally, the scientific community started to agree on the fact that the rising of temperature would not stop and that this continuous warming was expected to have harmful effects at a global level. The first scientific findings about the potential consequences of climate change began to raise awareness that human emissions and actions were the causes of global warming,

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[5] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report.* A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, (in press).

and government leaders began discussing solutions to reduce the outflow of greenhouse gas emissions in order to avoid the direst predicted outcomes. As a result, protocols and agreements to lessen the effects of climate change started multiplying and their importance began to rise. For example, the UN Framework Convention on Climate Change (UNFCCC) in 1992 was the first global treaty to explicitly address climate change; the Kyoto Protocol, signed in 1997 and entered force in 2005, was the first global agreement to reduce greenhouse gases; and the Paris Agreement in 2015 set emissions-reduction pledges to keep the global average temperature rise below 1.5 C°. Coming to the present day, the effects of climate change have already become apparent around the world, and the situation is projected to worsen. Despite intensified diplomacy, we are now beginning to experience some of these side effects at a far faster rate than scientists had anticipated. Sea ice loss, rapid sea level rise, longer and more intense heat waves, droughts, wildfires, and extreme rainfall are just a few of the numerous consequences that we are currently witnessing and are expected to face in the future. Furthermore, as I have stated, the intensity of the effects of climate change will be dictated by the future trajectory of human activity. More greenhouse gas emissions will increase climatic extremes and endanger our world on a global scale. Therefore, if we can reduce emissions, we might be able to avoid some of the most catastrophic consequences of climate change.

In order to efficiently address these complex consequences in a decision-making system, governments and institutions have drawn out in detail the border of the concept of environmental problems. Articulating environmental problems beyond local evidence of, for example, degradation of lakes, soil, groundwater, forests etc., requires conceptual frameworks and analytical capacities. In other terms, environmental problems are "socially constructed", building on expert language and concepts, research practices and available technology. The idea of environmental issues refers to the problems that emerge when the worlds of

ecosystems and human social systems collide.[6] Consequently, environmental issues are frequently interrelated and multifunctional, or in other words complex. The so-called decision-making systems, which can be composed of individuals or collective organisations like governments, must deal with two orders of complexity in order to address environmental issues.[7] First of all, the environmental issues field is inherently complex because of the two universes that constitute it. On the one hand, the natural ecosystem is so complicated and intertwined that even biologists will readily concede that there are still many unresolved questions on the subject. On the other side, we have human social structures, which are just as complex as those found in nature. Additionally, as I previously mentioned, environmental issues can be encountered where these two systems converge, which adds another level of complexity. This layering results in an expanding number of viable viewpoints from which to analyse the subject, since it is more difficult to demonstrate that one point of view is flawed or less valid than another. As a result, it is not surprising that the growth and expansion of environmental problems have been echoed by the proliferation of different perspectives and the difficulty in unifying this wide variety of positions. Given these presumptions, the complexities of environmental challenges impose a corresponding level of complexity in environmental policy. The intricate and diverse nature of the environmental subject gives rise to a multitude of distinct depictions of the environmental issue. Consequently, reaching a consensus and formulating efficacious and collectively endorsed policies to tackle this crisis becomes a challenging endeavour.

For this reason, it is important to look at how academics, scientists, and policymakers have portrayed climate change, global warming, and other environmental issues, in other words, it is necessary to take into consideration and analyse the predominant discourses in the environmental field and what

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[6] John S. Dryzek, 'Making Sense of Earth's Politics: A Discourse Approach', in The Politics of the Earth: Environmental Discourses (OUP Oxford, 2013), 9
[7] Dryzek, 'The Politics of the Earth: Environmental Discourses', 9

kind of discourse is used in different environmental policies. The term "discourse" refers to a shared way of understanding the world, which is also exposed by the language that we use when we talk about a certain subject. Discourses play a dual role in shaping the world: they both shape and are shaped by it. They have the capacity to reproduce and alter society, contributing to the formation of social identities, the establishment of social connections among individuals, and the development of systems of knowledge and belief. In essence, discourse is not merely a means of representing the world, but rather a practice that assigns significance to the world, actively constructing and constituting meaning within it.[8] Discourses are formed within the framework of "orders of discourse," which refer to established conventions for language usage that are intricately linked to social institutions.[9] Specifically, the environmental discourse related to the explanation of the world around us and what kind of relation exists or should exist between nature and humankind and society and discourse analysis "rests on the contention that language matters, and that the way we construct, interpret, discuss and analyse environmental problems has all kinds of consequences."[10] They are deep social structures which pattern thought, belief and practices and allow us to understand why human-environmental relationships take the forms they do.[11] Moreover, environmental discourses can be seen as an astounding collection of claims and concerns about environmental issues and solutions that a wide range of players, including legislators, NGOs, and industry, have brought together. However, it is important not to confuse something that is socially interpreted with something that is unreal. For example, the fact that climate is changing as a consequence of the rise of CO2 levels in the atmosphere and the excessive production of other greenhouse gases

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[8] Norman Fairclough, *Critical Discourse Analysis: The Critical Study of Language*, 2nd ed. (London: Routledge, 2013), https://doi.org/10.4324/9781315834368.

[9] Reiner Keller, 'Doing Discourse Research: An Introduction for Social Scientists' (SAGE Publications Ltd, 2013), https://doi.org/10.4135/9781473957640.

[10] Dryzek, The Politics of the Earth: Environmental Discourses, 10

[11] Lisa M. Benton and John Rennie Short, *Environmental Discourse and Practice* (Malden, Massachusetts: Blackwell, 2004).

is a reality.[12] Since there are so many different actors being part of the narrative of climate change and contributing to its development, it is very difficult to build a coherent environmental discourse. Environmental discourses are never static and rarely stable. They change and modify over time, both affecting human-environmental relationships and being shaped in turn by the changes in these relations.[13] As a result, it is not surprising that the dispute on environmental issues is disconnected and contradictory.

Structure and Research Questions

My dissertation rests on two pivotal research questions. The first one addresses how the concept of climate change is presented in local environmental policies and specifically in Barcelona and what type of environmental discourse is used in such policies. The second inquiry is interested in if and how the type of discourse utilised impacts the choice of a specific set of solutions. As a result, my research primarily relies on a comprehensive and rigorous examination of both the textual content and contextual elements inherent in two significant environmental policies that were implemented in Barcelona during a ten-year time frame. To effectively address my primary research inquiries, I meticulously scrutinised two distinct governmental strategies aimed at mitigating the repercussions of climate change within the urban landscape. These strategies, one introduced in 2011 and the other a decade later in 2021, outline the normative guidelines and practical actions that the Adjutament of Barcelona must undertake to address these pressing concerns. For this study, I have chosen to employ the discourse analysis methodology, a widely recognized and effective approach renowned for its proficiency in dissecting the representation of environmental issues. The central aim of employing discourse analysis is to dissect and comprehend how specific environmental concerns are portrayed,

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[12] Dryzek, 'The Politics of the Earth: Environmental Discourses'.
[13] Benton and Short, 'Environmental Discourse and Practice'.

divergences are underscored, and societal affiliations are forged through varied interpretations of the subject matter. This analytical framework enables exploration into the nuances of language, framing, and narrative construction employed within the chosen policies, facilitating a comprehensive understanding of the underlying discursive mechanisms at play. Through this method, my investigation aims to uncover the intricate interplay between language, policy discourse, and the broader socio-environmental context within Barcelona's environmental policies.

To present the main topic of my dissertation - environmental discourses at a local level - and my analysis, I decided to structure my research into four main chapters. In the first one, I identify the theories and previous research that influence my choice of research topic and the methodology I choose to adopt. Here, I present a literature review of the most important and relevant works on the topic of discourse analysis and environmental discourses. I start by giving a general definition of the concept of discourse and I introduce the main theories that give an important contribution to the use of discourse analysis in the environmental field. In a second moment, I report the more specific concept of environmental discourses. In this case, I mostly refer to Dryzek and his book "The Politics of the Earth". In this cornerstone of environmental studies, he analyses the predominant perspectives on environmental problems and classifies the most important environmental discourses, which are still prominent today. The second chapter mainly focuses on the definition and presentation of the methodology I am using to answer my research questions. Firstly, I present my single case study. I explain why I chose Barcelona as the focus of my dissertation and I present its unique characteristics. In the second part of this chapter, I outline the fundamental elements of the two methods that I refer to, which are the critical discourse analysis and the sociology of knowledge approach to discourse. I select respectively for their insights on the social and material implications of discourse and the assumption that everything

we perceive, experience, and sense is mediated through socially constructed and typified knowledge. Moreover, I present the theoretical framework that I refer to during my data analysis, the consequent display of results, and the discussion. I report the theoretical framework Dryzek uses in his studies and overall the criteria he uses in the classification of the environmental discourses. In the conclusive part of this second chapter, I explain in detail how I collect the documents at the centre of my thesis, how I build my data corpus and code book, and how I organise and analyse it. In the third chapter, I present in detail the results of the text analysis of two of Barcelona's many environmental policies. I take into consideration the Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020 and the Climate emergency action plan for 2030, and I analyse the different ways in which the distinct policies present the pivotal topic of climate change and which kind of solutions the two policies present in order to tackle the aforementioned issue. In a second moment, I explore the possible connection between the presentation of a problem and the set of solutions that are proposed. In the last part of this third chapter, I focus particularly on linking the discourses that have been used in the policy paper to one of the environmental discourses already known. In the fourth and last chapter, I discuss the results of my analysis. In particular, I try to make sense of the result of my text analysis and I try to discuss the result of my analysis in relation to my research questions.

Literature review

In everyday life, discourse is often interpreted as a "way of communicating" or as connected to the meaning of having a conversation. However, a social scientific viewpoint calls for a more comprehensive analysis of this widely accepted notion of "discourse". Thus, discourse theory assumes that all actions, things, and practices have social connotations and that these connotations are the result of social and political disputes that occurred during particular

historical periods.[14] To quote Fairclough, one of the fathers of Critical Discourse Analysis, the definition of discourse as a social practice suggests that there exists a mutually influential connection between a specific instance of communication and the broader context of the context, institutions, and social structures that shape it. A dialectical relationship refers to a reciprocal connection where the discursive event is influenced by various factors such as the aforementioned situations, institutions, and social structures, while simultaneously exerting an influence on them.[15] In this context, scholars started to analyse the narrative produced around certain topics, in other words, the discourse upon certain subjects. Discourse analysis uses a variety of linguistic and non-linguistic materials, such as verbal statements, historical occurrences, interviews, ideas, and politics, to demonstrate how the actions and objects taken into consideration become socially constructed, as well as what they refer to when discussing the social organisation and interaction.[16] The academic community aims to understand the patterns and contradictions in what is said (or written), as well as the social contexts and societal ramifications of various types of interaction. Fundamentally, the first step in conducting discourse analysis is determining the environment or target of a speech. In this context, communication and the social interactions that comprise it may be regarded as inextricably linked. On the other hand, discourse analysis can be performed while keeping in mind the real meaning of the subject of the exchange. As a result, a discourse is regarded as a collection of numerous thoughts, concepts, and categories. When it comes to environmental discourses, combining the two components of the inquiry, namely the goal of the speech and the actual content

[14] Frank Fischer, 'Public Policy and Discourse Analysis', in Reframing Public Policy: Discursive Politics and Deliberative Practices, ed. Frank Fischer (Oxford University Press, 2003), https://doi.org/10.1093/019924264X.003.0004.

[15] Norman Fairclough, *Critical Discourse Analysis: The Critical Study of Language*, 2nd ed. (London: Routledge, 2013), https://doi.org/10.4324/9781315834368.

[16] Frank Fischer, 'Reframing Public Policy: Discursive Politics and Deliberative Practices'

of the argument, is the most effective way to examine the discourses that influence how environmental issues are interpreted.

First and foremost, we must understand how academics arrived at a definition of a discourse applied to the environmental field. In a second moment, it is important to present a classification of the most prominent and noteworthy discourses in the environmental field and underline what are the main claims, goals and priorities of the subjects that use them. It is necessary to underline which of the different theories in circulation provides the best framework for the analysis of discourses of environmental problems in environmental policies. Finally, I must examine what is the role of discourses in environmental policies, what is the effect of different kinds of discourses and how different narratives matter for policy implementation.

Concept of Discourse in the environmental field

In this first phase of my literature review, I looked at the authors who have made the biggest contributions to the creation and development of discourse theory as a whole as well as the authors who have had the biggest impact on the application of discourse analysis in the environmental field.

Foucault

The first author that has to be mentioned is Michel Foucault, who, with his foundational contributions, has significantly shaped the evolution of discourse theory. His analytical exploration of discourses spanning disease, sex, criminality, and governance has left an indelible mark on the contemporary understanding of discourse. Operating across the disciplines of history, philosophy, and sociology, Foucault established a pivotal framework that underpins discourse theory today. His endeavours have led to a nuanced comprehension of how language functions not only as a medium of

communication but also as a potent instrument for the construction of knowledge and truth. Additionally, Foucault delved into the intricate dynamics through which these truths are harnessed by individuals and entities in positions of authority to perpetuate and uphold established norms and societal structures. Central to Foucault's perspective is the discursive practices that serve as the scaffolding of his discourse theory. These discursive practices encompass widely accepted and recurrent interpretations of social activities that play a pivotal role in generating and reinforcing behavioural patterns.[17] Over time, these interpretations become entwined with the fabric of institutional practices and discourses, exerting their influence on the very foundations that govern and regulate societal interactions.[18] Foucault's unique understanding of power interweaves closely with his discourse analysis, where power relationships emerge as the fundamental determinants influencing and shaping discourse dynamics. Crucially, Foucault advances the view that power is not solely wielded by singular individuals; instead, it operates through complex institutional frameworks and intricate social networks.[19]

A pivotal aspect of Foucault's power discourse is its role in the constitution of subject positions, the shaping of desires, and the establishment of truths. Power, in Foucault's conception, exhibits multifaceted manifestations that encompass diverse forms and avenues. It serves as a driving force behind political transformations while simultaneously shaping individual subjectivities. Of particular importance is the notion of power embedded within what Foucault terms "discourse" or, in later iterations, the "dispositive".[20] This intricate interplay involves a process Foucault labels "normalisation". Through this

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[17] Frank Fischer, 'Reframing Public Policy: Discursive Politics and Deliberative Practices'

[18] Fischer, 'Reframing Public Policy: Discursive Politics and Deliberative Practices'

[19] Michel Foucault, The History of Sexuality: The Will to Knowledge: Vol. 1, (Penguin, 1976), 93

[20] Franziskus von Lucke, 'Introduction and Theoretical Framework', in The Securitisation of Climate Change and the Governmentalisation of Security, ed. Franziskus von Lucke, New Security Challenges (Cham: Springer International Publishing, 2020), 1–58, https://doi.org/10.1007/978-3-030-50906-4_1.

process, specific concepts and behaviours undergo a transformation, acquiring a status of being "normal" and "natural" within the tapestry of everyday life.[21] This process is instrumental in shaping individual identities and guiding societal practices. Discourses function as complicated sociolinguistic systems that structure people's perceptions of reality without the participants being consciously aware of it.[22] Further elaboration from Shapiro brings to light the nuanced implications of discursive practices. Shapiro's perspective underscores how these practices lay down the norms and guidelines for the conceptualization of phenomena that emerge within the contours of discursive boundaries.[23] Epistemic discourses wield a profound influence over social interactions, definitions, and the construction of meaning within the sociocultural framework. This influence extends to the delineation of power dynamics and the establishment of social norms, thereby influencing the extent of disagreement and the boundaries of agreement.[24] The emergence of dominant discourses as intricate systems of meaning deeply embedded within the cultural fabric reinforces the importance of narratives in shaping thought processes and behavioural patterns.[25] Foucault's discourse theory posits that individuals are primarily shaped by the discourses in which they engage, often limiting their capacity to impartially evaluate the contrasts and commonalities that span various discourses. Moreover, these discourses are frequently characterised by notions of dominance, with a singular discourse typically asserting its pre-eminence.[26] This dynamic serves to constrict the space for disagreement while simultaneously circumscribing the realm of agreement. Dominant discourses

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[21] Edward W. Said, 'Criticism between Culture and System', in The World, the Text, and the Critic (Harvard University Press, 1983), p. 48.

[22] Said, 'The World, the Text, and the Critic', 48.

[23] Michael J. Shapiro, Language and Political Understanding : The Politics of Discursive Practices (New Haven : Yale University Press, 1981), http://archive.org/details/languagepolitica0000shap, 130

[24] Fischer, 'Reframing Public Policy: Discursive Politics and Deliberative Practices'

[25] Fischer, 'Reframing Public Policy: Discursive Politics and Deliberative Practices'

[26] Michel Foucault, 'Power and Norms' in M. Morris and P. Patton (ed.) Power, Truth and Strategy (Sydney: Feral, 1979), 62.

emerge as repositories of collective memory for societies and groups, drawing from narratives that underlie the foundational structures of thought and behaviour.[27]

In conclusion, Foucault's discourse theory encapsulates discourse as an intricate nexus between power and knowledge. This interplay fundamentally shapes our understanding of reality, influencing perceptions of truth and false and what is natural.[28] As Foucault aptly observes, 'Every point in the exercise of power is a site where knowledge is formed. Conversely every established piece of knowledge permits and assures the exercise of power';[29] and 'power is a relationship between actors that produce knowledge and truths that lead to individual and social practices that in turn tend to disseminate those truths. Knowledge transmits and disseminates the effects of power [...], while truth is a status given to certain knowledge by power. [...] Truth is linked in a circular relation with systems of power which produce and sustain it.' [30] This intricate interplay between discourse and power engenders a complex web of influence that fundamentally shapes and constructs our understanding of the world, illuminating the profound ways in which power dynamics and discourse entwine to mould our perceptions, interactions, and interpretations.

Hajer

Secondly, I will take into consideration Hajer's definition of discourse. For Hajer, and similarly to Foucault, discourse is described as a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and

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[27] Maarten A. Hajer, 'Discourse Analysis', in The Politics of Environmental Discourse: Ecological Modernization and the Policy Process, ed. Maarten A. Hajer (Oxford University Press, 1997), https://doi.org/10.1093/019829333X.003.0003.

[28] Hajer,'The Politics of Environmental Discourse: Ecological Modernization and the Policy Process', 42 - 72

[29] Michel Foucault, *Power, Truth and Strategy*, ed. Meaghan Morris and P. Patton (Sidney, New South Wales: Feral , 1979), 62.

[30] Michael Foucault, Power/Knowledge. (Brighton: Harvester Wheatsheaf, 1980), 133.

transformed in a particular set of practices and through which meaning is given to physical and social realities.[31] As such, discourse and discursive practices circumscribe the range of subjects and objects through which people experience the world, specify the views that can be legitimately accepted as knowledge, and constitute the actors taken to be the agents of knowledge.[32] Hajer's approach directs attention primarily to the socio-cognitive processes in which so-called "discourse coalitions" are formed. His theory is based on the central position of discourse in political institutions and accords the subject matter a crucial role, albeit within the framework of the concept of the duality of structure: "social action arises from the human agency of intelligent, creative people, but within a context of social structures of various kinds that both enable and constrain their agency".[33] In his book "The Politics of Environmental Discourse", Hajer claims that there is an important interplay between the development of preferences and linguistic structures. Language is viewed as a crucial component of reality and as a particular communication act that affects how people perceive their interests and preferences, which cannot be taken for granted. Through language, interests are interactively produced. This has significant implications for the study of environmental politics because it raises the possibility that the emergence of a fresh policy discourse, like ecological modernization, may actually change how each person views issues and opportunities, paving the way for the emergence of newly formed, unexpected political coalitions. His second assertion is that every belief system has its own already-established point of view and approach to the processing of information. Hajer's approach focuses on the discursive interaction level and makes the case

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[31] Maarten A. Hajer, 'Discourse Analysis', in The Politics of Environmental Discourse: Ecological Modernization and the Policy Process, ed. Maarten A. Hajer (Oxford University Press, 1997), 42-72, https://doi.org/10.1093/019829333X.003.0003.

[32] Frank Fischer, 'Public Policy and Discourse Analysis', in Reframing Public Policy: Discursive Politics and Deliberative Practices, ed. Frank Fischer (Oxford University Press, 2003), 0, https://doi.org/10.1093/019924264X.003.0004.

[33] Maarten A. Hajer, 'Discourse Analysis', in The Politics of Environmental Discourse: Ecological Modernization and the Policy Process, ed. Maarten A. Hajer (Oxford University Press, 1997), 42-72, https://doi.org/10.1093/019829333X.003.0003, p.58

that language use, or discursive interaction, can produce new identities and new meanings. Consequently, discourse is crucial to the processes of political change.[34]

His argumentative theory sees politics as an ongoing struggle for discursive hegemony in which participants fight to defend their conception of reality. A key principle of the discourse-coalition approach is that a political impact of a text does not come from its unwavering consistency but from its potential to be read in a wide range of ways. For example, the discourse on acid rain is characterised by the fact that information only becomes politically significant until it is incorporated into a higher-order political discourse. As a result, new ideas are constantly needed to reproduce, say, scientific findings in non-scientific speech. Hajer's theory breaks down the notion that environmental politics' realities are constituted by speech. The environmental dispute, therefore, appears to be primarily a disagreement over how to interpret the significance of both social and physical circumstances rather than an incompatibility over the types of measures that should be implemented (or whether interventions are required at all). In this process, storylines play a significant role. Storylines are narratives on social reality through which elements from many different domains are combined and that provide actors with a set of symbolic references that suggest a common understanding. Storylines are essential political devices that allow the overcoming of fragmentation and the achievement of the outline of a discursive narrative. Storylines not only provide the narrative within which a specific actor can understand his specific contribution to knowledge or localise his or her own social preference in the context of specific scientific findings. Storylines can also be seen to influence actors in their own production of knowledge. In conclusion, Hajer's argumentative approach, known as discourse coalitions

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[34] Hajer, 'The Politics of Environmental Discourse: Ecological Modernization and the Policy Process', 42-72

theory, proposes that in the struggle for discursive hegemony, coalitions are formed among actors who, for a variety of reasons, are drawn to particular storylines and who may perceive their position and interests according to widely contradictory discourses. Discourse coalitions are characterised as a combination of a set of narratives, the actors who articulate these storylines, and the practises that support this discursive activity.

Epstein

Another author that is worth mentioning, for her work on the analysis of discourse in the environmental field at the international level, is Charlotte Epstein. In her book "The Power of Words in International Relations: Birth of an Anti-Whaling Discourse" she presents a detailed and complete framework of the discourse about whaling and more generally about the creation and the takeover of dominant discourses.[35] The author uses the development of the whaling practices as a way to investigate the larger issue of normative change in international politics, which is crucial to comprehend the rise of dominant discourses.[36] In Epstein's conception of discourse, discourses are inherently social phenomena. They are what connect people and make it possible for them to interact, engage, and carry out social activities. Discourses are enabling, to the extent that they allow the actors to act in the social world. However, at the same time, they are restricting. The social actor must speak and act in accordance with accepted social norms for them to make sense to others. As a result, discourses are limited because of the conditions of sense-making, or in

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[35] Charlotte Epstein, 'Making Meaning Matter in International Relations', in The Power of Words in International Relations: Birth of an Anti-Whaling Discourse, ed. Charlotte Epstein (The MIT Press, 2008), 0, https://doi.org/10.7551/mitpress/9780262050920.003.0001.
[36] Jörg Balsiger, 'The Power of Words in International Relations: Birth of an Anti-Whaling Discourse – By Charlotte Epstein', Review of Policy Research 26, no. 6 (1 November 2009): 881–882, https://doi.org/10.1111/j.1541-1338.2009.00421_1.x.

other words, of the need to "be understood."[37] Talking about social structure, Epstein picks up Foucault's theory about normalisation, conceptualising dominant discourses as a carrier of the 'natural rule' through which society is regulated. Taking as an example whaling, it was considered a normal practice until the mid-1960s, after which it was displaced by a new anti-whaling discourse such that the old conception of whaling became "unacceptable".[38] Thus, normality is arbitrary and shaped by the current dominant discourses.

In Epsteins' point of view discourses serve as vital components of social forms, flowing throughout the social structure. If we were to make an analogy with the human body, we might say that modern power has moved from its head to its arteries and is now interconnected in the structure of society. Epstein's core claim in her book is that power and meaning—the two essential components of social life—are tightly connected.[39] Consequently, social relations or connections serve as both a centre of power and a place where meaning is created. As a result, it is critical to determine the relative character of truth claims and consider how they relate to the specific configuration of power relations from which they emerge. Language does not have an intrinsic meaning, nor does meaning remain consistent across time. It follows that neither language in general nor words, in particular, are intended to be ideal representations of reality or unbiased, undeniable truths. In a broader sense, discourse analysis allows one to step back from what those discourses actually say and study what those discourses actually do.[40] As a result, discursive power alters the investigation's point of view such that the emphasis is on the actions of power rather than its nature. The essential question Epstein tackles is not which rhetoric, in the context of her book Whaling or Anti-Whaling, is more

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[37] Charlotte Epstein, 'Making Meaning Matter in International Relations', in The Power of Words in International Relations: Birth of an Anti-Whaling Discourse, ed. Charlotte Epstein (The MIT Press, 2008), 0, https://doi.org/10.7551/mitpress/9780262050920.003.0001.

[38] Epstein, 'The Power of Words in International Relations',

[39] Epstein, 'The Power of Words in International Relations',

[40] Epstein, 'The Power of Words in International Relations',

true to reality. Instead, she looks at the effects of their description of reality, or more precisely, of their "truth."[41]

Environmental Discourses

Discourse analysts in fact have been interested in a broad variety of topics related to environmental politics.[42] Environmental discourse includes numerous subtopics, such as air quality, climate change, toxic emissions and nature protection. It encompasses quite diverse ways of talking and thinking about the environment.[43] First of all, they have scrutinised the processes through which environmental problems and underlying key notions, such as nature, wilderness, or the ecosystem, are socially constructed. These terms are imbued with cultural traditions and charged with social values, and discourse analysts have studied processes of societal communication, in which their very meaning is negotiated, or contested.[44] In a similar vein, scholars have been interested in the social production of scientific knowledge and expertise.[45] Not least, discourse analysts have also scrutinised the evolution of, and competition between, different paradigms of environmental policy.[46] The environmental discourse that constitutes an environmental problem enables and constrains the available policy options and the range of legitimate actors for its resolution.[47] Having in

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[41] Ibid.

[42] Lisa Benton-Short and John Rennie Short, Environmental Discourse and Practice (Blackwell, Malden/Mass., 2000).

[43] Peter H. Feindt and Angela Oels, 'Does Discourse Matter? Discourse Analysis in Environmental Policy Making', Journal of Environmental Policy & Planning 7, no. 3 (1 September 2005): 161–73, https://doi.org/10.1080/15239080500339638.

[44] Jens Steffek, 'Discursive Legitimation in Environmental Governance', *Forest Policy and Economics*, Discourse and Expertise in Forest and Environmental Governance, 11, no. 5 (1 October 2009): 313–18, https://doi.org/10.1016/j.forpol.2009.04.003.

[45] Karen Litfin, *Ozone Discourses: Science and Politics in Global Environmental Cooperation*, New Directions in World Politics (New York: Columbia University Press, 1994).

[46] John S. Dryzek, *The Politics of the Earth: Environmental Discourses* (OUP Oxford, 2013).

[47] Peter H. Feindt and Angela Oels, 'Does Discourse Matter? Discourse Analysis in Environmental Policy Making', Journal of Environmental Policy & Planning 7, no. 3 (1 September 2005): 161–73, https://doi.org/10.1080/15239080500339638.

mind the variety of environmental discourses that exist, I decide to present a classification of the main existing environmental discourses. On the ground of this, I decided to first introduce Dryzek's classification of environmental discourses and in a second moment present Von Lucke's theory about climate security discourse. Their classifications aim to create a complete and detailed framework to analyse the existing narratives in the environmental field.

Environmental discourses

"Discourses enable stories to be told"[48]

From Dryzek's point of view, debates over meaning are ever-present and the way we think about basic concepts can change dramatically over time. Also and especially, when we think about concepts linked to the environment and environmental issues. The consequences for politics, policies and policy-makers are meaningful. For example, not that long ago we didn't have what Dryzek calls "politics of the Earth".[49] Today, we are more and more sensitive and aware of what happens to the environment, both at a local and global level. However, it is important to note that the debate about environmental matters is subject to continuing disputes between people who think in sharply different ways, as it happens for every other political affair.[50] "At any time, the way the issue is dealt with depends largely (though not completely) on the balance of competing for discourses".[51] Dryzek defines discourse as an accepted way of seeing the world. Discourses establish common sense and accepted knowledge by creating meanings and links between concepts. As also Epstein was saying, discourses facilitate and limit communication at the same time. Furthermore, one of the most essential properties of discourses is that they assist in coordinating the

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[48] John S Dryzek, 'Making Sense of Earth's Politics: A Discourse Approach', in The Politics of the Earth: Environmental Discourses (OUP Oxford, 2013), 17
[49] Dryzek, 'The Politics of the Earth: Environmental Discourses', 1 - 24
[50] Dryzek, 1 - 24
[51] Dryzek, 8

actions of large groups of individuals and organisations that would not otherwise have the chance to communicate with one another. This standpoint is crucial, particularly in environmental policy. In global politics, when more formal channels of coordination are lacking, for example, environmental concerns and actions have been significantly coordinated through the conceptual framework of sustainable development. In his book "The Politics of the Earth: Environmental Discourses", Drysek (2013) claims that all the environmental discourses have as a fundamental basis the discourse of industrialism - which stands out for its commitment to continuously enhancing the production of goods and services and the material well-being that this development provides.[52] However, each of the environmental discourses departs from industrialism along two distinct dimensions: the reformist-radical dimension and the prosaic-imaginative dimension. Combining these dimensions Drysek (2013) produces a framework that he then uses to classify the environmental discourses considered. Each of these discourses constructs a story of what they perceive to be reality. They all present, from their point of view, what is natural, "normal" in the relationships between different entities that form reality. Discourses can become embodied in institutions in addition to having an impact on them. If so, discourses, like formal governmental regulations, act as the informal understanding that establishes the framework for social interaction. As a result, the impact of an environmental discourse may be evident in the policies of the government or other international bodies. On the other hand, there are occasions when discourses have an effect on society and culture without having any direct influence on governmental policies or institutions.

Due to the multifaceted nature of environmental concerns, there are many varying viewpoints on them, which in turn has led to the development of remarkably different narratives. This suggests that what we refer to as

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[52] Drysek, 8

"environmentalism" in general is composed of a variety of opposing and overlapping discourses and does not, therefore, provide a unified, cohesive argument against industrialism.[53] In light of his thorough analysis of environmental concerns and divergent viewpoints, Dryzek concludes his book by arguing that any adequate and successful solution to environmental challenges requires two elements. The first point is to properly evaluate the liberal capitalist economic system when seeking a solution to the environmental crisis.[54] That means considering what may be done to change its direction towards more environmentally friendly targets. Without an understanding of this system, we are limited to fantasising about how things could be different, while in reality, any clash between environmental concerns and the economic interests of the system, as well as those of its national and international institutions, always favours the latter. The ability to promote and get involved in collective learning is the second fundamental skill for a successful approach to the search for environmental solutions. Environmental concerns are fraught with ambiguity and complication, which is exacerbated as ecological systems interact with social, economic, and political systems. As a result, we require institutions and discourses that are capable of learning. The reinvigorated democratic politics and ecological democracy might be developed as a shared thread here. The communication side of democracy, rather than the more recognised electoral aspect, does the majority of the work. Deliberative democracy rests on the idea that legitimate governance depends on the right, opportunity and capacity of those subject to a collective decision to participate in the consequential deliberation about a decision. Ecological democracy should transcend the boundary between human social systems and natural systems.[55]

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[53] John Barry, review of The Politics of the Earth: Environmental Discourses, 2nd edition, by John Dryzek, Environmental Values 16, no. 2 (2007): 269–72.
[54] John S. Dryzek, 'Conclusion: Ecological Democracy', in The Politics of the Earth: Environmental Discourses (Oxford : Oxford University Press, 2013), 232–38.
[55] Dryzek, 'The Politics of the Earth: Environmental Discourses', 232–238.

Climate Security Discourse

In recent years, a growing number of countries, notably the European Union, have officially declared climate emergencies, marking a significant shift in how political experts perceive environmental challenges.[56] This evolving perspective has forged a connection between climate change and security, which, in turn, has provided legitimacy to a host of additional measures and policies. However, while there is a general acknowledgement of the linkage between climate change and security concerns, ongoing debates within the climate security discourse have failed to solidify consensus regarding the precise nature of climate change as a security issue.[57] Questions linger about appropriate countermeasures and the normative implications of intertwining climate change and security. Enclosed by these discussions, a common observation is that the form of securitization applied to climate change is deeply influenced by the broader contextual context. Furthermore, the political implications of such securitization can span a wide spectrum. Therefore, it becomes imperative to delve into the contours, rationale, and repercussions of diverse climate security discourses in order to grasp the broader landscape of climate change politics. An essential aspect is the ability to recognize how varying interpretations of the relationship between climate change and security shape specific political responses. Additionally, these interpretations confer legitimacy upon the actors implementing these responses and even shape the parameters of discourse surrounding the issue itself. This underscores the pivotal role of discourse

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[56] Franziskus von Lucke, 'Introduction and Theoretical Framework', in The Securitisation of Climate Change and the Governmentalization of Security, ed. Franziskus von Lucke, New Security Challenges (Cham: Springer International Publishing, 2020), 1–58, https://doi.org/10.1007/978-3-030-50906-4_1.

[57] von Lucke, 'The Securitisation of Climate Change and the Governmentalization of Security', 1–58.

analysis in comprehending the intricate interplay between climate change discourse, political dynamics, and policy formulation.[58]

One of the authors who have to be taken into account in light of the aforementioned assumptions is Franziskus von Lucke. In his comprehensive theoretical and empirical investigation of the relationship between climate change and security, he highlights the important role of power. The discourse of securitization, according to Von Lucke, has developed into a unique type of "security governance" that renders problems manageable based on multiple forms of authority.[59] In his book, "The Securitisation of Climate Change and the Governmentalisation of Security," the author discusses three different types of power: sovereign power, disciplinary power, and governmental power, and links them to modern conceptions of security, such as national security, human security, and risk management. The study discussed here suggests that the nature of the response to climate change itself is at stake, making it simpler to understand how various discourses on climate security have influenced and legitimised particular policies and practices. The original securitization theory serves as a reminder that utilising security notions and categorising something as a potential threat allows for new forms of governance, works to legitimise some practices and players, and marginalises others. According to this perspective, securitizing an issue is an example of governing, a procedure aimed at rendering things controllable via a combination of various types of power and the use of the security lens.[60]

Von Lucke's rethinking of securitization and categorization framework was based on the relationship between Foucault's 'power pyramid' of sovereign, disciplinary, and governmental power[61] and contemporary conceptions of

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[58] von Lucke, 1 - 58.

[59] von Lucke, 1 - 58.

[60] von Lucke, 1 - 58.

[61] Michel Foucault, Michel Senellart, and Graham Burchell. *Security, territory, population: Lectures at the Collège de France, 1977-78*. Basingstoke, UK: Palgrave Macmillan, 2014.

security. The author compares three unique approaches in securitizing a problem or simply three ideal-typical climate security discourses. Each discourse primarily draws on one of the aforementioned power structures, which are related to various issue interpretations and empower and legitimise distinct political solutions. He separated each climate security discourse into two distinct components to help guide the analysis. The first component, threat construction, examines how each discourse frames climate change as a danger. The second dimension, the power effect, focuses on the political ramifications of any individual discourse, and consequently on power dynamics. and the contemporary conceptions of security. The first type of power considered is the "sovereign power," which is akin to conventional ideas of power, such as the traditional authority conceptualised by Weber.[62] The sovereign discourse governs climate change by conceptualising it as a conventional security concern with an emphasis on the state's and military or defence actors' autonomous actions. The sovereign discourse focuses on potential security threats to states and their territories in terms of threat construction. One of the key claims is that climate change will lead to violent conflict, jeopardising governments' national security. Concerning the power effects, this kind of discourse significantly raises awareness of the issue, raising it into high and conventional security politics.[63] "Disciplinary power" is the second type of power that composes Von Lucke's framework. When examining current security concepts, it becomes clear that disciplinary power is most prevalent in human or individual security approaches, increasing the number of players who are legally able to participate in the securitization process and its political fallout. The issue of climate change is characterised as a challenge that must be tackled by non-state actors and the development sector in addition to traditional security actors and their

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[62] Max Weber, Economy and Society: An Outline of Interpretive Sociology, ed. Guenther Roth and Claus Wittich (Los Angeles: University of California Press, 1978), http://archive.org/details/MaxWeberEconomyAndSociety.
[63] von Lucke, 'The Securitisation of Climate Change and the Governmentalisation of Security', 1-58

corresponding practices. In terms of threat construction, the emphasis is on people and their vulnerabilities, as well as human security. When it comes to power effects, the disciplinary discourse is primarily concerned with solutions that deal with individual concerns by altering one's behaviour.[64] The governmentalization of the state and the emergence of the people as the main referent object are closely related to the third power form, the governmental power. In this type of securitization, climate change is portrayed as a long-term problem that might progressively produce many different kinds of threats. It usually operates through risk management systems to foresee adverse events that might endanger the well-being of the population. Governmental power-based securitization relies on sophisticated statistical models for threat generation in order to evaluate specific high-risk individuals and regions that climate change may affect in the future. By looking for ways to influence these events in their early stages, political authority focuses on regulating the future in order to prevent more extensive interventions in the times to come. Each of these three power sources has very diverse ways of execution, outcomes and risks, and empowers different people in different ways. In today's political arena, all three types of power are present, and there is a perpetual fight for domination.

Another author who is worth mentioning in respect of security discourses and climate change is Simon Dalby. Expanding on his analytical foundation, Simon Dalby's theoretical perspective presents an additional layer of understanding of the security discourse applied to the environmental field. Dalby, in his theoretical deliberations, interweaves urbanisation with climate change, advocating a recalibration of security paradigms to incorporate climate change as an inherent facet of the human experience.[65] Dalby asserts that the prevailing definition of security must be reimagined, as climate change necessitates a

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[64] von Lucke, 1-58

[65] Simon Dalby, *Anthropocene Geopolitics: Globalization, Security, Sustainability*. University of Ottawa Press, 2020. https://doi.org/10.2307/j.ctvx5w8dk.

fundamental re-evaluation of the parameters of security.[66] With the inexorable changes enveloping the global milieu, the author advocates for a reconceptualization of security to encompass measures that counteract climate change and foster adaptive urban lifestyles.[67] In essence, Dalby's theoretical proposition intimates that the complexities of climate change should be holistically embraced, factoring into security frameworks and urban planning strategies.[68] The transition toward low-energy urban configurations, the facilitation of biological adaptations, and the choreography of migrations align with Dalby's vision for an adaptive and sustainable urban future.[69]

Discursive effects in environmental policies

The examination of existing literature illustrates a fundamental reality: environmental issues materialise at the juncture where the human social system intersects with the natural ecosystem.[70] This convergence of the two complex systems engenders a realm of environmental challenges that is doubly intricate. Consequently, the complex nature of this subject, characterised by diverse and sometimes conflicting viewpoints, underscores the ongoing contention surrounding concepts, knowledge, and interpretations. This dispute, in turn, assumes a central role in addressing climate change and formulating effective environmental policies. In this context, it becomes intriguing to delve into the specific impacts that prevailing discourses can exert on the realm of politics, particularly within the sphere of environmental politics.[71] Discourse wields the

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[66] Dalby, Simon. *Security and Environmental Changes*, 2nd ed. (Cambridge, UK: Polity Press, 2012), 105 - 129

[67] Dalby, 'Security and Environmental Changes', 105 - 129

[68] Dalby, 105-129

[69] Dalby, 'Anthropocene Geopolitics: Globalization, Security, Sustainability'

[70] John S. Dryzek, 'Making Sense of Earth's Politics: A Discourse Approach', in The Politics of the Earth: Environmental Discourses (OUP Oxford, 2013), 9

[71] Sina Leipold et al., 'Discourse Analysis of Environmental Policy Revisited: Traditions, Trends, Perspectives', *Journal of Environmental Policy & Planning* 21, no. 5 (3 September 2019): 452 – 456, https://doi.org/10.1080/1523908X.2019.1660462.

power to shape the identity and stance of social actors, influencing the perceived legitimacy of governmental actions, and serving as a catalyst for political discourse. Consequently, the analysis of discourse has emerged as a significant tool within the domains of environmental sociology and policy analysis.

The process of weaving words into coherent sentences serves as a tool for individuals to not only comprehend but also communicate their perceptions of the world. Our interest in discourses does not stem from their intrinsic worth, but rather from their pivotal role as frameworks for constructing meaning. In this light, discourses become the central focus of scrutiny in an analytical approach aimed at unravelling interpretations of meaning. This analytical endeavour revolves around the process of constructing significance, entailing a keen exploration of the loci where meaning comes to life.[72] It is crucial to underscore that discourses encompass practices of making sense, thereby governing our interactions with specific objects or subjects. In the study conducted by Epstein, the examination of discourses concerning whaling unveils a spectrum of meanings attributed to whales, ranging from a source of lubricating fuel to a remarkable and scarce creature. Importantly, these meanings are intricately linked to the historical context and spatial dimensions in which these discourses emerged and found application.[73] Of notable importance is the dual function of discourses, as elucidated by Epstein. Firstly, these discourses give rise to a "spatial structure of entities," infusing tangible elements with distinct significance within our comprehension. The significant objects delineated within this framework reside within the realm of a specific discourse. This realm is marked by its unique attributes, distinguishing a discourse centred on whales or acid rain, for instance, from a discourse centred

[72]Charlotte Epstein, 'Making Meaning Matter in International Relations', in The Power of Words in International Relations: Birth of an Anti-Whaling Discourse, ed. Charlotte Epstein (The MIT Press, 2008), 0, https://doi.org/10.7551/mitpress/9780262050920.003.0001.
[73]Charlotte Epstein, 'Making Meaning Matter in International Relations', in The Power of Words in International Relations: Birth of an Anti-Whaling Discourse, ed. Charlotte Epstein (The MIT Press, 2008), 0, https://doi.org/10.7551/mitpress/9780262050920.003.0001.

on a divergent subject matter.[74] Furthermore, discourses wield substantial influence in moulding individual identities within society. This influence is established through the creation of specific subject positions, serving as platforms from which individuals can voice themselves within a given discourse.[75] For instance, one might adopt an identity as an advocate for liberation, an anti-whaler, or even a proponent of a vegan lifestyle.

Furthermore, it is necessary to direct our attention towards a particular facet of discourse that has been largely overlooked in academic research. This aspect relates to the validation of environmental governance institutions, which includes their goals, policies, and procedures, through discursive processes.[76] Governance legitimacy is a major topic in political science, especially in the field of environmental politics. The analysis of discourses retains an important place in establishing authentic legitimacy, which is attained through the incremental development of credibility via critical examination of institutions and their actions.[77] At this point, it is imperative to provide a comprehensive definition of the term 'legitimacy'. Legitimacy is a unique characteristic that is conferred upon governments or systems of governance, which generates compliance with norms, rules, and political evaluations.[78] It differs from the 'legitimation' procedure, which entails the normative evaluation that confers legitimacy. From an empirical point of view, legitimacy is the perception that a social order is binding.[79] Weber's analysis emphasises the crucial role of individuals' acceptance of rational principles and formal procedures in ensuring

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[74]Charlotte Epstein, *The Power of Words in International Relations: Birth of an Anti-Whaling Discourse* (The MIT Press, 2008), https://doi.org/10.7551/mitpress/9780262050920.001.0001.
[75]Charlotte Epstein, 'The Power of Words in International Relations: Birth of an Anti-Whaling Discourse'
[76] Jens Steffek, 'Discursive Legitimation in Environmental Governance', Forest Policy and Economics, Discourse and Expertise in Forest and Environmental Governance, 11, no. 5 (1 October 2009): 313–18, https://doi.org/10.1016/j.forpol.2009.04.003.
[77] John Parkinson, 'Legitimacy Problems in Deliberative Democracy', *Political Studies* 51, no. 1 (2003): 180–96, https://doi.org/10.1111/1467-9248.00419.
[78] Steffek, 'Discursive Legitimation in Environmental Governance', 313–318.
[79]Max Weber, 'Economy and Society: An Outline of Interpretive Sociology', 31

effective domination.[80] According to Weber, the process of rational rule-making requires the presence of publicly accessible and subject to rational debate justifications.[81] The process of rational justification is a precursor to the presentation of specific reasons that are employed to substantiate a particular rule or decision. The legitimacy of contemporary governance is demonstrated through rational communication, in which the act of providing reasons or engaging in reasoning plays a pivotal role in the communicative process that validates political institutions.[82] Public discourse involving governing entities and the governed population, supported by empirical observations, is essential for establishing the legitimacy of governance and authority.[83] In the present context, the term "public discourse" refers to the various communicative activities that contribute to the formation of well-reasoned viewpoints regarding the distribution and exercise of power within society.[84] Public discourses exert considerable influence by constructing widely acknowledged interpretations of events and relationships, thereby shaping political decision-making. Participants in these deliberations provide justifications to support or contest normative criteria for legitimacy and the fundamental values that underlie them.[85] Furthermore, they engage in a discussion regarding the degree to which these standards are actually met in practical application. The credibility of governmental institutions is fundamentally shaped by an ongoing cycle of

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[80] Jens Steffek, 'The Legitimation of International Governance: A Discourse Approach', *European Journal of International Relations* 9, no. 2 (1 June 2003): 249–75, https://doi.org/10.1177/1354066103009002004.

[81] Max Weber, 'Economy and Society: An Outline of Interpretive Sociology', ed. Guenther Roth and Claus Wittich (Los Angeles: University of California Press, 1978), http://archive.org/details/MaxWeberEconomyAndSociety

[82] Weber, Max. 'Economy and Society: An Outline of Interpretive Sociology'

[83] Jens Steffek, 'Discursive Legitimation in Environmental Governance', Forest Policy and Economics, Discourse and Expertise in Forest and Environmental Governance, 11, no. 5 (1 October 2009): 313–18, https://doi.org/10.1016/j.forpol.2009.04.003.

[84] Steffek, 'Discursive Legitimation in Environmental Governance', 315

[85] Steffek, 'Discursive Legitimation in Environmental Governance', 315

establishment, modification, erosion, and re-establishment, which occurs through discursive processes of comprehension and interpretation.[86]

Assessing and discussing government or governance can occur through interpersonal conversations. However, in modern society, mass communication platforms typically facilitate these exchanges. In contemporary democratic societies, where the government's legitimacy depends on ongoing voluntary endorsement by the population, contesting established authority often transpires through mediated public discourse.[87] The examination of discourses holds significant significance, as it is through the application of critical discourse analysis to institutions and their actions that authentic legitimacy is cultivated and solidified over a period of time. The discourse approach refers to the sociocultural process of legitimization, which is not exclusively associated with specific institutional characteristics. [88] The attainment of success in environmental management necessitates the imperative of obtaining support from citizens who are directly affected by policies. In light of the requirement for voluntary cooperation and the impracticability of enforcing a shift towards sustainable lifestyles through centralised methods, the legitimacy of institutions assumes a crucial role, serving not only as a normative advantage but also as a functional imperative.[89] Furthermore, the legitimacy of a social institution is contingent upon the establishment of consensus regarding its expected functions.[90] Multiple factors are at play. Establishing consensus on the significance of governance objectives is of primary importance, given the

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[86] Achim Hurrelmann, Zuzana Krell-Laluhová, and Steffen Schneider, 'Mapping Legitimacy Discourses in Democratic Nation States: Great Britain, Switzerland, and the United States Compared', 1 January 2005, 6

[87] Steffek, 'Discursive Legitimation in Environmental Governance', 315

[88] John Parkinson, 'Legitimacy Problems in Deliberative Democracy', *Political Studies* 51, no. 1 (2003): 180 – 196, https://doi.org/10.1111/1467-9248.00419.

[89] Jens Steffek, 'Discursive Legitimation in Environmental Governance', Forest Policy and Economics, Discourse and Expertise in Forest and Environmental Governance, 11, no. 5 (1 October 2009): 313 – 318, https://doi.org/10.1016/j.forpol.2009.04.003

[90] Steffek, 'Discursive Legitimation in Environmental Governance', 313 – 318

absence of a fixed or structured agenda in politics. Political methods have the potential to address any given issue.[91] An additional pivotal element, intricately linked to the delineation of governance objectives, pertains to the alignment of a particular political structure or level of policy formulation with said objectives.[92] Within this particular context, the third noteworthy component of justificatory discourse relates to the consequences that arise as a result of governmental governance. While the consideration of efficiency holds significance, it may not be deemed indispensable.[93] Many organisations are held in high regard despite experiencing frequent instances of objective failures. The United Nations (UN), for instance, an international organisation dedicated to the preservation of global peace, faces limited success. Nevertheless, the prevailing public sentiment, as evidenced by public opinion polls, demonstrates a significant level of acceptance and support for the subject matter, thereby emphasising its extensive legitimacy benefits.[94]

In particular, Dryzek's study underscores the paramount significance of language in shaping the understanding of environmental concerns and the narratives enveloping them.[95] His investigation identifies a spectrum of effects that discourses unleash on society.[96] These effects reverberate across multiple dimensions, commencing with their impact on governmental policies and international bodies. Notable here is the surge of environmental legislation observed in many industrialised nations during the 1970s, emblematic of the discourse of administrative rationalism, which refers to the category of problem solving.[97] Furthermore, these discourses extend their influence to become embedded within institutions themselves. In such instances, they assume the

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[91] Steffek, 313 – 318

[92] Steffek, 315

[93] Steffek, 315 - 316

[94] Steffek, 316

[95] Dryzek, 'The Politics of the Earth: Environmental Discourses', 3 - 23

[96] Dryzek, 21

[97] Dryzek, 20

guise of informal frameworks that permeate social interactions, harmonising with formal institutional regulations. This interplay between formal and informal structures fashions the societal backdrop against which environmental discourse unfolds.[98] The consequences of these discourses also reach into society and culture directly, bypassing the intermediary of formal institutions or public policies. Contemporary social movements strategically target prevalent perceptions and behaviours among the general populace, often measuring their success by catalysing shifts in these domains.[99]

Finally, as previously explained, in environmental politics the choice of discourse is extremely important. It influences the manner in which environmental matters are conceptualised, understood, and tackled.[100] Drawing upon the discourse of climate security, it is noteworthy to observe the manner in which the process of securitizing climate change unfolds within specific empirical contexts.[101] The concept of securitization is closely associated with the exertion of political authority, as it facilitates the introduction of novel concerns into the public sphere, serves as a catalyst for political discourse and exerts a direct impact on pivotal policies and practices. The original notion of securitization serves as a reminder that when security conceptions are invoked and something is identified as a threat, whether it pertains to national security, human security, or is perceived as a diffuse risk construction, has the effect of altering the political discourse and enabling a fresh approach to address the matters in question. Interestingly, the security framing of new forms of governance plays a crucial role in their acceptance as legitimate and their subsequent impact. Ultimately, various discourses surrounding climate security

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[98] Dryzek, 20

[99] Dryzek, 20 - 21

[100] Dryzek, John S. 'The Politics of the Earth: Environmental Discourses' , 3 - 23

[101] Franziskus von Lucke, 'Introduction and Theoretical Framework', in The Securitisation of Climate Change and the Governmentalisation of Security, ed. Franziskus von Lucke, New Security Challenges (Cham: Springer International Publishing, 2020), 1–58, https://doi.org/10.1007/978-3-030-50906-4_1.

yield significant normative consequences. When specific discourses are promoted or adopted, particularly by individuals representing political institutions, these discourses operate to legitimise certain practises and the individuals involved in them, while simultaneously marginalising others.[102] In summation, the exploration of climate security discourse serves as a prime example of how the process of securitization can exert influence over public discourse, reshape governance frameworks, and carry normative implications. By scrutinising these intricate connections, a deeper and more nuanced understanding emerges regarding how discourse, politics, and policy intersect and interact. This multifaceted analysis unveils the complex landscape within which climate change discourse operates and underscores the significance of critically examining the interrelations between language, politics, and environmental challenges.

In conclusion, the complex interaction of various discourses within the realm of environmental discourse has significant implications. The implications discussed by Dryzek, von Lucke, Epstein, Steffek, Parkinson, and other scholars are wide-ranging and encompass various aspects of society. These implications include the formation of individual identities, the shaping of culture, the influence on policy decisions, the dynamics of institutions, the legitimacy of governments, and the fundamental norms and values that underpin society. A detailed investigation of the connections between discourse and its many effects leads to a clear knowledge of the vast influence of language and communication on environmental thought and behaviour.

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[102] von Lucke, 'The Securitisation of Climate Change and the Governmentalisation of Security', 1 - 58

Methodology

Individuals possess the capacity to perceive and interpret a shared reality in diverse manners, in turn engaging in the analysis of distinct occurrences or various facets of a singular event. They are capable of proposing disparate resolutions to identical challenges and adopting contrasting positions within political disputes.[103] If we apply this premise to the complex environmental field, the proliferation of such a large number of different representations of a problem is exponentially multiplied. Furthermore, it is important to consider that the prevailing environmental discourses exert tangible impacts on social interactions, while simultaneously influencing material behaviours and power dynamics.[104] As a result, the complexity and multifaceted nature of the environmental topic leads to this flurry of environmental discourses and it is reflected in the intricacy of environmental policies, as well as in the difficulty of reaching a consensus on a single vision and producing effective and shared policies to address such a crisis. Furthermore, what is even more interesting in my opinion is the possible correlation between the narrative and the discourse used to describe a problem and the set of possible actions and practices that are presented as possible solutions to such a problem. As a result, I made the decision to conduct a more comprehensive examination of this particular aspect in relation to the increasing concerns surrounding the environment. Consequently, my research questions focus on "how the concepts of environmental issues, climate change and the consequently proposed solutions to these problems are represented in environmental policies at a local level" and "if and how there is a correlation between how the aforementioned issues are

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[103] Dryzek, 3 - 23

[104] Peter H. Feindt and Angela Oels, 'Does Discourse Matter? Discourse Analysis in Environmental Policy Making', *Journal of Environmental Policy & Planning* 7, no. 3 (1 September 2005): 161–73, https://doi.org/10.1080/15239080500339638.

conceptualised and presented and the choice of design and implementation of a specific set of actions for addressing such problems."

In order to give an answer to the aforementioned questions, I conducted a textual analysis of two environmental policies published by the municipality of Barcelona, focusing on the discourses employed to depict climate change, its impacts, and potential adaptation, mitigation and action strategies. Text analysis undergoes a shift towards discourse analysis when texts are viewed as elements within a broader context of supra-individual and socio-historical discourse.[105] Many authors, among which Jäger, classify specific segments of written or spoken communication as 'discourse fragments'. The entities being referred to are elements or segments of discourse threads. These threads consist of sequences of the aforementioned discourse fragments that share a common theme. These fragments operate at various discourse levels, representing different domains of speech such as science, politics, media, and everyday affairs. Collectively, these discourse fragments form the comprehensive discourse of a society, which can be envisioned as a vast and dynamic entity. Simultaneously, these discourses, encompassing the entire discursive chaos, establish the specific conditions that shape the subsequent trajectory of discourses within the entire society.[106] The term "discourse analysis" is used to refer to a wide variety of research methods that are concerned with the examination of everyday communication processes in a variety of contexts, employing linguistic, sociolinguistic, ethnomethodological-conversation-analysis, sociological, and psychological perspectives. Collectively, these research methods are referred to as "discourse analysis."[107] Discourse Analysis is a multidisciplinary approach that seeks to examine the use of language in

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[105]Reiner Keller, 'Approaches in Discourse Research', in *Doing Discourse Research: An Introduction for Social Scientists* (London: SAGE Publications Ltd, 2013), 5 – 68, https://doi.org/10.4135/9781473957640.

[106] Keller, 'Doing Discourse Research: An Introduction for Social Scientists', 5 – 68

[107] Keller, 5 – 68

spoken or written form as an empirical process occurring within a social context, commonly referred to as "text and talk in action".[108] Van Dijk understands discourse studies as interdisciplinary, and in particular as forming a bridge between linguistic and cognitive research and using his words "*discourse [is] essentially involving three main dimensions, namely language use, cognition, and interaction in their sociocultural contexts. [...] Discourse analytical studies distinguish various levels, units or constructs within each of these dimensions, and formulate the rules and strategies of their normative or actual uses. [...] Discourse Analysis thus moves from macro to micro levels of talk, text, context or society, and vice versa. [...] And perhaps most importantly, Discourse Analysis provides the theoretical and methodological tools for a well-founded critical approach to the study of social problems, power and inequality.*"[109] Furthermore, discourse analysis has the capacity to encompass the interconnectedness of discourses at the municipal or domestic level, at the national, and transnational levels. The process of policy-making is redefined as the outcome of the interplay among those competing discursive domains mentioned above, namely the local, national, and global spheres. Moreover, the dynamics of urban politics are reevaluated as a contestation between other distinct discourse coalitions.[110] Finally, discourse analysis offers a reflexive understanding of "the political" and transforms the practice of policy analysis and specifically in the context of environmental policies, it allows one to study the power effects produced by and built into environmental discourse.[111] In sum, discourse analysis problematizes what conventional policy analysts take for granted: the linguistic, identity and knowledge base of policy making. This

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[108] Keller, 5 – 68

[109] Teun A.van Dijk, 'The Study of Discourse', in *Discourse as Structure and Process: Discourse Studies: A Multidisciplinary Introduction*, 1 vols (London, 1997), 2 – 34, https://doi.org/10.4135/9781446221884, 32

[110] Peter H. Feindt and Angela Oels, 'Does Discourse Matter? Discourse Analysis in Environmental Policy Making', Journal of Environmental Policy & Planning 7, no. 3 (1 September 2005): 161 – 173, https://doi.org/10.1080/15239080500339638.

[111] Feindt and Oels, 'Does Discourse Matter? Discourse Analysis in Environmental Policy Making', 161 - 173.

includes a special awareness of the processes by and through which policy problems and even policy arenas are constructed. A discourse analysis of policy making shows how environmental problems and a related set of subjects and objects are discursively produced and rendered governable.[112]

Specifically, I have decided to let myself be guided by the Critical Discourse Analysis (CDA) and the Sociology of Knowledge Approach to Discourse (SKAD) in the endeavour to address my research questions. The Sociology of Knowledge Approach to Discourse (SKAD) closely aligns with Foucault's ideas and discourse theory. It operates on the premise that our perceptions, experiences, and senses are all influenced by socially constructed and standardised knowledge and this knowledge, to differing extents, is acknowledged as legitimate and objective.[113] Drawing from the theoretical framework established by Foucault, the primary theoretical premise of the SKAD approach claims that discourses can be subjected to systematic analysis by identifying the recurring arguments and patterns that emerge in various forms.[114] Additionally, SKAD focuses on the examination of procedures and methodologies involved in the generation and dissemination of knowledge within institutional domains, such as the sciences or the public sphere, within contemporary societies. Furthermore, this research approach is focused on the reconstruction of social processes involving the construction, objectification, communication, and legitimization of meaning structures. These structures refer to the interpretation and operation frameworks within institutions, organisations, or social actors. Additionally, the analysis also examines the social consequences resulting from the aforementioned processes.[115] SKAD

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[112] Feindt and Oels, 161 - 173.

[113] Reiner Keller, 'The Sociology of Knowledge Approach to Discourse: An Introduction', in *The Sociology of Knowledge Approach to Discourse*, 1st ed. (Routledge, 2018), 16 – 47, DOI: 10.4324/9781315170008-2.

[114] Wolf J., Schünemann, 'SKAD Analysis of European Multi-Level Political Debates', in *The Sociology of Knowledge Approach to Discourse*, 1st ed. (Routledge, 2018), DOI: 10.4324/9781315170008-5.

[115] Keller, 'Doing Discourse Research: An Introduction for Social Scientists', 5 – 68.

aims to provoke thinking "about the roles that knowledge, knowledge production, knowledge hierarchies and knowledge institutions play in […] social transformation".[116] The Sociology of Knowledge Approach to Discourse examines the social practices and processes involved in the creation, maintenance, and alteration of symbolic systems and their resulting impacts. This includes the influence of discourses on various aspects such as legislation, research, categorizations, strategies and practices. These elements can be seen as both products of discourses and as prerequisites for the emergence of new discourses.[117] The extensive methodological framework of sociology allows for a more comprehensive empirical foundation for discourse research compared to approaches that are grounded in linguistics or discourse theory. Finally, similarly to other qualitative methodologies, SKAD emphasises the importance of conducting sequential analysis of textual or visual data. This involves a systematic process of developing categories that assign labels to various patterns of meaning-making, such as interpretive schemes, classifications, narratives and dimensions.[118] The second methodology that has been chosen for implementation, which complements the SKAD approach effectively, is Critical Discourse Analysis. CDA is a research approach that positions itself as politically engaged, driven by the pursuit of independence and emancipation. In line with SKAD's perspective, scholars in Critical Discourse Analysis, CDA for short, consider language as a reflection of social behaviour. They also exhibit a dedication to examining the social and material consequences of discourse, which closely aligns with the focus of my research.[119] Their main emphasis lies in conducting comprehensive analyses of hidden power dynamics and deeply entrenched ideologies that are embedded within discourses. In conclusion, the

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[116] Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London, New York, New York: Zed Books, 2012).

[117] Keller, 'Doing Discourse Research: An Introduction for Social Scientists', 5 – 68.

[118] Keller, 5 – 68.

[119] Melissa N. P. Johnson and Ethan McLean, 'Discourse Analysis', in International Encyclopedia of Human Geography (Second Edition), ed. Audrey Kobayashi (Oxford: Elsevier, 2020), 377 – 383, https://doi.org/10.1016/B978-0-08-102295-5.10814-5.

chosen methodology was selected based on a series of distinctive characteristics. This methodology demonstrates a clear acknowledgement of the impact of language on the formation of policies, political entities, and political processes. This observation illustrates a propensity to perceive knowledge as contingent and open to deliberation. Furthermore, it demonstrates curiosity in exploring the partial outcomes of dominant modes of communication and understanding. It is widely recognised that language and knowledge should be examined as expressions of power and as influential factors in power dynamics. Moreover, this research methodology investigates the various ways in which practices, encompassing academic, political, and everyday activities, play a role in shaping power dynamics and knowledge systems. Within this framework, the examination of language usage within organisations has emerged as a central area of focus for academic research.[120] CDA has expanded its scope beyond the confines of critical linguistics in multiple ways. The initial aspect can be observed in the endeavour to elucidate the connection between discourses and the social practices within which they are placed.[121] It is important to note that critical discourse analysis does not adhere to a specific theoretical orthodoxy. The unifying factor among various approaches to CDA does not lie in a specific methodology or theoretical framework, but rather in a shared objective: the examination and critique of dominant discourses and genres that perpetuate social inequalities, injustices, and oppression within present-day society.[122] Hence, the absence of a precise and fixed set of norms or framework infuses this methodology with a quality of adaptability and versatility, which is evident in

[120] Keller, 'Doing Discourse Research: An Introduction for Social Scientists', 5–68.

[121] T. van Leeuwen, 'Critical Discourse Analysis', in Encyclopedia of Language & Linguistics (Second Edition), ed. Keith Brown (Oxford: Elsevier, 2006), 290–94, https://doi.org/10.1016/B0-08-044854-2/00501-0.

[122] T. van Leeuwen, 'Critical Discourse Analysis', in Encyclopedia of Language & Linguistics (Second Edition), ed. Keith Brown (Oxford: Elsevier, 2006), 290–94, https://doi.org/10.1016/B0-08-044854-2/00501-0.

the wide variety of studies that employ this approach.[123] Also for these reasons, the Critical Discourse Analysis framework has become widely known as a useful tool for analysing different kinds of research in the field of communication studies.[124] Since the mid-1990s, it has become especially well-known as a framework for analysing environmental policy.[125] Finally, Fairclough became a well-known academic figure due to his significant contributions to developing conceptual frameworks for analysing "text as discourse" and his valuable methodologies for analysing policy texts. In fact, the founding father of the CDA and Discourse analysis in general, guided me partially in the organisation and design of my research. Fairclough suggests that the first step into the analysis after the compilation of the data corpus and the selection of samples from it is the text analysis, particularly focusing on structures, topics, vocabulary and grammar.[126] In a second moment the author suggests inserting the text and discourse in question into a more general order of discourses.[127]

Case study: Barcelona

"*Reducing emissions may be a global commitment, but the effects of failing to meet it are local.*"[128]

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[123] T. van Leeuwen, 'Critical Discourse Analysis', in Encyclopedia of Language & Linguistics (Second Edition), ed. Keith Brown (Oxford: Elsevier, 2006), 290–94, https://doi.org/10.1016/B0-08-044854-2/00501-0.

[124] Etsuko Kinefuchi, 'Critical Discourse Analysis and the Ecological Turn in Intercultural Communication', *Review of Communication* 18, no. 3 (3 July 2018): 212–30, https://doi.org/10.1080/15358593.2018.1479882.

[125] Sina Leipold et al., 'Discourse Analysis of Environmental Policy Revisited: Traditions, Trends, Perspectives', *Journal of Environmental Policy & Planning* 21, no. 5 (3 September 2019): 445–463, https://doi.org/10.1080/1523908X.2019.1660462.

[126] Norman Fairclough, 'Critical Discourse Analysis in Practice: Interpretation, Explanation, and the Position of the Analyst', in *Language and Power*, 2nd ed. (Routledge, 2001).

[127] Fairclough, 'Language and Power'.

[128] Gerència d'Àrea d'Ecologia Urbana, 'Climate Emergency Action Plan for 2030' (Barcelona: Ajuntament de Barcelona, 2021), 184, http://hdl.handle.net/11703/123710, 33

The main objective of this study is to examine the particular type of environmental discourse employed in the latest environmental policies that have been enacted at the local level within Europe and if and how the latter can influence the choice of a specific set of actions and strategies in the fight against climate change. Yin (2009) posits that there are situations in which the research inquiry is centred on comprehending the underlying reasoning (the why) or procedure (the how) behind a specific action or behaviour. The utilisation of the Case Study method of research can offer several benefits in such instances. Moreover, the author claims that the optimal subjects for a research study utilising the case study methodology are those that explore a current combination of events in which the researcher has restricted or no authority. These characteristics are consistent with my ongoing research investigation, leading me to select the case study as a suitable method for organising my thesis.[129] The case study is the most correct choice when the investigator wants to comprehend a real-life phenomenon in-depth. However such understanding encompasses important contextual precisions and conditions because various highly pertinent topics compose the subject matter.[130] Considering the limitations imposed by time, I have opted to concentrate solely on one single case study. I was obligated to make a deliberate choice in order to adequately address my research inquiries and engage in a comprehensive and meticulous investigation of the primary subject matter of my research, as opposed to conducting a superficial examination of multiple subjects. Given the fact that I am taking into consideration one single case study, my desire, my final aim is not to arrive at a broad generalisation of my theory, my objective is to present

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[129]Robert K. Yin, Case Study Research: Design and Methods, 4th ed., Applied Social Research Methods (SAGE Publications, 2009), 219, https://books.google.it/books?id=FzawIAdilHkC.

[130] Robert K. Yin, 'Introduction: How to Know Whether and When to Use the Case Studies as a Research Method', in *Case Study Research: Design and Methods*, 4th ed., Applied Social Research Methods (Thousand Oaks: SAGE Publications, 2009), 3 – 25, https://books.google.it/books?id=FzawIAdilHkC.

the case of the local environmental policies of a city and to investigate how different discourses play a role in them.

I started structuring my analysis by considering cities that have openly demonstrated their commitment to environmental and sustainability matters, such as those that are affiliated with the International Council for Local Environmental Initiatives (ICLEI) or have implemented objectives from Agenda 21 and Agenda 30 locally. Subsequently, I directed my attention towards urban areas that, within the past decade, have formulated a comprehensive strategy or initiative aimed at addressing the aforementioned issues, while also being at the forefront of efforts to combat climate change. In addition, I gave priority to programmes with a medium- to long-term point of view, rather than policies with short-term action plans. Moreover, I was looking for the areas most affected by the effects of climate change in Europe. Spain is undeniably among the countries that are most impacted by and confronts substantial risks associated with the consequences of climate change in Europe and this can be attributed to its geographical positioning and socio-economic attributes.[131] The rise in temperatures is apparent, as evidenced by the fact that 2022 was the warmest year in the nation's 62-year data set with the highest recorded annual mean temperature of 15.3°C, surpassing the average annual temperature by 1.6°C.[132] As per the Agencia Estatal de Meteorología of Spain, the year 2022 witnessed a significant milestone, as it became the first year in which the annual temperature exceeded the threshold of 15.0°C.[133] In addition, Spain, along with the majority of countries located in the Mediterranean region, is now struggling with an extraordinary decrease in the frequency of

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[131] Ministerio para la Transición Ecológica y el Reto Demográfico, ed., Plan nacional de adaptación al cambio climático 2021-2030 (2020), 1 - 246.

[132] NOAA National Centers for Environmental Information, Monthly Global Climate Report for Annual 2022, published online January 2023.
https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202213.

[133] Agencia Estatal de Meteorología, 'Avance Climático Nacional de otoño de 2022' (Madrid, Spain: Ministerio para la Transición Ecológica y el Reto Demográfico, 16 December 2022), https://www.aemet.es/documentos/es/noticias/2022/Avanceclimaticonacionalotonho2022.pdf.

precipitation while simultaneously experiencing an increase in the severity of this precipitation.[134] In fact, this year, the country experienced its third-lowest annual rainfall levels since records began.[135] Finally, in Spain, a significant majority of the overall population, precisely 86%, expressed a notable level of concern and awareness regarding the issue of climate change and its effects.[136] It is important to note that this viewpoint is not manifested in their actions or behavioural tendencies. A comparable scenario can be discerned when examining the European population's attitudes towards environmental matters, as Spain emerges as a nation with notable environmental consciousness yet exhibits relatively limited engagement in environmental activities.[137] Given these explanations, it is deemed intriguing to undertake an analysis of the manner in which environmental concerns have been articulated within Spanish environmental policies, as well as the corresponding proposed solutions.

The primary focus of my research pertains to the examination of environmental policies implemented and enforced at the local and municipal levels. Consequently, I have narrowed down the selection of potential case studies to concentrate specifically on Spanish cities. Given that Barcelona has met all of the aforementioned criteria about the efforts in the fight against climate change, I have made the decision to focus my case study solely on this specific city. Barcelona has been working on climate issues for many years. Primarily on measures directly related to mitigation, such as energy efficiency and energy saving and subsequently with the approval of other plans and strategies linked

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[134] European Environment Agency, *How Climate Change Is Affecting Europe*, Infographic (Europe: European Parliament, 20 September 2018), https://www.europarl.europa.eu/resources/library/images/20180919PHT13822/20180919PHT 13822_original.jpg.

[135] NOAA National Centers for Environmental Information, Monthly Global Climate Report for Annual 2022, published online January 2023. https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202213.

[136] Àrea de Medi Ambient and Agència Local d'Energia de Barcelona, 'The Energy, Climate Change and Air Quality Plan of Barcelona (PECQ 2011-2020)', 2011, 159, 63

[137] Àrea de Medi Ambient and Agència Local d'Energia de Barcelona, 'The Energy, Climate Change and Air Quality Plan of Barcelona, 63

to adaptation. In general, all the plans cover issues related to energy and climate change. Air quality is implicitly included in most of the plans (which incorporate measures to reduce air pollution). Most of the plans cover a wider scope. Other issues that are also covered are waste management, water management and tourism. All the action plans are mainly based on energy efficiency in buildings and measures related to transport and mobility. Most incorporate measures affecting buildings, in both the private sector and public sector and also in the commercial sector.

In addition to the factors previously mentioned, several other factors influenced my decision to choose Barcelona as the primary subject of my case study. First and foremost, Barcelona occupies a prominent position as one of the most important urban centres in Spain. Barcelona, the capital of the autonomous community of Catalonia, exhibits a significant degree of autonomy from the central government in its ability to develop and implement specific policies, particularly in the areas of environmental protection and addressing the challenges posed by climate change. In fact, the sphere of influence of Barcelona extends beyond the administrative boundaries of the city. In the last four decades, there has been a notable global trend observed in major cities, known as *metropolitization*. This phenomenon has resulted in Barcelona emerging as the focal point of a vast urban system, wherein neighbouring towns and even peripheral districts have transformed into a distinct geographical entity. The aforementioned trend has encompassed an expansion of the boundaries of urban areas, resulting in significant environmental consequences for the region. Therefore, it is evident that any planning or territorial decision made, as well as any socio-economic change implemented, has a significant impact on the functioning and dynamics of Barcelona as a whole.[138] Secondly, the city is located in a very particular geographic area. Indeed, Barcelona is

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[138] Àrea de Medi Ambient and Agència Local d'Energia de Barcelona, 'The Energy, Climate Change and Air Quality Plan of Barcelona (PECQ 2011-2020)', 2011, 159.

situated on the same-named plain, which extends between the Llobregat and Besòs river basins and the Mediterranean Sea on one side and Serralda de Collserola, the Coastal Mountain Range and Montjuïc mountain on the other. Therefore, the topic mentioned above is increasingly vulnerable to the effects of climate change and is beginning to show early signs of being impacted by it.

In addition to incorporating the theoretical framework provided by Matusitz concerning "Glurbanization" and its application to the selected urban locale, I have also extended my analysis by introducing the theoretical perspective of Simon Dalby. This comprehensive approach serves to enrich the understanding of the intricate interplay between urbanisation, climate change, and environmental policy, thus contributing to a multifaceted comprehension of the subject matter. The chosen urban context, Barcelona, emerges as a crucible wherein the complexities of the theory of "Glurbanization" manifest. Matusitz's theory of "Glurbanization" establishes a conceptual scaffold that resonates deeply within the cityscape of Barcelona, a sprawling metropolis where the convergence of local, regional, and global dynamics becomes palpable.[139] This nexus is emblematic of the overarching premise put forth by Matusitz, wherein cities are elucidated as nuclei of globalisation. The "Glurbanization" framework posits that urban centres operate as frontiers of globalisation, where forces and processes originating from the local, regional, and national strata synergistically interact, amalgamate, and converge.[140] This intricate entanglement underlines the notion that cities, like Barcelona, function as platforms wherein a fusion of influences transpires, underscoring the interdependence of diverse scales of operation. Noteworthy within the context of Barcelona is the discernible alignment of its environmental policies with the principles encapsulated within

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[139] Jonathan Matusitz, 'Glurbanization Theory: An Analysis of Global Cities', *International Review of Sociology* 20, no. 1 (1 March 2010): 1 – 14, https://doi.org/10.1080/03906700903525651.
[140] Matusitz, 'Glurbanization theory: an analysis of global cities', 1 - 14.

the "Glurbanization" theory.[141] The alignment in question highlights the city's proactive recognition of the interconnectedness between various geographic layers, including the metropolitan, regional, national, and global scales. Barcelona's environmental policies can be seen as concrete manifestations of the complex intersections between various scales, thus providing empirical evidence for Matusitz's theoretical framework.[142]This interplay of theory and applied policy particularly resonates in an urban entity like Barcelona, whose proactive engagement with environmental concerns manifests the vital interdependence of urbanisation, climate change, and security. In conclusion, the confluence of Matusitz's "Glurbanization" theory and Simon Dalby's perspectives on climate change and security furnishes an enriched prism through which to scrutinise Barcelona's urban fabric. This multi-layered approach expounds upon the dynamic relationships between local, regional, and global dynamics, while also accentuating the imperative to align security and urbanisation strategies with the exigencies of climate change. By harmonising these theoretical frameworks with empirical evidence from Barcelona, this comprehensive analysis aims to underscore the intricate interplay between urbanisation, environmental policies, and climate change adaptation, thereby contributing to a holistic understanding of the subject matter.

Theoretical Framework

I situate my theoretical framework in consideration of Dryzek's taxonomy of environmental discourses. Within his seminal work, "The Politics of the Earth," Dryzek meticulously presents an intricate classification of prevailing environmental discourses, rooted in selected criteria.[143] Central to Dryzek's framework there are two pivotal dimensions that exert influence on the interface

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[141] Matusitz, 1 - 14.
[142] Matusitz, 1 - 14.
[143] Dryzek, 'The Politics of the Earth: Environmental Discourses'.

between human agency and the environment. The primary dimension delineates the spectrum upon which environmental discourses are positioned, ranging from reformist to radical in comparison to the backdrop of industrialist discourses.[144] This positioning further signifies the extent to which the discourse signals a departure from the established conditions engendered by dominant industrialism. Within this continuum, reformist discourses advocate for cautious, incremental alterations, representing a measured approach to change. In contrast, radical discourses embrace a more transformative stance, advocating for swift and profound shifts in both societal structure and systemic dynamics.[145] The degree of change sought delineates the demarcation between reformist alterations characterised by evolutionary, contained change, and radical transformations characterised by revolutionary, expansive shifts. Dryzek's classification unfolds with an initial partition of discourses grounded in their level of deviation from the dominant industrial discourse. A discourse adhering to a reformist departure posits that the existing system is fundamentally functional, albeit necessitating selective modifications, often implemented through gradual processes.[146] Such a discourse seeks to refine and adapt the system from within, aiming for incremental and limited alterations. Conversely, a radical departure signifies the recognition of an imperative for comprehensive, abrupt modifications to both the societal framework and systemic configuration. The pursuit of change in this context is distinctly profound and far-reaching.

The secondary dimension encapsulates the diverse ways in which departures from the dominant industrial political economy manifest, either in prosaic or imaginative trajectories.[147] Prosaic departures presuppose the acceptance of the existing political-economic framework built by industrial society, interpreting

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[144] Dryzek, 14 - 16.
[145] Dryzek, 14 - 16.
[146] Dryzek, 14 - 16.
[147] Dryzek, 14.

environmental challenges within the confines of the established industrial political economy. The environmental issues mentioned above are commonly perceived as disturbances within the established economic framework. Within the continuum of the prosaic-imaginative spectrum, it is imperative to acknowledge and confront the environmental crisis. However, it is worth noting that such concerns do not inherently advocate for the establishment of a novel societal framework, such changes operate from within the borders of the society.[148] In stark contrast, imaginative departures endeavour to redefine the parameters of the established chessboard. The imaginative aspect surpasses prior complexities, reconfiguring the understanding of environmental challenges. Under this paradigm, environmental concerns emerge as avenues for innovation rather than adversities, thereby recasting the relationship between economic and environmental considerations in a harmonious light. By doing so, the environment assumes a pivotal role within society.

Synthesising these dual dimensions culminates in a classification grid featuring four distinct quadrants, wherein all considered discourses can be categorised. This systematic categorization provides a structured framework through which the intricate mosaic of environmental discourses can be comprehensively analysed and systematically interpreted.

At this point in the analysis, Dryzek's classification of environmental discourses becomes more distinct, revealing a detailed taxonomy that aligns well with the segments within his framework. This comprehensive classification includes four primary types of environmental discourse: Environmental Problem-Solving, Limits and Survival, Sustainability, and Green Radicalism. Each of these discourses represents a specific stance in the broader spectrum of human-nature interaction, as proposed by Dryzek.[149] A more detailed explanation of

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[148] Dryzek, 14.
[149] Dryzek, 15

these discourses follows, shedding light on their distinctive features and underlying principles. The discourse of Environmental Problem-Solving, situated in the first quadrant of Dryzek's classification, is characterised by a practical and reform-oriented perspective. This discourse operates on the assumption of the existing political-economic status quo, while recognizing the need for calibrated adjustments to effectively address environmental challenges. The central principle revolves around the utilisation of public policy to facilitate the necessary adaptations to confront environmental issues. It's important to note that this discourse covers a range of perspectives, encompassing varying opinions on the most suitable strategies within its scope.[150] Moving to the next quadrant, which encompasses the Limits and Survival discourse, we encounter a pragmatic yet radical approach. Emerging in the 1970s, this discourse has evolved over time, with contemporary iterations focusing more on the concept of planetary boundaries rather than rigid limitations. At its core, this discourse asserts that Earth's natural resources and capacity have definite limits. The discourse argues against unchecked economic growth and population expansion, which are seen as detrimental to the fragile ecosystem. Thus, the emphasis lies in recognizing these ecological constraints and formulating strategies to mitigate further damage.[151] In the realm of Sustainability, Dryzek introduces a discourse that echoes an imaginative and reformist mindset. This discourse calls for a re-evaluation of conventional notions of progress and development, aiming to bridge the gap between environmental and economic values. The core of sustainability discourse is to redefine the parameters of advancement, forging a connection between human prosperity and ecological harmony. The discourse aspires to foster a balanced coexistence where environmental stewardship and economic progress go hand in hand.[152] Lastly, Dryzek's primary classification culminates in the Green Radicalism discourse,

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[150] Dryzek, 14 - 17
[151] Dryzek, 14 - 17
[152] Dryzek, 14 - 16

located in the quadrant of imaginative and radical ideologies. This discourse represents a significant departure from the foundational principles of the industrialised world, advocating for a paradigm shift in how society perceives the environment, humanity, and its interplay. It introduces innovative perspectives on human agency, societal structure, and humanity's role in the greater ecological narrative. This discourse calls for a reconfiguration of humanity's relationship with the natural world, transcending conventional boundaries to drive a profound transformation of prevailing paradigms.[153]

Dryzek's taxonomy of environmental discourses encompasses the four primary categories previously outlined, along with additional specific environmental discourses that are organised within one of the broader groupings. To create this more detailed classification, Dryzek introduces four distinct elements that characterise the story lines[154] structures underlying these various discourses: basic entities, assumptions about natural relationships, agents and their motives, and key metaphors and other rhetorical devices.[155] Dryzek's concept of "basic entities" pertains to the fundamental elements that constitute the core of a discourse's worldview. It recognizes that different discourses may acknowledge or construct distinct elements in the world. For instance, some discourses may recognize ecosystems as essential, while others might lack any concept of ecosystems altogether.[156] The second element in discourse analysis involves examining assumptions about natural relationships. This element refers to the ideas surrounding what is considered natural in the relationships between different entities. Different discourses might emphasise notions of competition, cooperation, hierarchies, or other types of relationships as being natural within their perspective.[157] The third element centres on agents and their motives

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[153] Dryzek, 14 - 16
[154] Hajer, 'The Politics of Environmental Discourse: Ecological Modernization and the Policy Process', 42-72
[155] Dryzek, 17-20
[156] Dryzek, 17
[157] Dryzek, 18

within the discourse. Every narrative requires actors that operate with specific motivations. This element pertains to both individuals and collectives, predominantly human but occasionally encompassing non-human entities in certain discourses.[158] The fourth and final element for analysing discourse is the utilisation of key metaphors and other rhetorical devices. These devices are used to express one concept in terms of another, framing situations in particular ways. Metaphors and rhetorical devices play a crucial role in shaping the narrative and influencing how audiences perceive the discourse.[159]

Dryzek identified nine distinct environmental discourses based on the criteria mentioned earlier. These discourses are positioned within a graphical framework formed by the radical-reformist and the prosaic-imaginative dimensions, as shown in Figure 1.
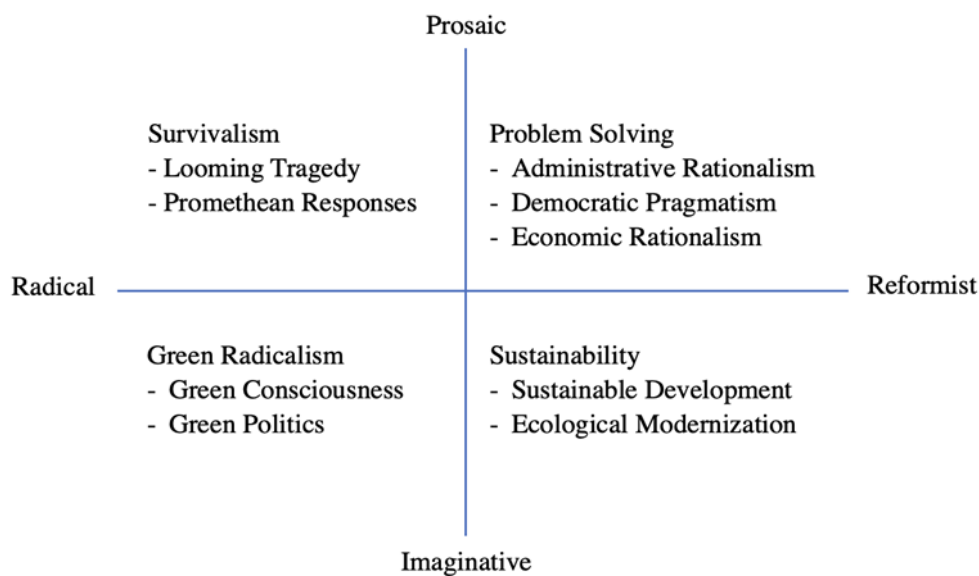

Figure 1 – Graphical representation of Dryzek's taxonomy

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[158] Dryzek, 18
[159] Dryzek, 18-19

In summary, Dryzek's intricate classification of environmental discourses offers a nuanced framework that categorises prevailing ideologies in the context of human-environment interactions. By elucidating the fundamental principles of each discourse, his analysis aims to foster a comprehensive understanding of the diverse perspectives converging in the discourse on environmental paradigms and to underline the importance of the language one uses in engaging in environmental affairs. This exploration delves deeply into the intricate tapestry of environmental ideologies, contributing to a more profound comprehension of the manifold ways in which society conceptualises and addresses the intricate interplay between human civilization and the natural world.

Limitations

Critical Discourse Analysis has faced criticism for its potential bias and perceived lack of neutrality. However, as Fairclough aptly asserts, CDA explicitly acknowledges its departure point, as the complete absence of prior value judgments is unattainable. It's crucial to note that the outcomes yielded by my research are open-ended and remain susceptible to future refinement and modification. In view of the interpretive orientation inherent to this study, it's essential to acknowledge that the findings are contingent upon the researcher's perspective and not easily generalizable. The limitations embedded within my thesis are closely linked to the constraints of time. Consequently, I made the deliberate choice to focus on a single case and for these reasons, the results of my analysis are not easily generalizable. Furthermore, language proficiency has proven to be both a strength and a limitation. While my ability to communicate in and comprehend Catalan facilitated data access and analysis, my non-native English proficiency might have resulted in limitations in articulating and elaborating on the findings.

Data Collection

Given such premises and once I decided to focus solely on the case of Barcelona, I decided to proceed with an analysis of the narratives and discursive frameworks that underpin the formulation of Barcelona's most significant environmental policies. To build the text corpus for the analysis and as a starting point to find the texts I needed for the research project I used the *Repositori Obert Coneixement de l'Ajuntament de Barcelona* (Barcelona City Council's Open Knowledge Repository).[160] At this point, I made an initial selection by entering the keyword "*Politíca Ambiental*" (environmental policy) in the search bar of the website, setting a timeframe from 2010 until today. Among the vast number of texts and documents I found, I decided to take into consideration the Climate Emergency Action Plan for 2030 released in 2021 because it is the most recent municipal strategic plan released with respect to climate change. I decided to select the other texts in a 10-year span from 2021 back to 2011. Consequently, I took into account the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" released in 2011 because it is the only municipal strategic plan that explicitly displays the concept of climate change and that is at a significant time distance. I have made the decision to focus my attention on two policy papers that were implemented one decade after the other, respectively in 2011 and 2021, for the simple reason that this gap in time provides me with the opportunity to more effectively recognise and draw attention to the disparities in the discourses that were used to present the environmental issues that were taken into consideration as well as the differences in the action plan proposed to address the aforementioned concerns. In addition, I chose two publications, specifically the "*Barcelona i el canvi climàtic*" (Barcelona and the climate change) report that was issued in 2010 and the "Climate Emergency Declaration" that was published in January 2020, to offer additional background information and context for each of the policies that

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[160] https://bcnroc.ajuntament.barcelona.cat/jspui/

I evaluated. Taking into consideration my time limit, I decided to focus solely on these two environmental strategic plans. They are similar from a spatial point of view, they refer to the same geographical location. However, they differ from a temporal point of view, in fact, they have been published with a difference of 10 years from the other. This temporal difference allows me to develop my research more efficiently and to better highlight the different discourses used and solutions proposed. This way, even though the data collected is limited to only one case and does not allow me to generalise my result and theory, it is sufficiently detailed to start to answer my research inquiry and to prove if my theory applies to this specific case, at what level or if it does not.

Data Organization and Analysis

In order to answer my research questions, I proceeded with a textual analysis of the two policies that had been selected. At first, I started by closely and deeply reading the selected documents multiple times, in order to acquire familiarity with the content and the language and to gather information with the purpose of extracting the data relevant to my research. My first goal in this part of my analysis was to answer my first research question which concerns the depiction of the concept of climate change, of its impacts on both local and global levels, and of the corresponding solutions at the local level within the context of local environmental policies. Consequently, my text analysis was, at first, focused on determining in which way the concept of environmental issues, climate change and the effects of it at a municipal and a global level were being presented in Barcelona's "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" and "Climate Emergency Action Plan for 2030". At this point, I decided to use the support of the qualitative data analysis software NVivo 12 and Atlas.ti for conducting my text analysis. I decided to use an inductive approach to the construction of my coding scheme. I made this choice because I didn't have any prior assumption and I let myself guide by the raw data of the selected documents. Furthermore, since the study issue is open-ended, this data-driven

research approach allows the theory to emerge from the data and enables the use of labels that are in close proximity to the analysed data, while minimising the impact of pre-existing principles, structures, or assumptions.[161] At the same time, it reduced the possible bias I could have had while reading and analysing the document. It gives more objective results. At this point, after reading carefully the selected documents, I selected key text parts that reply or are connected to my research question. This means parts of the text that define climate change, its effect on the city and the solution that the selected plans propose in order to tackle this issue. Then, I proceeded by labelling segments of text (words, sentences and paragraphs) with a code. The vast majority of the time, I selected phrases or even larger parts of text; but, when it came to particular codes, I opted to highlight single words instead. I divided the codes into two different groups: "Description of environmental issues" and "Description of solutions to environmental issues" (Table 1).

Name	^	Size	Created by
◇ Description of environmental issues		19	Marta Cacre
◇ Description of solution to environmental issues		20	Marta Cacre

Table 1- Code groups

The codes contained in the first group are those codes which refer to a word or part of the texts that present the issue of climate change in a certain way or which attribute the issue to a certain cause. For example, "climate emergency", "energy and resources consumption", "GHG emissions", "threat" etc. On the other hand, the codes that constitute the second group refer to the possible solutions that the strategic plans propose to tackle the problems. For instance, "raise awareness - education", "mitigation", "reduce GHG emissions" etc. Once I finished coding all the documents, I read the policies for a second time with

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[161] Yanto Chandra and Liang Shang, "Inductive Coding,", in *Qualitative Research Using R: A Systematic Approach* (Singapore: Springer, 2019), 91–106, https://doi.org/10.1007/978-981-13-3170-1_8.

the objective of reviewing my first-level codes. At this point, I proceeded by finding redundant coding and deleting superfluous codes; aggregating my first-level codes into high-level code; combining similar codes into broader categories. I repeated this procedure a total of three times, in order to be certain to have given the same degree of attention and care to each piece of text of the two policies. After these various steps, finally, my code book was finished and it was composed of 39 codes (Table 2). It is composed of some completely different codes and other more similar ones in order to cover the nuanced and complex subject area and topic and have a broad and complete perspective both on the representation of the problems and the solution.

Code Group: Description of environmental issues	Code Group: Description of solution to environmental issues	
air pollution	adaptation	
cities as part of the problem and the solution	big changes	
city level	carbon neutral	
climate change effects	citizen participation	
climate emergency	energy culture	
climate justice	energy efficiency	
consumption model - energy and resources	energy poverty	
correlation between cities role and energy use and GHGs	green or circular economy	
economy	greening	
emergency-urgency	improve air quality	
fight climate change	mission	
GHG emissions	mitigation	
global level - international agreements	municipal action	
limits	raise awareness - education	
people-citizens health	reduce emissions of GHG	
threat	reduce energy and resources consumption	
transports	responsability	
urban growth	sustainability	
vulnerability	sustainable resources - renewables	
	water management	

Table 2 - Codebook

Results

Following a thorough initial phase of meticulous data analysis, a comprehensive examination was undertaken, encompassing the content of relevant documents that directly pertain to the core of my primary research inquiry. This inquiry focuses on the intricate depiction of the multifaceted concept of climate change,

encompassing its diverse effects that spread from local to global levels. Additionally, it considers the corresponding solution strategies at the local level, which are encapsulated within the boundaries of localised environmental policies.

Both policies are available in three languages: Catalan, Spanish, and English; however, they exhibit slight structural variations. The "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" consists of six distinct blocks, each serving a specific purpose within the document's framework. The initial section functions as an introductory preamble, delineating the program's scope while contextualising the emergence of the environmental issue at hand. Subsequent sections, namely the second and third blocks, offer a more comprehensive exposition of the program, delineating a clear demarcation between the city-level and municipal-level strategies. The fourth and fifth segments expound upon the execution landscape and the tangible action strategies, respectively. The concluding block entails an environmental evaluation. In contrast, the "Climate Emergency Action Plan for 2030" adopts a simpler compositional structure, comprising two distinct sections. The primary division furnishes an overview of the action plan, presenting a succinct overview of prior municipal strategies and the contextual backdrop against which the program is poised to address climate change impacts. The ensuing section unveils the core action plan, affording a meticulous dissection of strategic objectives and avenues of action. It is noteworthy that a discernible discrepancy emerges in the proportion of content dedicated to specific aspects in each document. The earlier policy document allocates a substantial portion to technical explication, meticulously detailing the genesis, implications, and consequences of greenhouse gas emissions, energy consumption, and climate change dynamics. This leaves a comparatively modest segment for the elucidation of proposed solutions. In contrast, the more recent environmental policy tilts the balance, dedicating over half of its content to delineating the

action strategies, underscoring a pronounced shift in prioritisation within its framework.

After the conclusion of the comprehensive coding process, I decided to investigate the domain of word frequency analysis in the two chosen texts. The present analytical approach focuses exclusively on nouns, verbs, and adjectives. These linguistic elements are crucial in conveying the essence of meaning within the documents. Finally, in order to maximise the relevance and importance of the observed language patterns, a pragmatic threshold for the minimum frequency of word occurrence was determined at 177 occurrences. Moreover, a rigorous filtering procedure was conducted, expunging terms that were unrelated and superfluous to the subject of research. The final result of the word frequency list is visible in Tables 3 and 4. For illustrative elucidation, consider the "Climate Emergency Action Plan for 2030" (Table 3). In this document, the term "climate" is found 786 times, indicating a prevalence of 16%. This prominence is accompanied in a harmonious manner by the term "action," which is observed to occur 488 times, and the term "emergency," which is found to surface 312 times. In stark contrast, the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" predominantly focuses on the concept of "energy," with a total occurrence of 1884 instances, accounting for 11.33% of the entire text. The term "consumption" is observed with a high frequency of 790 instances, indicating its significant prominence. Similarly, the term "emissions" is also notable, appearing 606 times throughout the text. Significantly, the term "climate" appears 327 times in this context, representing a relative frequency of 1.97%. This observation highlights a notable deviation from its prevalence in the previous document.

Following the completion of complex quantitative analysis, a visualisation technique known as "Word Cloud" was utilised to visually represent the most frequently occurring lexical elements within each set of documents. Two separate visualisations, each tailored to the individual cluster of documents,

Word	Length	Count ▼	%
climate	7	786	16.00
barcelona	9	680	13.84
action	6	488	9.93
plan	4	459	9.34
city	4	428	8.71
urban	5	360	7.33
energy	6	317	6.45
emergency	9	312	6.35
council	7	254	5.17
change	6	217	4.42
consumption	11	208	4.23
actions	7	205	4.17
ecology	7	198	4.03

Word	Length	Count ▼	%
energy	6	1884	11.33
barcelona	9	1152	6.93
consumption	11	790	4.75
city	4	671	4.03
emissions	9	606	3.64
municipal	9	423	2.54
air	3	383	2.30
vehicles	8	376	2.26
change	6	343	2.06
waste	5	332	2.00
gas	3	330	1.98
climate	7	327	1.97
electricity	11	303	1.82

Table 3 – Word frequency of "Climate Emergency Action Plan for 2030" (right)

Table 4 - Word frequency of "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" (left)

were chosen in search of an all-encompassing viewpoint. The use of this representation not only enhanced the visibility of commonly appearing words but also enabled a more comprehensive understanding of the underlying thematic implications present in the "Climate Emergency Action Plan for 2030" (Figure 2) and the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" (Figure 3). The visual representations clearly revealed different thematic focuses within the two groups of documents. The "Climate Emergency Action Plan for 2030" exhibits a clear sense of urgency, supported by a strong dedication to tackling climate-related issues in urban settings. The aforementioned dedication is primarily evident within the sphere of energy usage, preservation of ecological balance, and the advancement of sustainable methodologies.

Figure 2 – Word Cloud "Climate Emergency Action Plan for 2030"

Figure 3 -– Word Cloud "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020".

The thematic focus of the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" is centred on energy variability, the generation of emissions, and patterns of consumption, which stands in direct opposition to the other policy. The usage of the terms change, action, and climate, which are prominent in the previous document, is relatively restrained in the latter, indicating subtle changes in thematic focus. In summary, the thorough examination of data, supported by the accurate evaluation of word frequency and the use of visual aids such as Word Clouds, has effectively revealed the intricate variations in themes present in the chosen documents. Through the application of analytical methodologies, the intricate relationship between lexical prevalence has been revealed. This has facilitated the identification of the thematic boundaries within the "Climate Emergency Action Plan for 2030" and the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020." Consequently, these findings have contributed to a holistic comprehension of the diverse viewpoints that form the foundation of environmental policy formulation within these texts.

The analysis of the chosen environmental policies aims to understand how they discuss environmental issues and the concept of climate change. This involves examining how they use language to convey their ideas and how certain words and phrases are connected within the documents. To help visualise these connections, I used a Sankey diagram, which makes it easier to see how different parts of the documents relate to each other. In the Sankey diagram shown in Figure 4, I've connected the two selected policy documents to the most relevant parts of the "Description of Environmental Issues" category. When looking at the diagram for the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020," I noticed that the main themes are about economic interests and the rise of greenhouse gas emissions. These emissions are largely caused by unsustainable transportation practices, leading to air pollution and a decline in air quality. This, in turn, negatively affects the overall quality of life for the

residents of Barcelona. Additionally, this policy points out a consumption pattern that heavily relies on energy and resources, leading to wastefulness. On the other hand, In the most recent policy, climate change is portrayed as an urgent matter, sometimes likened to a threat to the city's safety and people's well-being. The language used suggests a sense of fighting against this issue, much like a battle. This policy emphasises the potential impacts of climate change on the city and the world, with a specific focus on the health of vulnerable groups in the local population. In both documents the cities as entities, being an agglomerate of industries and market focal points, are considered part of the aetiology of climate change and they are found responsible for the worsening of the climate crisis. At the same time, and probably also for this reason, they are considered an important and perhaps essential actor in the efforts to find solutions to the aforementioned concerns. However, they approach the issue differently. The "Climate Emergency Action Plan 2030" emphasises the urgency and potential crisis, while the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" focuses on economic implications and the impact on the resident's quality of life. In summary, my analysis of these policies and the use of the Sankey diagram has helped me see the distinct ways they address climate change. The visual representation of the diagram made it easier to understand how different ideas are connected within these policies, shedding light on how they discuss and incorporate the concept of climate change in their narratives.

After examining the various ways in which the central issue of this thesis is represented, namely climate change and its effects, it becomes intriguing to explore the manner in which the aforementioned challenges are tackled and the solutions offered by the selected policies are portrayed. In order to accomplish this objective, it is imperative to conduct an examination of the distribution patterns of codes within the code group labelled as "Description of solutions to environmental issues" across the two policy documents in question. The subsequent depiction in the second Sankey diagram (Figure 5) provides insight
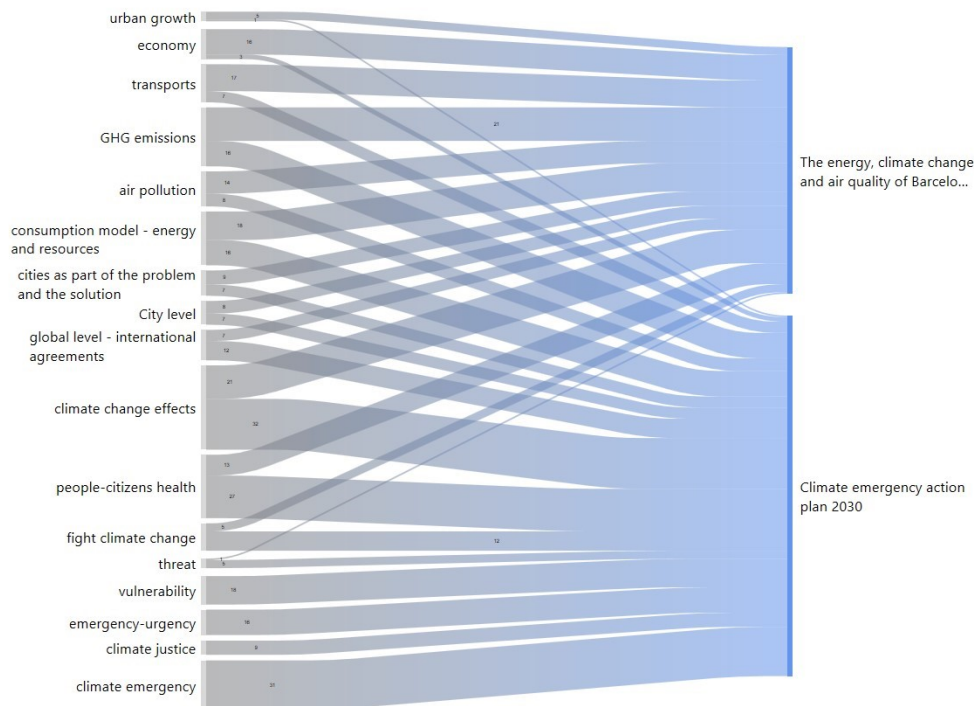
Figure 4 - Presentation of environmental

into the analysis of solutions presented by different policies. While a clear-cut, exclusive differentiation of proposed solutions between policies might not be evident, some noteworthy observations can be drawn.

The "Climate Emergency Action Plan 2030" strategically accentuates solutions grounded in sustainability, sustainable actions, and fostering a culture of sustainability. Aligned with international agreements, the Adjutament of Barcelona advances measures to transition energy production toward progressively greater reliance on renewable sources. Central to this approach is a concerted reduction in the city's greenhouse gas emissions, ultimately aiming for carbon neutrality. A notable proportion of the solutions within this plan revolves around adapting to ongoing climatic changes, and concurrently raising awareness among the populace about the root causes and consequences of the climate crisis. Furthermore, there is a palpable emphasis on educating citizens toward adopting ethically sound, equitable, and sustainable lifestyles, thereby actively involving them alongside the municipal administration in addressing
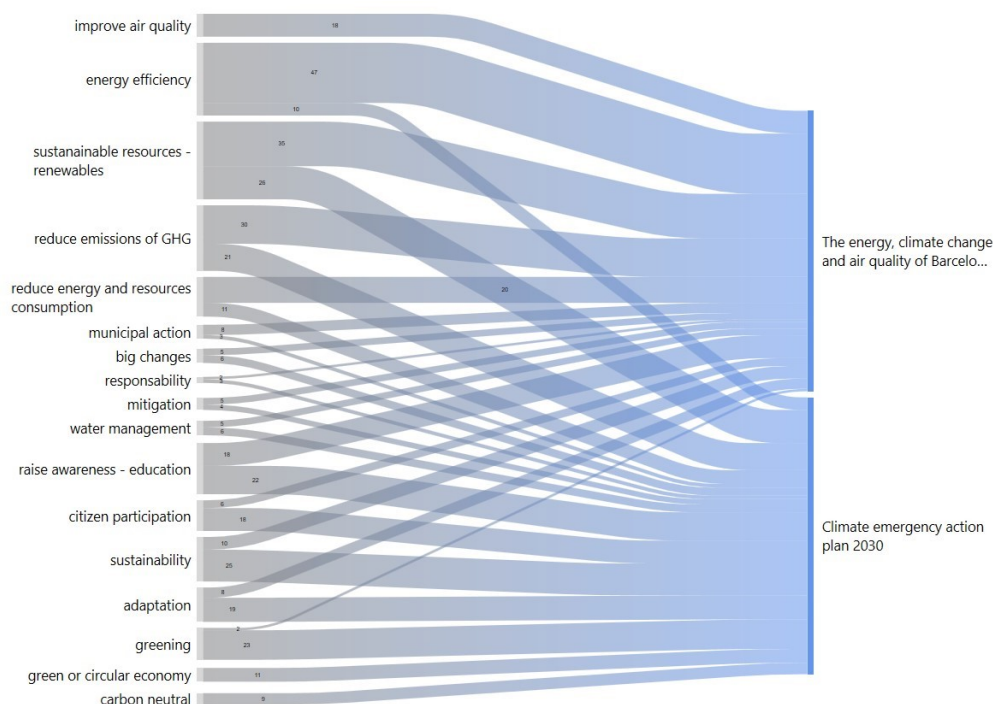
Figure 5 - Presentation of solutions to environmental issues

these challenges. To augment urban resilience and enhance the quality of life for residents, the policy proposes an array of initiatives and reforms that can be collectively categorised as nature-based solutions or greening strategies.

In contrast, the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" adopts a more focused approach, notably directed at bolstering the city's energy efficiency and facilitating a transition toward renewable energy sources. Additionally, this policy places significant emphasis on actions targeting the amelioration of air quality. This pursuit is underscored by a multifaceted strategy, with particular attention devoted to reducing greenhouse gas emissions and pollutants originating from transportation sources, such as private vehicles, aeroplanes, and ships. Moreover, though to a lesser extent, the policy acknowledges the need to heighten awareness regarding the impact of citizens' lifestyles, encompassing elements such as a linear economic model, unsustainable energy/resource consumption patterns, and polluting mobility habits. These aspects are recognized as potent contributors to environmental

degradation, amplifying declines in urban quality of life, and accentuating the effects of climate change. In conclusion, the visualisation of codes within these policies, coupled with insights garnered from the Sankey diagram, underscores their divergent trajectories. The "Climate Emergency Action Plan 2030" emphasises comprehensive sustainability and citizen engagement, while the "Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020" spotlights energy efficiency, renewable energy transitions, and targeted measures for air quality improvement. This analysis enriches our comprehension of how distinct policy documents frame solutions to complex environmental challenges, revealing the multifaceted strategies each document envisions in addressing urban environmental concerns.

In the last phase of my analysis, I utilised Atlas.ti software to conduct Named Entity Recognition and Text Search, with the intention of identifying entities and actors referenced within the selected policy papers. To achieve this, I configured the tool to scrutinise each sentence of the documents for named organisations and individuals, thereby unveiling the prominent entities present. Notably, the Barcelona City Council emerged as the predominant organisation referenced across both documents. It garnered 230 mentions within the "Climate Emergency Action Plan for 2030" and 262 mentions within the "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020". In a subsequent stage, I further delved into the textual content of the documents by employing a comprehensive text search strategy. Specifically, I sought out sentences that encompassed the terms "citizen," "people," "private organisation" and "resident," along with the keywords "action," "commitment," "engagement," "participation," and "work." The objective was to illuminate instances where the policies explicitly linked individuals and private organisations with actions, commitments, and engagement initiatives. The outcomes of this text search unveiled a compelling narrative discrepancy between the two policy documents. In the "Climate Emergency Action Plan for

2030," an emphasis on people's involvement, commitment, and actions surfaced, manifested through a count of 31 relevant mentions. On the contrary, the "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" exhibited a more limited exploration of this link, with 3 references. This contrast in prominence highlights a notable divergence in the two documents' focus on citizen engagement and participation, accentuating the evolving priorities and approaches over the considered timeframe.

Discussion

My research seeks to explore the potential correlation between the discourse employed in the presentation of a particular environmental concern and the subsequent proposed measures and remedies to address said issue. This investigation is conducted within the context of two significant environmental policies implemented in Barcelona over a decade-long period, spanning from 2011 to 2021. The previous chapter presents the results of the textual and discourse analysis that was conducted on Barcelona's "Climate Emergency Action Plan for 2030" and "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020". Now, these results have to be discussed, inserted in the reference theoretical framework and interpreted in order to answer the questions that guided this research.

The first research question addressed in this study delves into how the concept of climate change is depicted within environmental policies that specifically target the city of Barcelona. The results obtained from the examination of these policies shed light on distinct patterns in how climate change is presented. In the Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020, climate change is presented as a consequence of GHG emissions and energy consumption. It is presented as a responsibility of the city and as a disruption in the well-being of the city and the quality of life of the citizens. The tone is technical and lacks any form of alarmism. Even though it uses expressions like

"risk factor" or phenomenon "that cannot be ignored" to drive attention to specific effects of climate change in the city, such as raised frequency of heat waves and the severity of droughts. On the other hand, as it is evident in the analysis, the "Climate Emergency Action Plan for 2030" described climate change in terms of emergency, challenge and threat. It uses expressions from the war world, inferring that cities have to "fight against" climate change and the health of the planet and of the citizens has " to be protected".

Finally, using the data I precedently gathered and processed, I began to consider the interconnectedness between the narratives and the discourses used in the different policies. Following Dryzek's theoretical framework, I endeavoured to determine the potential integration within a specific environmental discourse. I started by considering the results of my textual analysis and applying them to the four criteria Dryzek uses for the scrutiny and analysis of discourses.

With regard to the first evaluative criteria, a comprehensive examination uncovers the "basic entities" inherent in the analysed environmental policies. The conceptual foundation of the "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" is rooted in the principles of liberal democracy and a strong capitalist economy. The policy explores the complex relationship between economic and social systems, while also emphasising the importance of an efficient society, a rational allocation of resources, and the integration of technology. Moreover, this policy highlights the evident interconnectedness between the consumption behaviours of individuals and the active engagement of the governing institution. Although the direct reference to "ecosystems" is limited, its underlying impact becomes evident, particularly in relation to the utilisation of resources. This, consequently, presents a nuanced viewpoint regarding the interconnection between human beings and the natural environment, wherein the latter is subordinated at the service of humankind. The "Climate emergency action plan for 2030" exhibits a similar reliance on complex interdependencies between economic and social systems, which are firmly situated within the framework of liberal democracy. Nevertheless, this

strategy specifically focuses on an ecosystem which suffers the major impact of human activities, thus requiring urgent implementation of protective measures. In direct opposition to the previous policy, this emerging framework clearly rejects the linear economy paradigm and instead strongly advocates for the circular economy model.

The second crucial aspect to be taken into account relates to the assumptions made about natural relationships that are emphasised by each policy. The preceding environmental policy exhibits a noticeable absence of a clear link between the general population and the natural ecosystem, except for a subordinate understanding of nature primarily as an origin of resources. Furthermore, a comprehensive perspective on sustainable economic growth, which is achieved by carefully managing resource consumption, becomes apparent. In contrast, the recent policy establishes a significant interconnectedness between the natural environment and individuals, cultivating a climate of mutually beneficial collaboration and fair interactions across various socio-economic groups. It is worth noting that there is a strong focus on the dynamic interplay among governmental bodies, public administration, and the private sector, highlighting the interactive nature of their respective roles.

Both policy papers include similar stakeholders; however, there are subtle distinctions in their underlying motivations. The "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" is driven by a strong desire for technological advancement, as evidenced by its focus on enhancing energy efficiency, improving air quality, and significantly decreasing greenhouse gas emissions. In contrast, the more recent policy framework is grounded in a comprehensive objective to not only promote adaptation and mitigation but also to establish a city that is resilient. Shifting the focus to the matter of stakeholders, it is undeniable that the local or municipal administration indisputably occupies the foremost role in the execution of both initiatives. The significant contributions of NGOs and private organisations should also be

acknowledged, as they are recognised as crucial partners in the effective implementation of the proposed strategies. It is worth noting that both policy frameworks support a diverse range of actors, including both transnational and local entities, implicitly underscoring the significance of their collective contribution over the central role of state mechanisms. In conclusion, citizen engagement plays a crucial role in the conceptual foundations of both policies. Nevertheless, within the framework of the "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020," individuals are portrayed as rational actors who actively engage in the conscientious utilisation of resources to promote efficient resource consumption. The "Climate emergency action plan for 2030" presents a contrasting perspective by portraying citizens as accountable and virtuous individuals.

Finally, the last evaluative criteria include the "key metaphors and other rhetorical devices" inherent in each policy document. The "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" demonstrates a proficient utilisation of scientific terminology, allocating a significant portion of its content to the inclusion of empirical data and statistical projections. Significantly, the discourse extensively employs terminology that references the concept of progress and development, effectively integrating phrases such as "growth", "improvement" and "enhancement." In contrast, the "Climate emergency action plan for 2030" adopts clear alarmist rhetoric, vividly delineating the current state of emergency and the imperative need for immediate action, with the use of slogans like "It's now or never". Furthermore, this policy document extensively explores metaphors related to warfare, skillfully utilising a narrative infused with militaristic imagery. The aforementioned paradigm is exemplified by the evocative metaphor of "protecting the Planet" and fiercely "fighting" climate change, which is portrayed as an imminent "menace" or "threat".

Moreover, it is imperative to determine the degree of change from the prevailing system advocated in the aforementioned policies, as well as the specific

circumstances in which this transformation occurs. The "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" adopts a reformist approach, acknowledging the effectiveness of the existing societal governance system while advocating for progressive and gradual adjustments that align with a long-term vision. This is apparent from the absence of explicit short-term deadlines and timeframes. In contrast, the "Climate Emergency action plan for 2030" exhibits a notable departure from the dominant system, evident in its emphasis on emergency and urgency to change. This is underscored by the inclusion of numerous projects and actions classified as "necessary short-term actions," despite the overall strategy of the policy being oriented towards long-term objectives. Nevertheless, despite the prevailing advocacy for a societal transformation, it is important to note that this change is being pursued from within the existing system and takes into consideration the need for a departure from the current status quo. In contrast, concerning the particular domain in which this shift away from the industrial political economy takes place, both policies are oriented towards the imaginative end of the prosaic-imaginative continuum. They demonstrate a willingness to redefine the existing boundaries and constraints within the established system. Nevertheless, it is important to note that it prevails an important difference between the aforementioned policies. The most recent strategy is situated towards the imaginative end of the continuum, wherein environmental concerns play a prominent role in society and reshape the connection between economic and environmental factors in a mutually beneficial manner. The oldest strategy is positioned in the central area of the graphic, towards the prosaic end of the quadrant. This strategy is characterised by its interpretation of environmental challenges within the established political-economic framework, as depicted in Figure 6.
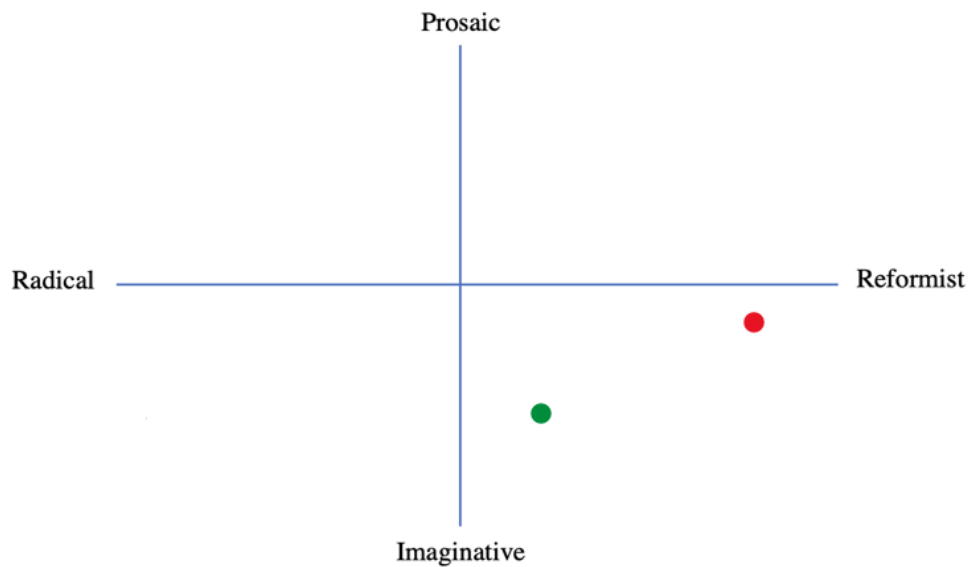
Figure 6 – Positioning of the policies analysed in Dryzek's graphical framework (Green= the "Climate Emergency action plan for 2030"; Red= "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020")

Both of the strategies being analysed are firmly rooted in discourses centred around the concept of Sustainability. This discourse exhibits a distinct imaginative and reformist viewpoint. This discourse highlights the need to reevaluate existing paradigms of progress and development, with the ultimate goal of reconciling the perceived divide between environmental concerns and economic endeavours. The discourse surrounding sustainability serves as a catalyst, leading to a significant reconfiguration of conventional indicators of progress. The objective of this reconfiguration is to establish a fundamental connection between the trajectories of human prosperity and the imperatives of ecological equilibrium. The primary objective of the sustainability discourse is to promote a balanced and mutually beneficial relationship between environmental stewardship and economic growth.

To conclude, it is fundamental to examine and highlight the influence of the employed discourse on the selection of specific solutions within environmental policies. The analysis of the past literature works and of the policies sheds light

on how the chosen discourse shapes the formulation of concrete actions to address climate change challenges. The "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" predominantly highlights long-term sustainability, advancements in technology, and regulations for the limitation of resource consumption and the reduction of GHGs emissions. The main strategies proposed by this policy include monitoring systems for energy efficiency and pollutant emissions, limitation for vehicle circulation and improvement of the public transport system, and promotion of a transition towards renewables, overall boosting solar energy production. The discourse emphasising sustainable technologies aligns with the selection of measures centred around technological advancements, infrastructural improvements, and emissions reduction targets. Conversely, the "Climate Emergency Action Plan for 2030," with its urgency-focused discourse, aligns with the adoption of more radical and immediate actions such as carbon neutrality targets, bold renewable energy integration, and carbon footprint reduction mandates, Notably, the potency of urgency is further underscored by the delineation of a multitude of strategies and initiatives as "necessary short-term actions," with an explicit mandate for implementation by the year 2025.

These findings underscore in some way the interconnectedness between discourse and policy outcomes. The discourse employed not only reflects policymakers' perceptions but also influences the selection and prioritisation of specific solutions. For example, it is evident that the contextual framing of climate change as a looming emergency and a threat decisively precipitates the inclusion of a more comprehensive, decisive, and radical array of measures within the policy spectrum. In contrast, a more technical and economic approach leads to the consideration of solutions and strategies that are confined to the role of technology and a long-term perspective.

Conclusion

The focus of my dissertation lies in the recognition of the significant influence of positivist research, which is grounded in the natural sciences, in furthering our comprehension of environmental issues. However, it moves forward while underlining the equal importance of exploring the significance we assign to scientific truths. This has significant implications for the actions that are ultimately taken or disregarded. Expanding upon this intricate understanding, I proceed to explore in greater depth the debate, interpretations, and actions pertaining to environmental issues, while undertaking a thorough investigation and evaluation of the results of the text and discourse analysis of two Barcelona's environmental policies.

This dissertation undertook an analytical investigation guided by Dryzek's theoretical framework, with the aim of unravelling the complex relationship between discourse and environmental policy. The objective of the study was to analyse the relationship between narratives embedded in particular environmental policies and the subsequent proposed actions intended to tackle the said challenges. The study examined the discourse present in two significant environmental policies that spanned a period of ten years. Specifically, the focus was on the "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" and the "Climate Emergency Action Plan for 2030." Discourse analysis plays a crucial role in facilitating the connection between the examination of different discourses and a comprehensive understanding of our actions, including the tactics and measures we employ to tackle a range of challenges. By engaging in the analysis of discourses, individuals are able to acquire a deeper understanding of the complex fabric of human behaviour and the process of decision-making. The present analytical methodology elucidates the intricate connections between language and action, providing insights into the fundamental processes that influence our policies and reactions. Discourse

analysis, at its essence, transcends mere observation as it is intricately intertwined with the notion of human emancipation. The aforementioned correlation arises from its ability to reveal the dual nature of language, wherein it can function as a mechanism of deception and as a method of control. Through the examination of how language can be manipulated by influential individuals within society, discourse analysis emerges as a prospective catalyst for facilitating transformative change.

As I progressed in my analysis, my primary focus was on elucidating the manner in which the concept of climate change was portrayed in these policies, as well as the nature of the proposed resolutions for these challenges. The analysis of the text revealed a significant disparity in the expression of climate change between the two policies. The "Energy, Climate Change, and Air Quality Plan of Barcelona 2011-2020" presented a technical and objective perspective, depicting climate change as a consequence of greenhouse gas emissions and energy utilisation. In contrast, the "Climate Emergency Action Plan for 2030" effectively conveyed a sense of urgency by utilising alarmist metaphors that portrayed climate change as an imminent "threat," thereby emphasising the need for prompt and comprehensive measures. These findings align with previous research that indicates shifts in the discourse surrounding environmental matters over the course of time. The observed phenomenon of evolution can be attributed to the expansion of scientific knowledge and the increasing societal apprehensions. The disparities observed in the discourses present in these policies reflect the ever-evolving nature of communication surrounding climate change. Policymakers modify their language in order to effectively communicate the gravity and immediacy of the matter at hand. By comprehending these alterations in discourse, we acquire valuable insights into the perception and communication of environmental issues.

Moreover, the process of deciphering discourses reveals a complex network of constructing meanings. Epstein's analysis highlights the multifaceted nature of

discourses, emphasising their role as influential forces that extend beyond mere linguistic constructs. These discourses actively shape our understanding of the world, impacting how we assign value to various entities, and contributing to the formation of identities that subsequently influence social interactions. By engaging in a deep exploration of discourses, one can acquire a thorough comprehension of their dynamic function in shaping our understanding and interaction with the environment. Furthermore, it is evident that there is a correlation between the manner in which a specific problem is presented and the selection of solutions to be implemented. Additionally, the interaction of various discourses within the domain of environmental discourse carries significant ramifications. Discourses wield significant influence, encompassing prevailing social interpretations that mould our collective perspective on environmental matters. These discourses encompass not only abstract theoretical concepts but also exhibit intricate connections to the tangible realm of social activities. Dryzek effectively demonstrates how these implications become evident in policy trajectories, institutional dynamics, and the fundamental structure of societal norms and values. The analysis of the complex connection between discourse and its various effects offers an insightful viewpoint on the widespread influence that language and communication have on the overall narrative of environmental thinking and behaviour. A more practical viewpoint also demonstrates the utility of discourse analysis in navigating the complexities of policy formulation. Through the analysis of discursive dynamics, we are able to acquire a deeper understanding of the various factors that influence policy choices and guide them along specific paths. Concurrently, this analysis aids in comprehending the factors that contribute to the adoption of certain paths, while others remain unexplored and overlooked.

This study offers a thorough examination of the intricate relationship between discourse and policy, yet opportunities for further investigation remain. One possible trajectory may entail an exploration of the manner in which stakeholders and the general public perceive and construe these policies. The

examination of how different discourses intersect and motivate collective action has the potential to provide valuable insights into the effectiveness of various communication strategies.

This study reveals a complex relationship between discourse and policy, providing a nuanced perspective on the influence of language on the development and execution of policies. The research highlights the significance of language in both mirroring the dominant perspective and influencing the course of action. In a time characterised by urgent environmental issues, this study highlights the importance of employing language strategically and intentionally in policy discussions, as it possesses the ability to guide collective efforts towards resilience and sustainability. Ultimately, my aspiration is for a decision-making landscape that is characterised by greater equity and understanding, wherein policies are founded upon an in-depth awareness of the influential nature of language and its significant consequences on behaviour. It is anticipated that policymakers, through a thorough understanding of the significant influence of discourse on the formation of perceptions and policy decisions regarding climate change, will be able to develop policies that are more efficient and influential. These policies will be in line with the pressing and intricate nature of present-day environmental issues. Additionally, policymakers will equip themselves with the necessary resources to facilitate transformative change and forge a sustainable future.

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