The University Of Sheffield.

Planetary Fever: Climate Change and the Medical Profession

August Lindemer

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

The University of Sheffield
Faculty of Social Sciences
Department of Sociological Studies

Submitted April 2022

Abstract

Climate change is a major challenge facing human societies in the 21st century. In the complexity of its causes and breadth of its consequences, it touches on virtually all dimensions of human existence and social organisation, one of these dimensions being human health. In consideration thereof, members of the medical profession have become engaged in climate activism and advocacy in various forms, from patient communication to direct action efforts. Despite the rise in prominence of these efforts, little attention has been given to this phenomenon within social scientific research on climate change. To address this lacuna, this thesis explores how climate change is constructed, engagement with the issue is given meaning, and the efficacy in the pursuit thereof is understood by medical professional climate activists and advocates. Drawing on in-depth interviews, this work analyses medical climate activism and advocacy through a Bourdieusian framework as a practice unfolding in particular social sites (fields), informed by sets of fundamental presuppositions (doxa), structured in its meaning by dispositions (habitus), and drawing on the operationalisation of particular resources in its pursuit (capital). This analysis shows medical climate activism and advocacy to rest on careful negotiations between—in some parts congruent and others incongruent—medical and radical ecological sensibilities and commitments. This thesis contributes to three distinct efforts. Empirically, it presents an in-depth account that illuminates and positions a contemporary practice of civic engagement on which to date little research exists. Theoretically, it advances the application of Bourdieu's thinking tools to the sociological study of climate change in particular and negotiated practice at the intersection of different fields more broadly. Practically, it develops suggestions for the facilitation of this engagement by stressing the importance of the social determinants of health model, the congruence of climate concerns and medical practice, and the availability of supportive networks.

Key Words: climate change, medical profession, practice, field, habitus, capital

Acknowledgements

Wenn die, so singen oder küssen, mehr als die Tiefgelehrten wissen.

How does one distinguish themself writing a doctoral dissertation in sociology without acknowledging the farcicality of the enterprise? The comedy of merit sicklied o'er with the pale cast of structure. And yet, even in this acknowledgement, the nonchalance betrays its theatrics. Farces all the way down.

Hence, as with any comedy, the act itself begs a certain humorous disregard, the people that set the stage for its enactment do not. I want to thank my participants for taking their time to talk to me under the most extraordinary circumstances both of global and personal nature, from tackling the COVID-19 pandemic to battling personal tragedies. It goes without saying that this work would not exist without you. I want to especially acknowledge Paul who, mere months before his untimely passing, took the incomparably valuable time to share his experiences with me. I want to thank my academic supervisors Warren Pearce, Tom Stafford, and Kate Dommett for providing guidance and keeping vigilance over the endeavour from the very beginning to its last word. I want to thank the team at Climate Outreach who gave me the opportunity to explore the world of climate change communication at the outset of this project, and in particular Steve Fairman who through our discussions first gave this research its direction. I want to thank the team at the Grantham Centre for Sustainable Futures whose generous support gave me the privilege of not having to concern myself with material worries over the past four years. I want to thank Sheila Jasanoff for inviting me into the world of STS at Harvard and taking the time to share her august wisdom and counsel with me.

Last but not least, I want to express my eternal gratitude to Marcus, Emily, Lars, Donald, Jeremy, Yasunori, and Eithne, for supporting, inspiring, delighting, and sustaining me and my sanity across various stretches of the journey.

List of Contents

List of Figures

Glossary

Term	Definition
Practice	The thoughts, sayings, and doings of structurally positioned and disposed actors.
Dispositions	The propensities or inclinations of an actor.
Fields	The social sites in which practices take place and actors compete over their structural positions therein.
Doxa	The fundamental presuppositions that inform a particular field, i.e. that which, in its respective field, is presupposed to be true.
Habitus	The disposed patterns of meaning-making that structure practices and the perceptions of practices.
Capital	The actual or potential resources and capacities that actors have accumulated and can operationalise in the pursuit of practices.
Efficacy	The ability to affect a field and the practices therein, i.e. that which is obtained through the operationalisation of capital.
Sensibilities and Commitments	A set of emotional, intellectual, aesthetic, and moral dispositions that inform and are informed by commitments to particular but intersecting social fields, their fundamental presuppositions, and the practices therein for which particular forms of capital are operationalised, i.e. the relationship between fields and their doxa, habitus, and capital as a system.
Congruence	The dimensions of different sensibilities and commitments that are perceived and negotiated as aligned.
Radical Ecological Habitus	The pattern of meaning-making attuned to the field of climate politics and its practices.
Medical Habitus	The pattern of meaning-making attuned to the field of medicine and its practices.

Chapter 1: Introduction

1.1 Background

Anthropogenic climate change has long been recognised as constituting not merely a process of deleterious atmospheric greenhouse gas accumulation in need of technical solutions, but one that presents human societies with contentious challenges to political decision making (Morgan and Dowlatabadi 1996, Oppenheimer et al. 2007, Hulme 2015). As much as the understanding of the underlying physical processes and their potential impacts rely on natural scientific propositions, in its causes and the future projections thereof climate change rests on contingent human activity, policy decisions, and socio-economic developments (Pachauri et al. 2014, p.8). Both in its principal cause, the emission of carbon dioxide through the combustion of fossil fuels, and its principal effect, an increase in global mean surface temperature, the issue is closely intertwined with human societies, cultures, and their ways of life. It is in light of this context, that the social science literature on climate change has shown considerable concern for questions of how climate change is perceived, understood, and engaged with by different groups in society. While this circumstance has itself been subject to critical analyses by scholarship roughly based in science and technology studies, to date much of the social science literature on the perception of and engagement with climate change has been grounded in communication studies focused on and addressing the public understanding of climate change and the approaches suitable to increasing such comprehension of the issue. Efforts of this sort closely relate to enterprises such as risk, health, or science communication, and have been grouped under the term *climate change communication* (Moser 2010), with much of this research focusing on the effects of particular communication strategies on different audiences. As a pervasive issue touching on virtually all aspects of life, it has become a central concern of this climate change communication research to explore the effectiveness of representing and communicating climate change in particular dimensions affected by or relating to the issue—prominently discussed under the umbrella of framing research (Nerlich et al. 2010, Gallagher and Updegraff 2011, Walker et al. 2018).

One such dimension of concern centrally affected by climate change is that of human health. Climate change is understood to have a range of adverse consequences on the health and wellbeing of humans, including first and foremost through extreme weather events such as heat waves and

extreme precipitations, their various fallouts such as floods and droughts, and subsequent issues such as particulate or allergenic air pollution (De Sario et al. 2013, Smith et al. 2014). Other concerns relate to such issues as the expansion of disease-carrying vectors and infection areas or seasons (Pachauri et al. 2014, pp.67-69). In light of the various human health impacts of climate change, members of the medical profession have begun to form national organisations, networks, and local groups centred on an engagement with the issue, involving a range of climate activism and advocacy efforts directed at policymakers, medical institutions and colleagues, as well as their patients. Similar to the literature on climate change perception and engagement more generally however, the social scientific research on the intersection of medicine and climate change has been principally concerned with assessing how approaches to communicating and framing the issue as one of human health affect perceptions and understandings of climate change by different audiences (Maibach et al. 2010, Myers et al. 2012, Petrovic et al. 2014). Whereas such communication research grounded in quantitative and positivist-qualitative methodologies (Yanow and Schwartz-Shea 2015, p.6) can inform our understanding of the potential effects that different ways of communicating climate change have on different people, sociological research grounded in interpretive-qualitative methodologies is needed to explore how and why this talking is taking place and how one may facilitate it. The dimensions of the intersection of medicine and climate change that such a sociological analysis may explore—questions of how climate change is constructed and understood by those engaged in medical climate activism and advocacy, and how such constructions inform an understanding of these efforts as meaningful, responsible, and appropriate by and for the medical profession—have to date received little if any attention (Hathaway and Maibach 2018, Yang et al. 2019). It is this lacuna that the research presented in this thesis aims to address.

1.2 Research Overview and Contributions

This thesis explores the climate activism and advocacy of medical professionals and their ways of giving meaning to such engagements. Medical professionals are here understood as synonymous with the World Medical Association's use of the term physicians (WMA n.d.) as medically qualified doctors, to which I include advanced medical students pending said qualification. Throughout this thesis I will speak of climate activism and advocacy to refer to the efforts that

attempt to affect how climate change is understood and engaged with by others that variously organised medical professionals are and have been involved in. This includes such efforts as political advocacy for climate policies, attempts to mobilise colleagues to engage in climate action both within and outside of clinical settings, attempts to change patient behaviours or climate change perceptions, as well as efforts to affect organisational change within healthcare institutions. It is this phenomenon that throughout this thesis I will refer to as the practice of medical climate activism and advocacy. This research is guided by three central research questions that address particular but interrelated dimensions of this practice:

1. How do medical professionals involved in climate activism and advocacy understand climate change and construct it as an issue?
2. How do medical professionals give meaning to engaging in climate activism and advocacy in light of this so-constructed understanding?
3. How do the so-involved medical professionals understand their particular efficacy in these pursuits?

For the pursuit of these questions, I conducted in-depth interviews with medical professionals involved in climate activism and advocacy. Building on the analysis of these, this thesis presents an explorative account of the sensibilities and commitments informing medical climate activism and advocacy, outlining how climate change is constructed, medical climate activism and advocacy is given meaning, and the efficacy of the medical profession in the pursuit thereof is understood. In the analysis of this so-produced interview data, this research assumes a constructivist-interpretive stance. In this epistemological presupposition, it aims to produce accounts of, interpret, and understand "another's meaning" (Yanow 2017, p.407)—that ascribed by medical professionals to their climate activism and advocacy. More precisely, this thesis will present this account, interpretation, and understanding as an analysis of practice (Carr 1986) within a framework inspired by the thinking tools (Leander 2008) of the French sociologist Pierre Bourdieu. In this framework, I will detail an analysis of practice as constituted through three closely interrelated dimensions corresponding closely to the three research questions listed above. These three analytical dimensions are:

1. An analysis of fields and their doxa, i.e. the sites in which practices are pursued (fields) and the fundamental presuppositions that inform them (doxa).

2. An analysis of habitus, i.e. the "pattern[s] of meaning making" (Ambrasat et al. 2016, p.1) that dispose an interest and engagement with a practice.
3. An analysis of capital, i.e. the basis from which the efficacy to affect a field and the practices therein is operationalised at a cost.

It is this relationship between fields and their doxa, habitus, and capital as a system that throughout this thesis I attempt to capture with the term sensibilities and commitments: the "emotional, intellectual, aesthetic, and moral dispositions" (Wickberg 2007, p.669) that inform and are informed by commitments to particular but intersecting social fields, their "fundamental presuppositions" (Bourdieu 1990, p.68), and the practices therein for which particular forms of capital are operationalised. These dimensions are schematically represented as categorical questions guiding the analysis in Figure 1. Note that these categorical questions are precisely that: a rough template that was used as orientation in the production and analysis of the interview data.

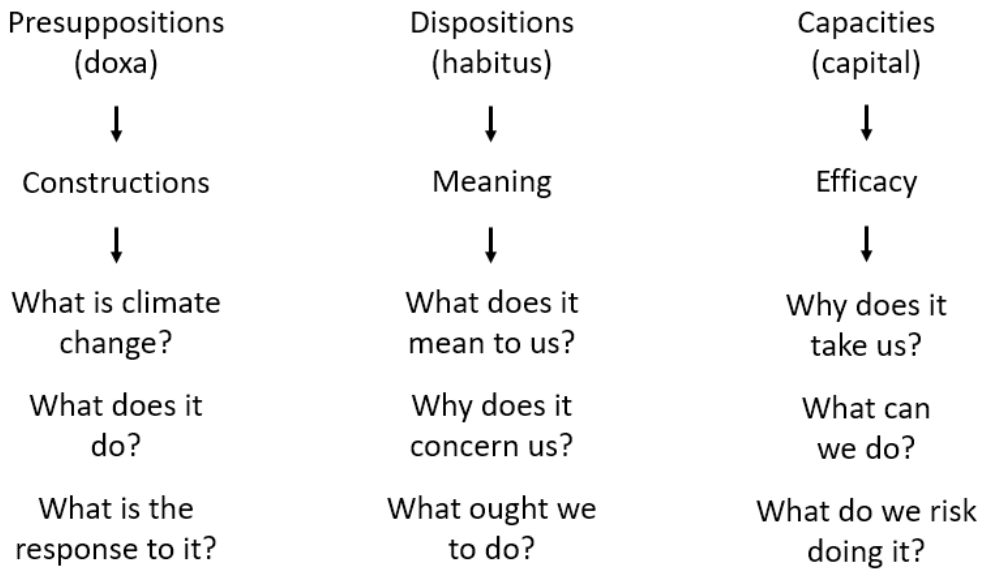


Figure 1: *Categorical Questions Guiding the Analysis*

As this thesis will demonstrate, the so-explored practice of medical climate activism and advocacy is structured by careful negotiations between medical and radical ecological sensibilities and commitments. Medical climate activists and advocates were found to understand themselves as much as medical professionals committed to medical concerns as they did as climate activists and advocates committed to ecological and socio-structural concerns. It is in light of the various

congruences and incongruences between these two sets of sensibilities and commitments that the practice of medical climate activism and advocacy is negotiated as a meaningful, responsible, and appropriate practice for the medical profession to engage in.

This thesis offers three distinct areas of contribution. Firstly, by presenting a thick description (Geertz 1973) of medical climate activism and advocacy based on in-depth interviews with the so-involved actors, this research illuminates a phenomenon of which to date scarcely any description exists in the academic literature. The argument presented by this thesis is that medical climate activism and advocacy is not a process of discursive capture (Hugé et al. 2013) by the medical profession for its own benefit—a medicalisation (Conrad et al. 2010) of climate politics that aims to claim medical professional jurisdiction (Abbott 1988) over climate change—but a carefully balanced practice of civic engagement that rests on negotiations between medical and radical ecological sensibilities and commitments and that in light of these commitments and the severity of the issue that they concern is pursued against, at times substantial, professional and personal costs. This account positions the practice of medical climate activism and advocacy for future research on and discussion of the phenomenon in two ways: One, by presenting a pre-emptive challenge to such potential critiques of discursive capture or medicalisation that may be levied against it by critical social scientific scholarship or structural opposition from within the involved fields and their institutions, and, two, by providing an empirical and theoretical basis that can both inform and be challenged or confirmed, and thus elaborated and advanced, by these future inquiries.

Secondly, by presenting a theory-driven analysis of medical climate activism and advocacy through a Bourdieusian framework, this research advances the application of Bourdieu's thinking tools (Leander 2008) to the sociological analysis of climate change and climate activist and advocacy practices. More broadly, however, it does so by building on the idea of negotiated practice (Patton and Loshny 2008) that allows sociological research to account for the multiplicity of structural forces exerted by different sensibilities and commitments on practices unfolding at the intersections of fields as well as on the actors that find themselves between these social sites. By presenting an in-depth account of such a negotiated practice, one informed by the in some parts congruent and other parts incongruent sensibilities and commitments at the intersection of the fields of medicine and climate politics, this research exemplifies the interactions between distinct sets of doxa, habitus, and capital as the co-constitutive dimensions of such negotiations. This

extension of the structural causality of practice (Bourdieu and Passeron 1990) from within a particular field to the structuring between multiple fields can inform future relational sociological research, especially inquiries into emerging practices that unfold between established fields.

Thirdly, by developing an understanding of the meaning given to climate activism and advocacy by medical professionals—by exploring what makes or breaks the practice of medical climate activism and advocacy—this research provides insights into how this practice becomes meaningful to engage in. These insights can be used to facilitate such civic engagement with the issue of climate change and participation in climate politics by the medical profession (and potentially others) going forward. Three considerations in particular will be shown to stand out: One, the centrality of the social determinants of health model that embeds socio-structural and environmental concerns into those of medical practice, two, the importance of stressing the many congruences between concerns for human health and climate change, not merely on the grounds of the impacts of the latter on the former but in the various ways that both practical and normative concerns towards the two are aligned, and, three, the significance that supportive networks of like-minded activists and advocates have on enabling and sustaining medical professional engagement with climate change in light of the various concerns for the costs that may be incurred over such involvement.

These contributions are qualified insofar as they rest on an exploration of "social particulars" (Rustin 2000, p.168)—an interpretation of the meaning-making concerning a particular contemporary phenomenon through particular perspectives of actors involved in and producing it. What can as such be generalised from this research is not the statistical distribution and prevalence of the here explored particular perspectives, but the theoretical insights (Andrade 2009, p.42) into medical climate activism and advocacy as a negotiated practice navigating such perspectives. This so explored practice implicitly carries with it a further qualification, namely that it is precisely a practice of *medical* climate activism and advocacy. While the exploration presented in this thesis draws on insights into two fields out of whose negotiation the so posited practice results, it is a practice that will be explored principally from and through the perspectives of the field of medicine, not those of the field of climate politics. Whereas the latter is leveraged to explain the former, it is first and foremost the former whose explanation is thus pursued. Future research could fruitfully assess the inverse, exploring the practice as medical *climate* activism and advocacy through a focus on the field of climate politics, its perspectives, and the effects thereon.

1.3 Thesis Structure

This thesis is structured by seven chapters in total, the first of which constitutes this introduction. The six remaining chapters will address, in order, the literature review, the methodology discussion, three respective findings chapters, and a concluding summary and synthesis. As in this introduction, each of the six remaining chapters is structured by a set of sections within them. Each chapter begins with an introduction that posits the purpose, presuppositions, and structure of the chapter, followed by several discussion sections that address particular dimensions of interest or concern, and ends with a conclusion that summarises the key findings of the discussions that precede it.

Chapter 2, the literature review, presents an overview of the issues under investigation and the existing literature discussing these. It is structured along three discussion sections. The first addresses the issue of climate change and its discussion in social science research. It highlights the inherent contestability—and consequently ongoing contestation—of climate change, and stresses the limitations of existing research in focusing too narrowly on questions of knowledge and ignorance while failing to address questions of how and why existing engagements with climate change are taking place. The second section addresses the human health dimensions and responses of the medical profession to the issue of climate change. It lays out the context from which medical climate activism and advocacy emerged, and provides an exemplary overview of the organisational structures of these efforts. The third section details the theoretical framework and perspective that will be used for the analysis and discussion in the thesis. It highlights the suitability of practice-theoretical perspectives and explicates the application of Bourdieu's thinking tools (Leander 2008) to the analysis of medical climate activism and advocacy. More detailed discussions of particular dimensions of this framework that apply to parts of the analysis will be discussed in the introductions to their respective findings chapters.

Chapter 3, the methodology discussion, outlines the ontological and epistemological presuppositions of this thesis and details the various steps taken during the research, the reasons behind their design, and the process of their execution. For structural clarity, this chapter is broken down into a total of seven discussion sections. The first re-introduces the research questions posited above, contextualising them in light of the preceding literature review. The second lays out the constructivist-interpretive presuppositions that ontologically and epistemologically guide

this research. The third discusses the suitability and application of in-depth interviewing as the method of narrative data production that was employed. The fourth, elaborating on the third, details analytical approaches to this narrative data. The fifth briefly highlights the quality criteria of reflexivity, multidimensionality, and criticality that apply to the data used in constructivist-interpretive research. The remaining two discussion sections address, in order, the design and process of participant recruitment, highlighting the challenges encountered during the process and approaches to ameliorating them, and, lastly, participant consent and data management concerns.

Chapter 4, the first of the three findings chapters, principally discusses the constructions of climate change by the research participants. It begins by introducing a more detailed look at the dimension of fields and doxa in the analysis, followed by two central discussion sections. The first presents an account of how climate change is constructed as a biomedical issue, focusing on, one, the present and ongoing human health impacts of climate change and, two, concerns for climate change as a health crisis, climate anxiety, and the tethering of such concerns to biomedical practice. The second presents the contrasting construction of climate change as a socio-structural issue, stressing the importance of the social determinants of health model in the positing of concerns for social justice, economics and politics, and societal transformations as central to how climate change is understood. Through the discussions of these two sets of constructions, Chapter 4 highlights the negotiation that takes place between different understandings of climate change, producing the interrelated construction that informs medical climate activism and advocacy.

Chapter 5, the second of the three findings chapters, continues the exploration of this negotiation by focusing on two patterns of meaning-making that dispose medical professionals to engage or not to engage in climate activism and advocacy—conceptualised as medical and radical ecological habitus. It begins by qualifying these habitus in their characteristics and positions within the theoretical framework, which is again followed by two central discussion sections. The first discusses the various ways in which engagement with climate activism and advocacy is understood as congruent with the medical profession and medical sensibilities and commitments, i.e. in line with what is perceived to be meaningful, responsible, and appropriate for the medical profession to engage with. It highlights how socio-structural concerns for, one, inequality and, two, the environment are understood as dimensions of expected medical concern, how a biomedical practice of medicine is itself posited as an insufficient contribution to human health and wellbeing, and how the medical sector's contribution to the issue of climate change demands a response from

those employed within it. The second section contrastingly discusses how such engagements with climate activism and advocacy are understood as incongruent with the medical profession and medical sensibilities and commitments—highlighting how such perceptions of incongruence were experienced by interviewees as expressed by their colleagues, and how climate activism and advocacy may conflict with medical professional commitments or are superseded in their priority by other medical concerns and responsibilities. Through these discussions Chapter 5 elaborates on the idea of a negotiated practice, highlighting how medical and radical ecological habitus find balance in the practice of medical climate activism and advocacy.

Chapter 6, the third and last of the findings chapters, expands the discussion of the preceding two chapters to the perceptions of efficacy and costs, exploring how medical professional climate activists and advocates perceive the ability of their efforts to affect how climate change is understood and engaged with by others and the potential costs involved in the attempts to do so. It begins by elaborating on the concept of capital and the necessity of its operationalisation through more or less costly transformations, followed by four discussion sections. The first three of these discussions focus on the operationalisation of trust, the ability to speak to issues of health, and professional networks respectively. These discussions highlight how medical climate activists and advocates understand themselves as in a particular position to talk about, be listened to, and be trusted in expressing concerns about climate change, how they see their ability to frame the issue as one of human health to raise the salience of it, and how they stress the importance of professional networks and organising with like-minded colleagues for these efforts. The fourth and last of the discussion sections stresses how, on the other hand, medical climate activists and advocates have experienced and see themselves faced with a range of costs incurred due to their efforts, from collegial and private pushback to concerns over career and professional reputation. Through these discussions, Chapter 6 contextualises the negotiations between medical and radical ecological sensibilities and commitments for the practice of medical climate activism and advocacy in light of the capacities for and costs of the pursuit thereof.

Finally, Chapter 7 presents the conclusion to the thesis. It is structured along five discussion sections. The first addresses the findings of the research as they relate to the three research questions that guided it, summarising how climate change is constructed, medical climate activism and advocacy is given meaning, and the efficacy in the pursuit thereof is understood. The second presents a brief synthesis of these discussions, positing the interpretation of medical climate

activism and advocacy as a negotiated practice and relating it to the greater question of social order. The third section summarises the three central contributions of this thesis to, one, the understanding of the phenomenon of medical professional engagement with climate activism and advocacy, two, the sociological analysis and theorisation of climate change and practices at the intersection of fields, particularly as positioned within a Bourdieusian framework, and three, the efforts to facilitate medical climate activism and advocacy as a form of civic engagement with climate change. The fourth section lays out the limitations of the research presented in this thesis and suggests future avenues of research to pursue going forward. Lastly, the thesis concludes with a short reflection on what I, at the outset of this research, thought medical climate activism and advocacy was and what I now, at the end of it, understand it to be.

Chapter 2: Literature Review

2.1 Introduction

The body of research on medical professional climate activism and advocacy is virtually non-existent, likely conditioned by the comparably recent emergence and in any case recent popularity of the phenomenon. While a review of the literature may thus draw little on work specifically on the subject, the efforts under scrutiny relate closely to neighbouring issues with substantial bases in social scientific research. These include research on constructions of climate change, scholarship in science and technology studies (STS), and sociological analyses of practices. It is with the background of these existing empirical findings, strains of thought, and theoretical frameworks that this thesis presents a novel approach and contribution to developing the understanding of the practice of medical climate activism and advocacy. In this chapter, I will present a review of the existing literature on these related issues that will be structured along three sections.

In the first section, I will present a review of the literature on the phenomenon of climate change, the involvement of research within communication studies in the assessment of the contestation of this phenomenon, and the discussions surrounding knowledge and ignorance in STS scholarship. The second section will explore the discourses that sit at the intersection between medicine and climate change, looking at the human health dimensions of the issue, its reception by the medical profession, and the landscape of medical climate activism and advocacy that formed around it. In the third and last section, I will present a review of the theoretical lenses that can be applied to the analysis of this practice of medical climate activism and advocacy, in particular laying out the Bourdieusian framework that will be employed throughout this thesis.

2.2 Climate Change and its Contestation

Climate Change Across Natural and Social Science

Climate change, or more precisely anthropogenic climate change, refers to changes in global climatic conditions induced by human activity. Article 1, paragraph 2 of the United Nations

Framework Convention on Climate Change defines anthropogenic climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere" (United Nations 1992). This concern for the composition of the global atmosphere, in particular the analysis of cumulative anthropogenic emissions of so-called greenhouse gases and their subsequent atmospheric concentration, has become the central focus of climate science and its assessment by the United Nations' Intergovernmental Panel on Climate Change (IPCC) (Pachauri et al. 2014, pp.2-6). Greenhouse gases are produced by a range of human activities. Principally they are released in the form of carbon dioxide during the combustion of fossil fuels, for example in heating and transportation. Other greenhouse gases include methane and nitrous oxide which are released by activities such as animal agriculture. The effect of this change in the composition of atmospheric gases is, chiefly, an increase in global mean surface temperature over century-long timescales. Importantly, it is in their lasting accumulation of past and ongoing emissions that these atmospheric gases will continue to determine this warming "by the late 21st century and beyond" (Pachauri et al. 2014, p.8).

Given these extensive timescales and the primacy of contingent human activity, much of the analysis of both the magnitude of this temperature increase and its impacts is built around projections based on various socio-economic development and climate policy scenarios (Pachauri et al. 2014, p.8). The resulting projections in the synthesis report to the fifth assessment report of the IPCC are accordingly wide-ranging and include predicted global mean surface temperature increases by the end of the 21st century from as low as 0.3°C to as high as 4.8°C relative to the period of 1986 to 2005 (Pachauri et al. 2014, p.10). It is on the basis of these varying scenarios that a range of potential effects on a wide variety of geological, meteorological, and hydrological processes are model simulated. What ramifications these physical changes have on ecosystems, human societies, and how their consequences are faced differently by different nations, regions, and social groups, adds yet another level of scenario contingent prediction (Capela Lourenço et al. 2015). In light of these considerations, scholars have argued that uncertainty and underdetermination are essential aspects of and challenges to the analysis of climate change risks and the policy decisions made in response to them (Oppenheimer et al. 2007, Betz 2009, Hulme 2015). Further considering the fundamental contingency of anthropogenic climate change on future human activity, various scholars have pointed out that climate change is, in its research (Corner and Groves 2014), in its issue construction (Hoffmann 2013), in the negotiations

surrounding it (Tanner and Allouche 2011), and in its representation and communication (Manzo 2010), inherently political.

These are not new arguments—climate change and the questions of how to respond to it have for decades been considered as much social and political problems as they have been seen as scientific ones. In analyses ranging from more technical issues of climate engineering (Bodansky 1996, p.320), processual questions about the underlying collective decision-making frameworks (Turner 1995, p.8), to institutional aspects of its assessment through bodies such as the IPCC (Agrawala 1998), scholars have long pointed to the distinctly political dimensions of climate change. As Knox (2015) stresses, this is not to detach the politics of climate change from its scientific descriptions, but to acknowledge the uptake of the latter in political processes. Climate change, she posits, "is reintroducing political questions of agency, ethics, and responsibility" (Knox 2015, p.91) into precisely those domains that have bracketed out such socio-political concerns from scientific ones. Morgan and Dowlatabadi argued back in 1996 that the issue of climate change is fundamentally a political problem and cautioned against "exaggerated expectations about how much modest improvements in scientific understanding over the next decade or two can improve the situation" (p.340). More than two decades later their call for caution appears to have been substantiated.

The scientific understanding of climate change has made significant advances across the fields of related disciplines and the various issues they attend to. These include advances in the scientific understanding of the atmospheric processes underlying surface temperature increases (Shrivastava et al. 2017), the effects that these increases have on ecological systems (Hoey et al. 2016), and climate-economy linkages including improvements to the models by which climate change costs are assessed (Burke et al. 2016), to name just a few. Much of the meta-analysis of the so-achieved scientific understanding of climate change is commonly summarised under the umbrella of *scientific consensus on climate change*, with two particularly impactful studies to do so being by Oreskes (2004) and, roughly one decade later, Cook et al. (2013). Progress has also been made regarding the refinement of the approaches to communicating the issue to raise awareness, understanding, and support for climate policy responses (Moser 2016). These attempts to communicate the scientific understanding of climate change to various publics have been grouped under the term *climate change communication*—efforts to communicate climate change as an issue or concern (Moser 2010) that represent enterprises closely related to other such endeavours as risk, health, or science communication (Nerlich et al. 2010, p.3).

The research on such climate change communication efforts has to date focused extensively on the effects of particular communication strategies and approaches on audience opinion and behaviour. The contexts to which such analyses of strategy are attuned are principally how the scientific information on climate change is perceived and understood (Akerlof et al. 2010, Cardwell and Elliott 2013), how particular demographic characteristics affect this perception and understanding (Hamilton and Stampone 2013, Capstick and Pidgeon 2014) and, relatedly, how the issue is communicated and represented by media sources (Corbett and Durfee 2004, Good 2008, King et al. 2019). A central research subject within this communication research literature is the framing of climate change (Nisbet 2009, Spence and Pidgeon 2010, Scannell and Gifford 2013, Stevenson et al. 2018). Framing refers to the modification of message wording within the boundaries of equivalent informational content (Gallagher and Updegraff 2011) and the modes of organising and packaging such information (Borah 2011), the basis of which, Vliegenthart (2012) suggests, has become the dominant media-effect theory in communication research.

One such framing approach to climate change that has received considerable attention is that of health framing, itself a topic of significant attention in research on health communication more broadly (Akl et al. 2011, Wansink and Pope 2014, Covey 2014). Research on the health framing of climate change has principally focused on the effects of such frames on different audiences, highlighting the notable salience such health framing has compared to alternative approaches to representing the issue (Maibach et al. 2010, Myers et al. 2012, Petrovic et al. 2014, Walker et al. 2018). In light of political communication research highlighting the interrelation of media exposure and civic engagement (Sotirovic and McLeod 2001, Shah et al. 2005), research has also assessed the prevalence of health framing in how the issue of climate change is addressed and represented in media accounts and publications (Weathers and Kendall 2016, Depoux et al. 2017, Bolsen and Shapiro 2018). This research on the effects of communication strategies and media representations is undoubtedly of importance to political processes, in particular in light of the relationship between media discourses, perceptions of political agency, and civic engagement (Gil de Zúñiga et al. 2012).

As predicted by Morgan and Dowlatabadi's call for caution however, politically the problem of climate change remains contentious despite these various advances in natural and social scientific understanding. Research on public opinion has highlighted such political contestation both in the USA (Dunlap et al. 2016) and in European countries such as the UK (Carter 2014) and Germany

(Koos and Naumann 2019). The debates surrounding global climate politics are taking place both within and across individual countries along such lines as cultural identity (Zaleha and Szasz 2015), political affiliation (Hartter et al. 2018), norms and values (O'Dea et al. 2018), or issues of costs and expenditures (Gilmore and St. Clair 2018). Internationally much debate surrounds questions of authority (Porter et al. 2018), leadership (Groen et al. 2012), and responsibility (Okereke and Coventry 2016). This includes ongoing contention over issues from energy (Owusu and Asumadu-Sarkodie 2016), transport (Creutzig et al. 2015), justice (Schlosberg and Collins 2014), and priorities of adaptation and mitigation (Jørgensen and Termansen 2016), to the suitability of entire economic systems (Wright and Nyberg 2015). Opinion polling has also suggested that peoples' perceptions of climate change are significantly affected by various demographic factors such as age, with concern decreasing among older people (Semenza et al. 2011), gender, with women expressing higher levels of concern than men (McCright 2010, Ballew et al. 2018), and ethnicity, expressed in particular in lower levels of climate policy support among white people compared to other ethnicities (Malka et al. 2009, Leiserowitz and Akerlof 2010). Research has also shown that there are significant differences between different countries in how climate change is discussed and represented by the media (Boykoff 2007).

In light of the above-mentioned concerns for climate change as a contested political issue and the differences between scientific and public opinions, much of the research in this area is pursued in the attempt to increase the "science acceptance" (Maibach and Van der Linden 2016) within society to close a posited "consensus gap" (Cook et al. 2013, p.6). In light of this ongoing contention around the issue and the divergence between scientific and lay-man positions towards climate change, scholars have raised the question of why despite the existence of a scientific consensus there has not yet been a wider consensus established across society (Cook and Jacobs 2014, Benestad et al. 2016, see also the exchange between Pearce et al. 2017a, 2017b, and Cook 2017). It is in this context that the understanding or non-understanding of climate change is a prominently raised topic in the social science literature on the issue, discussed both along the lines of and in direct critique of a deficit model of public understanding (Suldovsky 2017)—the notion that additional information will address differences in opinion between experts and non-experts. In what follows I will briefly discuss why and to what extent these discussions of knowledge or ignorance of scientific issues are relevant to the constructivist-interpretive inquiry presented in this thesis.

Knowledge and Ignorance

As I will detail at length in the following chapter on methodology, this research pursues a constructivist-interpretive analysis of a particular practice that engages with the issue of climate change (cf. Chapter 3.3)—the practice of medical climate activism and advocacy. In this research effort, I am actively departing from the concerns for the scientific understanding of climate change that, as highlighted in the discussions above, have preoccupied a great number of research endeavours in the social sciences. In the analysis of the constructions of climate change that inform the practice of interest in this thesis, the circumstance that different actors are differently knowledgeable or ignorant regarding climate change is relegated in its importance to the circumstance that different actors do hold different understandings of what climate change is and means, and are structurally positioned in different ways to express their constructions of and meanings given to the issue, such as through activism and advocacy (cf. Chapter 2.4). A central dimension of these expressions revolves around the interest of different actors and institutions to affect the perceptions of and actions towards climate change by others, and their efficacy to do so. Accordingly, the questions of what they know or are ignorant about are equally relegated in their importance to questions of what allows for their constructions and meanings to stand in discourses of science, society, and climate politics, and how meaning is given to them doing so. In this light, the acknowledgement of the centrality of different ways of knowing is the basis from which an analysis of medical professional climate activism and advocacy becomes the analysis of a particular, meaningfully positioned, and structured practice pursued by a particular group of people informed by particular ways of knowing and meaning-making (Jasanoff 2004). How then does the literature discuss these circumstances?

The socio-cultural knowledge and recognition of a problem do neither require nor affirm scientific knowledge and recognition of said problem (Fischer 2019). However, in the context of discussions of the understanding of climate change, the very idea of socio-cultural knowledge is often discarded as irrational from the perspective of positivist scientific thinking, with the latter maintaining that "social knowledge cannot be considered valid knowledge" (Fischer 2019, p.140). As scholars in the field of science and technology studies have argued against this perspective, scientific knowledge is itself the product of socio-cultural processes, situated in contingencies, structures of social order, and accordingly embodies social and cultural prescriptions (Bloor 1991, Wynne 1996, Haraway 2013). Science not only prescriptively speaks to society, but "society can

answer back to science" (Nowotny et al. 2001, p.47). As the preoccupation with scientific knowledge and its reception in society of the literature discussed above already suggests, when society does answer back in disagreement, this disagreement is frequently constructed as ignorance of the scientific knowledge that is assumed to ground these prescriptions (Smithson 2008, Hurlbut 2017). What from such a positivist perspective is constructed as ignorance, non-comprehension, or denial of science may however not only be far from an absence of knowledge, but rather may signify an acknowledgement of the uncertainty, variability, and limits of scientific knowledge that is ignored or denied by scientific expert bodies (Wynne 1996). Mathews (2014) in his research on representations of climate change positions what he identifies as non-knowledge in political and technological discourses "as the inherently contestable quality of public fact" (p.83) in light of uncertain presents and futures. As Smithson (2008) points out, the very definition of concepts such as knowledge and uncertainty that are employed in scientific discourses coproduce, in their contestability, differences in how ignorance is understood on their own ends (p.209). These arguments in many ways echo the much earlier idea of essentially contested concepts by Gallie (1955), proposing that the concepts employed by the sciences to propose singular meanings are themselves essentially contested in their meaning, subject to dispute and negotiation of social order—settled on social rather than scientific grounds.

Smithson (2008) further argues that the positing of ignorance is always a positive knowledge claim on part of the claimant. Scholars analysing this so-called ignorance have, as Smithson lays out, distinguished between a wide range of ignorance types, two of which I want to pay brief attention to, namely their passive and active variants. Passive ignorance—the state of being ignorant—describes a genuine, native state of lack of awareness whereas active ignorance—the act of ignoring—describes a "deliberate and strategic ploy" (Smithson 2008, p.210). In the context of climate change this distinction between passive and active ignorance can be seen to play out in the literature's discussions of information deficit models of public understandings on the passive side (Suldovsky 2017), and disinformation campaigns by interested actors strategically creating and imposing ignorance and confusion as merchants of doubt (Oreskes and Conway 2011) on the active side. Hurlbut (2017) provides additional differentiation between these so-discussed dimensions of public ignorance and confusion, positing the former as drawing on discourses of epistemic deficiency to be remedied by scientific knowledge as in the information deficit model, and the latter as drawing on discourses of democratic deficiency in the public's ability to reason

that warrants corrective "intervention by scientific authorities to restore democratic deliberation to the right (and righteous) path" (p.208). That the arguments above cautioning against the dismissal of discordant constructions, perceptions, and understandings as scientifically ignorant are not made against a positivist strawman but prominent thinking is exemplified by Thaler and Sunstein's Nobel Memorial Prize-winning work on nudging theory. In their central work *Nudge*, Thaler and Sunstein (2008) posit an inherent incapability of humans to rational thinking and acting and their proneness to fallacy and error that, as they argue, has been demonstrated by "careful research by social scientists over the past four decades" (p.7). Rather than allowing people to succumb to their irrationality, they suggest that a number of so-called private and public choice architects are to guide people towards better choices and better lives (see also Jasanoff 2013, pp.449-450).

It is against these positivist positions that the research presented here explicitly assumes a constructivist-interpretive stance as not merely an epistemological but an ontological presupposition—the presupposition that particular ways of knowing and giving meaning not only grasp social order (Jasanoff 2021, p.11) to varying degrees but shape it; that climate change is not merely a technoscientific issue graspable solely by expert knowledge but a societal issue graspable by a plurality of knowledges (Gallopín and Vessuri 2017). Climate change intersects with virtually every aspect of human societies and their cultures, from how we heat our homes and where we build them, to what food we eat and how we produce it, to what cars we drive and on what fuel, to where we go for our holidays and how we get there, to even the most intimate questions of how many children we have (Murtaugh and Schlax 2009). It is in light of the constructivist-interpretive presuppositions of this thesis that these questions are political questions that are to be decided by the pluralities of human societies, not by a handful of public choice architects—shaped by civic engagements, not technocratic decrees. The way that human societies will decide to structure themselves and their lives will fundamentally affect how the climate changes. The effects of these changes will, in turn, fundamentally structure human societies. One such major societal aspect that climate change is vitally intersecting with is that of human health that I will turn to now.

2.3 Climate, Health, and the Medical Profession

Climate Change as a Medical Concern

In 1990 the World Health Organization (WHO) published its first assessment report on climate change and human health (WHO 1990), an abridged version of which formed the basis of the section on human population health in the IPCC's first assessment report later that year. Concern for human health has since become a central aspect of the IPCC's assessment reports, the fifth of which references human health and its interrelations with aspects such as water, energy, land use, and biodiversity throughout its analysis (Pachauri et al. 2014). Other efforts to track the state and scientific understanding of climate change in its effects on health exist, for example by the English medical journal The Lancet that started in 2017 to annually publish the *Lancet Countdown* report on health and climate change (Watts et al. 2017).

The interrelations between ecological systems concerning such dimensions as natural resources or biodiversity and the systems of the human body raise a wide range of concerns for potential adverse consequences of climate change on human health. The projected health impacts of these external systems on the human body presented in the IPCC's fifth assessment report include increased risks of injury, illness, and death due to more intense heat waves, more frequent fires, a proliferation of foodborne and waterborne diseases, loss of work capacity especially among vulnerable populations, risks of undernutrition particularly in poor regions, and increases in vector-borne diseases and extensions of infection areas and seasons (Pachauri et al. 2014, pp.67-69). The report also concludes that the potentially positive effects of an increase in global mean temperature in some regions, such as a reduction in extreme cold or disease-carrying vectors, will be outweighed both in magnitude and severity by the negative effects of climate change worldwide (Pachauri et al. 2014, p.69). The IPCC further points out that human health is put at risk by climate change indirectly, as its impacts on economies and resources may produce and exacerbate violent conflict (Pachauri et al. 2014, p.73). A similar account of climate change has been expressed in the idea of planetary health. The concept has garnered attention since 2014 when The Lancet published its *From Public to Planetary Health: A Manifesto*. The manifesto pronounces a planetary representation of health and climate change and calls for transformative health action to address the issue and its impacts. Notably, it presents an expansionary vision of medical professional practice as one integrating concerns for external dimensions into the systems within the human

body that, if healthy, sustain or, if not, threaten this human body and its health (Horton et al. 2014, p.847). The health and wellbeing of the human body and its biomedical systems here remains, explicitly, the central issue of medical concern.

The human health impacts of climate change are similar to other consequences of the issue also distributed unequally across different countries and regions. As the IPCC highlights, many of these consequences will most significantly impact poorer, more vulnerable parts of the planet (Pachauri et al. 2014, p.31). In a European context, existing research points to primarily two interrelated climate change impacts on human health: extreme weather events and threats to respiratory health (De Sario et al. 2013). Shifts in weather patterns, in particular in their production of extreme heat, are also the central direct climate change impact on human health discussed by the IPCC (Smith et al. 2014, p.713). Heat stresses, both particularly extreme temperatures and heat waves (i.e. runs of hot days), are expected to increase in frequency and severity causing dehydration, physical and cognitive impairment, circulatory collapse, organ damage, and in the extreme heat-related deaths (Smith et al. 2014, p.720). Heat waves and the resulting increase in droughts, wildfires, and events such as dust storms are expected to in turn increase issues of air pollution and the likelihood of respiratory diseases and asthmatic conditions. De Sario et al. (2013) conclude from a review of existing research on health impacts that climate change is "predicted to influence the start, duration and intensity of the pollen season, to increase the frequency and intensity of heat waves, heavy precipitation events (i.e. thunderstorms) and wildfires, and to raise long-range transport of air pollutants and allergens" (p.839). The impacts of climate change on allergic disorders are not limited to pollen but include other generic air pollutants and allergens such as mould spores following for example flooding events (Smith et al. 2014, p.729).

The issue of air pollution in particular relates to what the literature commonly discusses under the umbrella of health co-benefits between climate policy efforts and human health and wellbeing (Shaw et al. 2014, Haines 2017, Workman et al. 2018). The chapter on human health in the Fifth Assessment Report of the IPCC does itself carry the term co-benefits in its very title (Smith et al. 2014). A primary source of air pollution is the combustion of fossil fuels such as coal and oil which, as mentioned earlier, is also the leading cause of human influence on the atmospheric concentration of greenhouse gases (Smith et al. 2014, p.737). Since activities that exacerbate climate change themselves, such as burning coal, and the impacts of the resulting changing climate, such as extreme heat, both impact health in adverse ways, i.e. particulate air pollution and heat

stress, it is co-beneficial to both health impacts when, for the example, solar energy is used in place of coal. There exists a wide range of potential health co-benefits that can be derived from efforts nominally subsumed as climate change related, such as reducing methane emissions from animal agriculture which may directly reduce human exposure to ambient ozone (Smith et al. 2014, p.738) or replacing motorised transportation with more active forms of travel (Creutzig et al. 2012), both also potentially reducing non-communicable chronic diseases such as diabetes, cancer, and heart disease due to physical exercise and the reduction of meat consumption.

In addition to the physical threats that climate change poses to human health, research has highlighted a range of mental health impacts, both ongoing and prospective, that climate change and the awareness thereof brings with it. These impacts on mental health are usually grouped under the concepts of ecological grief (Cunsolo and Ellis 2018) and climate anxiety (Clayton 2020). The two concepts imply a temporal differentiation—ecological grief concerning principally the response to experienced "climate-related losses to valued species, ecosystems and landscapes" (Cunsolo and Ellis 2018, p.275), whereas climate anxiety concerns principally future-oriented concerns towards climate threats (Panu 2020). Both however concern emotional distress, depression, and despair in the face of the ecological and societal ramifications of climate change (Fritze et al. 2008, Hayes et al. 2018). Scholars have however questioned whether ecological grief and climate anxiety can be considered pathological, i.e. mental disorders. Comtesse et al. (2021) argue that ecological grief may well constitute a "normal and reasonable response to ecological loss" (p.6) and as such a functional response to an actual, experienced loss of ecosystems. Likewise, on the issue of climate anxiety, scholars have argued that in the evaluation of psychological responses to climate change one has to "distinguish between adaptive and maladaptive levels of anxiety" (Clayton 2020, p.1), stressing that climate change is a substantiated threat to which "anxiety can serve an adaptive function" (Clayton 2020, p.3).

In light of this understanding of the human health impacts of climate change, medical professionals have become engaged with the issue in a wide variety of ways, ranging from direct action initiatives and political campaigning, patient and public health communication, to efforts to increase the engagement of their colleagues or respective organisations. One of the longer-standing climate activism and advocacy efforts that can be identified are repeated calls for action through scientific publications aimed at medical professionals over the past decade. This includes in particular articles, often in the form of editorials, essays, and commentaries, aimed directly at

readerships of medical doctors (Chivian 2014, Blashki et al. 2012) and the field of medicine more broadly (Frumkin et al. 2008). Central themes found throughout these publications as to why medical professionals ought to engage with climate change are those of professional responsibility for human health issues, the professional ability and expertise to lead on such issues, and high levels of public trust held by medical professionals allowing them to talk about climate change and health (Frumkin et al. 2008, Costello et al. 2013, Chivian 2014, Kreslake et al. 2018). Actions that are being called for include increasing patient communication and education on climate change (Kreslake et al. 2018), facilitating organisational efforts to reduce carbon emissions of facilities and the healthcare sector at large (Costello et al. 2013), and actions such as policy advocacy, industry engagement, and political campaigning (Blashki et al. 2012, Ramanathan and Haines 2016). Some of these calls posit climate change as a health crisis that calls for medical professional intervention similar to previous activist and advocacy efforts of the medical community towards issues such as tobacco smoking bans (Solomon and LaRocque 2019) and compulsory seat belt wearing (Woodward 2019).

Alongside these calls in scientific and professional publications, a range of newly formed organisations such as the UK Health Alliance on Climate Change (formed in 2016), the German Alliance Climate Change and Health (formed in 2017), and the US American Medical Society Consortium on Climate & Health (formed in 2016) have begun to facilitate inter-organisational cooperation between existing medical professional bodies in the pursuit of climate action. Whereas some of these efforts are aimed directly at structural change within specific organisations, others are concerned with more broadly organising and advocating for the engagement of medical professionals in climate change activism and advocacy efforts. For such efforts, new activist and advocacy networks of medical professionals have been formed and sub-groups have emerged in larger environmental movements such as Extinction Rebellion. The efforts of these organisations in many ways echo those expressed in the above-mentioned publications, ranging from calls for engagement and mobilisation of medical professional peers, advocacy of policy efforts within the health sector and through political channels such as lobbying and more traditional forms of science communication, direct action efforts, to raising public involvement in and salience of the issue by communicating the relationships between health and climate change to patients and others.

In light of their involvement with the more publicly visible dimensions of these efforts, medical professionals and their engagements with climate change activism and advocacy have garnered

coverage in news media, discussing such events as doctors joining Extinction Rebellion (York 2019), arrests of healthcare workers and medical students for acts of civil disobedience (Guyoncourt 2019), as well as calls for further such nonviolent direct action by doctors and medical academics (Taylor 2019). Medical professionals themselves have written op-eds in newspapers calling out a moral duty for their profession to publicly make the case for drastic action tackling climate change (Issa 2019) and published open letters on the urgency of such climate action (Underwood et al. 2019). Topics such as patient education and communication around climate change by medical professionals (Bebinger 2019) and local efforts to incorporate climate change concerns into general practices (Haynes 2019) have found media coverage too.

If we recall the earlier discussed research that suggests that this media coverage of medical professional engagement with climate change may in itself affect further such involvement of fellow professionals in similar efforts (cf. Chapter 2.2, p.22), these efforts to achieve media coverage or engage in op-ed publication directly have to be understood as themselves potential recruitment and facilitation efforts of such climate activism and advocacy. In this way, medical professionals may be mobilised to become involved in action surrounding climate change not by additional information on the issue as such, but rather through discussions of its importance and accounts of the involvements of other medical professionals that signal the opportunity to do so. This research on communication strategies and their effects similarly raises questions as to how medical professionals go about this activism and advocacy and how they understand their ability to do so. The existing analyses of the effects of health framing strategies on climate change perceptions of audiences, public opinion polling, and media representations however tell us little about how climate change is understood by medical professionals, how these understandings inform the activism and advocacy efforts they engage in, nor how and why they perceive themselves in a position to do so.

A literature review by Hathaway and Maibach (2018) on the issue found only a few marginally relevant existing English language studies on the perceptions of climate change and health in general. Despite their extensive database research, the researchers found only 46 peer-reviewed studies covering any of their basic research questions, these questions being themselves rather broad and including, next to medical professionals, perceptions of climate change and health by the general public. What little existing research they did find suggested that climate change is generally perceived as harmful to human health by medical professionals but that specific

knowledge of these health impacts is low and that medical professionals express both an interest and need for further information and resources to engage effectively in the health responses towards them (Hathaway and Maibach 2018). A protocol for a scoping review of the existing literature on the attitudes, perceptions, and practices of medical professionals regarding climate change and its health impacts was submitted in 2019 (Yang et al. 2019), but as of 2022, no resulting research has been published. As the authors of both the review and protocol point out, how medical professionals understand and engage with the issue of climate change, and on what grounds and to what extent they are prepared to do so, is unclear.

In light of the discussions in the preceding section, the review above raises three central points of importance. First, what climate change is understood to be, what it means that the climate is changing, and what conclusions to draw from the so-constructed situation, are three different levels at which the contestability of climate change plays out. Within the resulting contestation, climate activism and advocacy takes an important role as a practice through which claims over the meanings of climate change are constructed, posited, and challenged within the field of climate politics. Second, human wellbeing and health are central areas intersecting with these processes and constructions of climate change. Not only does a changing climate pose substantial challenges to human wellbeing, but health is itself centrally affected by the economic and cultural practices that exacerbate the emissions of climate change inducing greenhouse gases. Third, in response to these connections between climate change and health, variously organised medical professionals have begun engaging in efforts that can be grouped under the practice of medical climate activism and advocacy. Throughout this thesis I will speak of climate activism and advocacy, in particular medical climate activism and advocacy, to refer to efforts that attempt to affect how climate change is understood and engaged with by others, including such efforts as advocating for climate policies, mobilising colleagues to engage in climate action, and changing patient behaviours or organisational processes.

The Organisation of Medical Climate Activism and Advocacy

To understand the mode of organisation of the emerging practice of medical climate activism and advocacy better, I will briefly review the organisational landscape of these efforts. I will do so by sketching out three forms that the organisation of medical climate activism and advocacy takes. These are national professional organisations, national student organisations, and local or regional

activist and advocacy groups and networks. These three forms are loosely grouped for the sake of exemplary representation, the various organisations that I here categorise as such having diverging particularities beyond the so-categorised characteristics that they share. Example organisations have been chosen from Germany, the United Kingdom, and the United States for three central reasons. Firstly, the practice of medical climate activism and advocacy is prominently taking place in these three contexts. This circumstance may be conditioned by these three being major economic and political actors in climate politics (Brenton 2013, p.542), with Germany and the UK being responsible for the largest and second-largest share of EU total CO2 emissions respectively, while the United States is the second-largest emitter globally (Ritchie and Roser 2020). Likewise, The United States, Germany, and the UK rank first, fourth, and fifth respectively for contributions to global cumulative CO2 emissions since the beginning of the Industrial Revolution in 1751 (Friedlingstein et al. 2021). As I will highlight later in the findings chapters, this circumstance may inform a sense of responsibility grounded in a polluter pays principle (Gaines 1991) that could in turn inform such engagements in climate activism and advocacy (see Chapter 5.2, p.130). Secondly, I had access to these sites and their organisations based on institutional affiliation and my ability to speak their respective languages (i.e. German and English). Lastly, the participants interviewed for this research were to varying degrees involved with the here presented organisations. This circumstance was co-produced with the first two conditions above, as research participants were recruited in light of these considerations (for a detailed description of participant recruitment see Chapter 3.7).

The first organisational form that medical climate activism and advocacy takes is that of national professional organisations. These are both consortia and alliances of established medical organisations that re-organise their members around the issues of climate change, human health, and medical practice, as well as new independent organisations formed specifically for these concerns. The former have emerged very recently, such as the German Alliance Climate Change and Health (KLUG) founded in 2017, the UK Health Alliance on Climate Change founded in 2016, and the Medical Society Consortium on Climate and Health in the United States founded in 2016. As their names imply, these are national alliances and consortia of healthcare organisations and medical societies that organise and facilitate their collective involvement in climate politics. Their goals are commonly to strengthen the networks between existing organisations in the healthcare sector, coordinating climate action and sustainability initiatives between their members, and to

support their members and affiliated organisations by facilitating interorganisational collaboration, assisting in mobilisation and communication efforts, and providing information, tools, and other resources. An example of a newly formed independent organisation meanwhile is the Centre for Sustainable Healthcare (CSH) in the United Kingdom. The CSH is a registered charity formed in 2008 and works, principally in the form of a think tank, on sustainable healthcare research and the development of educational resources and courses delivered to medical professionals to develop sustainable healthcare management skills to achieve carbon neutrality within health systems.

The second organisational form that medical climate activism and advocacy takes relates closely to the first but is organised by and for medical students rather than medically qualified doctors. While these organisations have a similarly broad focus on facilitating cooperation on initiatives concerning climate change, in this case particularly between medical student bodies and universities, they are more strongly concerned with organisational change in medical educational institutions—be it to educational curricula by changing existing module structures, by developing new courses on the intersection of climate change and medicine, or by changing sustainability-related processes of the institutions themselves such as resource use and procurement by medical schools. These organisations can structurally be positioned in widely different ways. In the case of the German Medical Students' Association, the organisation organises medical climate activism and advocacy as themselves a member of the abovementioned German Alliance Climate Change and Health, acting as a representative of medical students therein. In the case of Students for Global Health (SfGH), the organisation runs nationally coordinated working groups and activities through university-based branches across the United Kingdom, focusing on "education, advocacy and community action" (SfGH n.d.) concerning a wide range of medical issues intersecting with socio-structural concerns beyond climate change. For two consecutive years however, 2019-2020 and 2020-2021, the SfGH's annual general assembly voted for climate change and health to constitute the organisation's central concern, the work of the organisation consequently centring on this issue. Again differently, Medical Students for a Sustainable Future (MS4SF) meanwhile is a nationally organised network of medical students from medical schools across the United States and focuses specifically on the intersection of medicine and climate sustainability. MS4SF was founded in 2019 to facilitate collaboration between climate engaged medical students and supports first and foremost changes to curricula structures of medical schools and practices in healthcare institutions (MS4SF n.d.).

Lastly, medical climate activism and advocacy is organised by local and regional groups and networks of medical professionals. These groups and networks are oftentimes principally organised on such local and regional levels while simultaneously having a nationally representative organisation. The German Health for Future network is one such example, represented on a national level but operated through independent local groups organised on a city by city basis. Besides its principal local basis and organisation, the various Health for Future groups congregate in national working groups on particular issues, especially ones of practical concern for the groups' efficacy in contact with the press, political activism, communicating divestments within the healthcare sector, and other similar concerns. Health for Future emerged in 2019 as one of a wide range of For Future initiatives spearheaded by the international environmental protest movement Fridays for Future that came into existence the preceding year. Doctors for Extinction Rebellion is a similarly organised network of several local groups of medical professional activists and advocates. The network formed in the United Kingdom in 2019 during the height of popularity of the Extinction Rebellion movement of which it is an offshoot. Both Health for Future and Doctors for Extinction Rebellion are networks principally concerned with organising and supporting protest and direct action initiatives of medical professionals including marches, sit-ins, occupations, and mass flyposting. The Greener Practice network on the other hand, while similarly structured as a network of local groups formed and organised independently but networked through the nationally representative National Greener Practice, has a distinctly different focus. Founded in the United Kingdom in 2017, Greener Practice is focused on providing a sustainability network supporting specifically general practitioners in advocacy and organisational change management towards environmentally sustainable healthcare and carbon-neutral general practice. They provide educational resources, coaching, and collaboration both on a national level and for and between the local Greener Practice groups. In the United States, much of this regional organisation of medical climate activism and advocacy takes place on a state level. These state-level organisations are independently organised and run by and for clinicians in their respective states, such as Virginia Clinicians for Climate Action or Florida Clinicians for Climate Action, and focus principally on state-level policy advocacy and activism. It is these local and regional groups and networks that are most intimately involved in organising the climate activism and advocacy that medical professionals engage in—assisted and facilitated by the abovementioned national organisations.

The above has presented a very rough overview of some of the organisations structuring the climate advocacy and activism efforts of medical professionals. Despite the particularities of the various organisational structures, the efforts that make up medical climate activism and advocacy at large were found to constitute one coherent practice, hinted at already by the similarities between the various efforts pursued by these organisations as well as the overlap between the involvements in them. As I will elaborate further in the next chapter on methodology, it is thus important to note that these different organisational structures are dimensions of one coherent phenomenon under analysis—the practice of medical climate activism and advocacy explored in its multidimensionality, expressed across different dimensions and from the perspectives of different medical climate activists and advocates involved in it (see also Chapter 3.6, p.69). Figure 2 shows a tabular overview of the so-involved organisations discussed above. The reader is again advised to appreciate the exemplary nature of this overview.

This and the preceding section have presented discussions surrounding the phenomenon of climate change, its relationship with human health, and the subsequent engagement of the medical profession in climate activism and advocacy that together constitute the impetus to analyse these efforts and the sensibilities and commitments that they inform and are informed by in this research. In the next section, the third and last of this literature review, I will take a closer look at the analytical framework that will be employed for this analysis. It bridges the concerns of this literature review chapter with those of the subsequent chapter on methodology, presenting the practice-theoretical perspective, or more closely the Bourdieusian framework, that underlies the analysis presented in this thesis.

Organisational Form	Example Organisation	Focus
National Professional Organisations	German Alliance Climate Change and Health / KLUG (Germany). Founded in 2017. Registered society. Directly affiliated with local groups.	Concerned specifically with climate change. Focused on education, facilitation, and organisational change across the medical sector.
	UK Health Alliance on Climate Change / UKHACC (United Kingdom). Founded in 2016. National alliance of healthcare organisations.	Concerned specifically with climate change. Focused on coordinating climate action between member organisations.
	Medical Society Consortium on Climate and Health (United States). Founded in 2016. National consortium of medical societies.	Concerned specifically with climate change. Focused on advocacy and organisational change in medical societies.
	Centre for Sustainable Healthcare (United Kingdom). Founded in 2008. Registered charity.	Concerned specifically with climate change. Focused on education, research, and training resources.
National Student Organisations	German Medical Students' Association (Germany). Founded in 2004. Registered society. Member organisation of KLUG.	Not independently organised on climate change. Represents medical students in the KLUG as a member organisation.
	Students for Global Health (United Kingdom). Founded in 1996. Registered charity. Has locally organised subgroups.	Concerned with global health inequality broadly. Focused on education, advocacy, and community action.
	Medical Students for a Sustainable Future (United States). Founded in 2019. Nationally organised network of medical students.	Concerned specifically with climate change. Focused on advocacy and organisational change in medical educational institutions.
Local and Regional Activist and Advocacy Groups and Networks	Health for Future (Germany). Founded in 2019. Offshoot of Fridays for Future. Locally organised network of medical professionals.	Concerned specifically with climate change. Focused on activism and direct action towards public awareness and policy change.
	Greener Practice (United Kingdom). Founded in 2017. Locally organised network of GPs with a nationally representative group.	Concerned specifically with climate change. Focused on organisational change towards sustainable primary care.
	Doctors for XR (United Kingdom). Founded in 2019. Offshoot of Extinction Rebellion. Locally organised network of medical doctors.	Concerned specifically with climate change. Focused on activism and direct action towards public awareness and policy change.
	Various state-level organisations (United States). E.g. Virginia Clinicians for Climate Action, Florida Clinicians for Climate Action.	Concerned specifically with climate change. Focused on state-level policy advocacy and activism, organisational change.

Figure 2: *Organisational Landscape*

2.4 Theory and Framework

Movements and Practices

There are various ways in which the climate change activism and advocacy of medical professionals can be assessed with a focus on the sensibilities and commitments that inform their efforts. Two perspectives of particular relevance are found in social movement and practice theory. In its principal concern for social and political movements, social movement theory has been influenced by economic and political scholarship, in particular the work of the American political economist Mancur Olson on the logic of collective action (Pecorino 2015). Major analytical concerns within social movement theory revolve around collective action, political opportunity, and resource mobilisation (Morris 2003). Concerns for collective action draw on and focus on questions of group organisation and the emergence of collective identity, especially in the context of advocacy by and for disadvantaged groups (Stürmer and Simon 2004, Dolata and Schrape 2016). What this analytical focus is thus particularly suited for is the analysis of the formation of collectives, i.e. the emergence of groups and networks of people and their organisation to act together (Rao et al. 2000, Klandermans 2002). Concerns for political opportunity, while equally focused on political and social movements, shift this interest outwards to exogenous factors, external institutional structures, and towards the strategies of movements and their likelihood of success under these structures (Meyer and Minkoff 2004, McCammon 2013). A focus on political opportunity is as such principally concerned with the structural conditions of political action and the influence of and policy outcomes achieved by different strategic pursuits of such movements (Olzak and Ryo 2007, p.1564, Giugni 2011). Resource mobilisation, lastly, focuses on an analysis of the resources employed by various groups, again in particular those that are marginalised, in pursuit of their respective movement's objectives (Edwards and Gillham 2013). It attempts to analyse social movements through an assessment of the political demands they pose, the costs and benefits of their (attempted) realisation, and the resources accessible to or held by individuals and organisations engaged in posing these demands (Zald and McCarthy 2002, p.536).

The apparent limitation of these approaches in social movement theory is their common focus on strategic collective political action, particularly in the form of protest movements of emergently organised groups against in some fashion advantaged institutions. In the analysis of climate change activism and advocacy efforts of medical professionals however, we are dealing with an

established and organised professional group engaging in organisationally interlinked actions that existed before and outside of their participation in and involvement with climate action. Their climate change activism and advocacy take place in such areas as doctor-patient communication, organisational management, education and training, or direct action. To be sure, medical professionals marching in the streets represents an "event" (Oliver et al. 2003, p.220) of collective action, but this aspect of what they say and do cannot conceptually stand for the whole of their efforts. One also runs into problems in terms of social movement theory's focus on disenfranchised groups when assessing the actions of medical professionals. Goldstone (2004) argues more generally that social movement theories building on the above-mentioned notions of disadvantaged or otherwise repressed groups strategically pursuing objectives against some sort of repressive authority fail to explain the interaction between increasing levels of democratisation and social movements. Social movements should instead, Goldstone argues, be seen as "situated in a dynamic relational field" (Goldstone 2004, p.333) in which the ongoing actions of the involved actors interact with and influence each other, an argument strikingly reminiscent of the relational sociology of the French sociologist Pierre Bourdieu.

Some scholars have indeed argued for such an analysis of social movements through Bourdieu's theory of practice and its conceptions of habitus, capital, and field (Crossley 2003, Haluza-DeLay 2008). Haluza-DeLay (2008) critiques that social movement theory is too narrowly focused on political contention and misses, particularly in the analysis of environmental movements, the broader "effort to create sociocultural change" (p.206). He suggests instead to consider participation in social movements as practices, i.e. the thoughts, sayings, and doings of structurally positioned and disposed actors. In particular, Haluza-DeLay suggests to position these practices in Bourdieu's sociological framework "involving the interplay of habitus, practice and their cooperative relations in social fields" (p.216). Crossley (2003) further maps out how the various elements of social movement theory discussed above conceptually relate to and can be strengthened by concepts from a Bourdieusian framework, in particular the concepts of habitus in relation to collective action (p.52), fields to political opportunity (p.60), and capital to resource mobilisation (p.56). In what follows I will lay out these concepts of habitus, fields, and capital as well as other related elements of the Bourdieusian framework in detail (see also Glossary, p.8, for brief definitions of the central terms used throughout this thesis).

A general challenge in reviewing Bourdieu's conceptual ideas is that they evolved in not always entirely consistent ways throughout his writings and their applications therein.[1] In particular the two closely interrelated concepts of capital and habitus require some work to distinguish. In the earlier work of Bourdieu and Passeron (1979) on French university students, the idea of habitus is first presented as a set of habits, tastes, and attitudes that people derive from their social background and upbringing (p.12). They are derived insofar as they are principally not actively and intentionally pursued through effort but inherited as an "implicit condition" (p.17). This idea of implicitness is later developed into habitus as embodied dispositions. In Bourdieu and Passeron's (1990) subsequent work on social reproduction, habitus is defined as the "product of internalization of the principles of a cultural arbitrary" (Bourdieu and Passeron 1990, p.31), this cultural arbitrary, in turn, being "schemes of perception, thought, appreciation and action" (p.35). In his later work Bourdieu (1998) further clarifies that these disposed principles of thinking, saying, and doing are the embodied form of what he calls cultural capital (p.5). What then is this capital that habitus is a particular embodied form of?

Capital generally is defined by Bourdieu somewhat cryptically as "accumulated labor" (Bourdieu 1985, p.245). It is labour in the sense of it having been produced and acquired by human actions, and accumulated in that it is historically structured, i.e. its acquisition takes time and its distribution is persistent. Functionally, it represents the actual or potential resources and capacities actors have accumulated and can operationalise in the pursuit of practices. This accumulated labour has been objectified, institutionalised, or embodied in principally three guises: economic, social, and cultural capital. Economic capital in its objectified form either is or can directly be converted into money, and in its institutionalised form exists as property rights (Bourdieu 1985, p.243). Social capital meanwhile is summarised by Bourdieu as connections—defined as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group" (1985, p.248). Cultural capital refers to various cultural goods or objects such as clothing and books in its objectified form, is institutionalised in the form of qualifications, i.e. diplomas, licences et cetera, or embodied in habitus, the "long-lasting dispositions of the mind

[1] Bourdieu presents an "account of [his] position and its evolution over time" in his posthumously published *Sketch for a Self-Analysis* (Bourdieu 2008).

and body" (Bourdieu 1985, p.243) through the, often unconscious, mental and physical accumulation of culture, upbringing, and education. Each of these various expressions of capital can, under certain conditions, be converted directly or intermediately into each other.

As mentioned above, capital is structurally distributed. This means different people, individually and collectively, hold different qualities and quantities of it—its distribution representing the structure of social order. This distribution of capital is however not wholly fixed but subject to efforts of reproduction and the above-mentioned conversion in which capital can be lost and acquired through conversion costs as well as wins and losses in the "games of society" (Bourdieu 1985, p.241), i.e. the various fields in which practices are pursued. Not all capital aligns with the presuppositions—the doxa—of any one of such social games in which an actor is disposed to partake, and accordingly requires conversion to acquire "efficacy in the field in question" (Bourdieu 1985, p.243). It is thus not any particular quantity or quality of accumulated capital in itself that structures social order, but its relational positionality. Bourdieu and Passeron (1990) refer to this circumstance both as, epistemologically, a "relational mode of thought" (p.222) and as, ontologically, a "structural causality" (p.87). The relational mode of thought is the analytical approach to assessing social order not by the characteristics of individual elements but their relation to each other within a positional system (i.e. field) that is itself constituted by exactly these relations. Structural causality describes the resulting constitution of social order as a "system of factors, acting as a system" (Bourdieu and Passeron 1990, p.87).

Figure 3 presents an illustrative example of this relational positionality within a field on the basis of capital. It illustrates the field of climate politics as a Euclidean space with the positioning of two exemplifying actors therein. The actors are positioned in the field on the basis of their operative economic, social, and cultural capital, here distributed along the "x", "y", and "z" axes and exemplified as funding, connections, and expertise. Positions in the top-back-right octant (+,+,+) are highest in capital and thus potential efficacy and as such most desirable. Positions in the bottom-front-left octant (-,-,-) are lowest in capital and potential efficacy and thus least desirable. While presented on its own, the reader is advised to appreciate that just as the actors within the field relate positionally to each other, the field of climate politics relates to and intersects with various other fields that exist within and outside of it—most crucially for the discussions of this thesis that of medicine (for an illustration of this intersection see Figure 6, Chapter 4.1, p.84). It is in these relations that the positions in and between fields acquire their full significance.

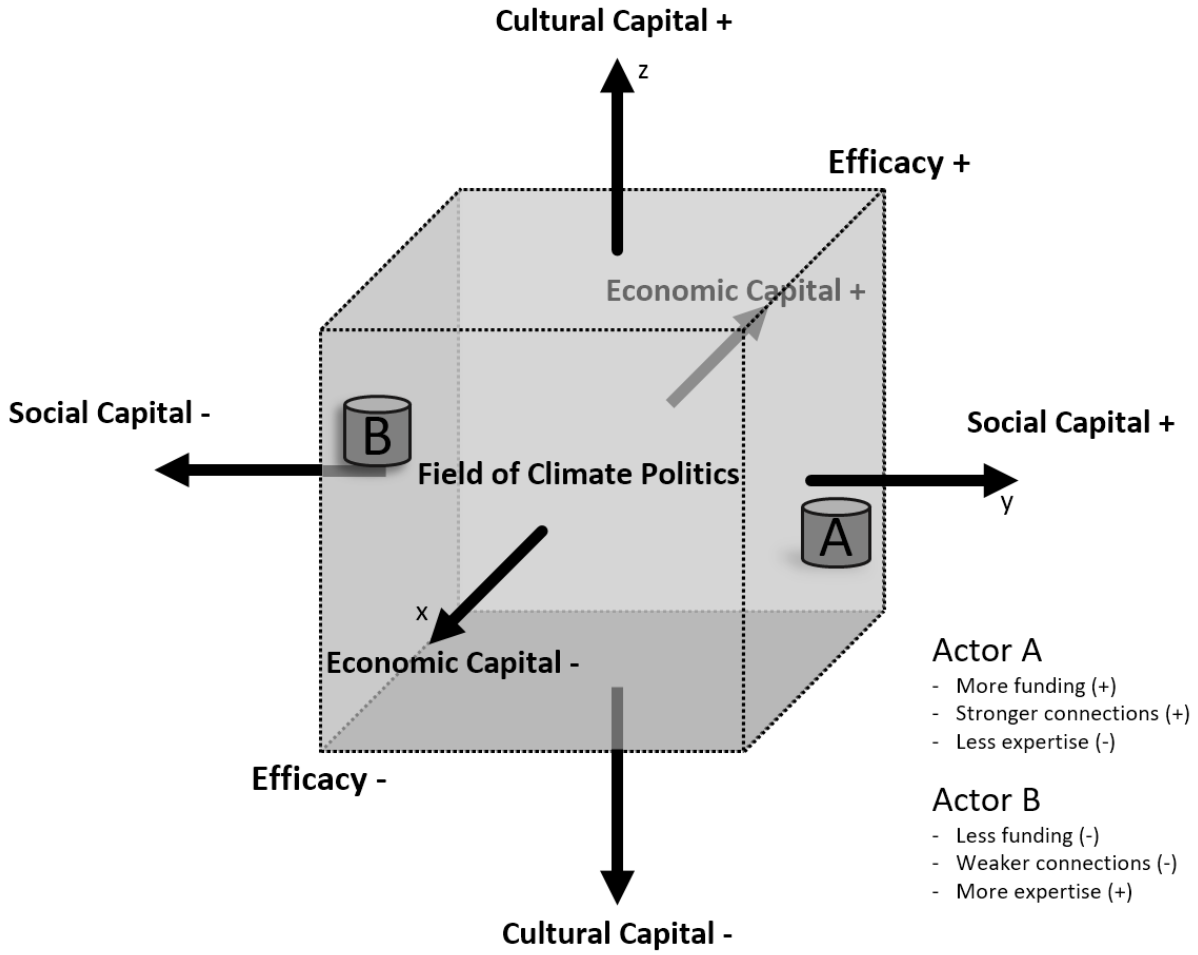


Figure 3: *Field Illustration*

To the cultural capital exemplified by expertise in the illustration above one may add a radical ecological habitus that is attuned to an engagement with climate politics as a practice in this field. To repeat what I stated above, habitus is a particular form of a particular guise of capital, namely embodied cultural capital or, in its effect, the disposed meaning-making resulting from this capital. Bourdieu later summarised this understanding of habitus in its definition as "social positions embodied in bodily dispositions" (Bourdieu 1998, p.182), once more highlighting capital as an expression of a relational social order. Habitus is at once embodied and enacted; a disposed but active "pattern of meaning making" (Ambrasat et al. 2016, p.1). The concept of habitus sits thus at the centre of Bourdieu's practice-theoretical orientation. Practice theory is the attempt of capturing what people "think, say and do" (Carr 1986, p.178) at the intersection of agency and structure, particularly in situations in which these thoughts, sayings, and doings are of somewhat organised and sustained nature (Vargo and Lusch 2016, p.13). Practice-theoretical approaches

assume a duality of structure and agency, looking at how practices, i.e. the actions that actors engage in and their underlying ways of thinking and meaning-making, organise and structure social order and relations across space and time (Giddens 1984, pp.24-25, Schatzki 1996, p.89). In a Bourdieusian framework, this duality of agency and structure is principally found in embodied dispositions, i.e. the above-discussed concept of habitus. Habitus structures practices, and practices structure habitus—it represents a "structuring structure, which organizes practices and the perceptions of practices, but also structured structure" (Bourdieu 1996, p.170). An idea found throughout Bourdieu's work is that habitus is self-perpetuating; that it represents systems of structured dispositions that themselves produce and reproduce such structures (Bourdieu and Passeron 1990, p.31, Bourdieu 1990, p.53). It is in this presumed production and reproduction of the social world and its structures through practices—in the social production of social categories themselves—that Bourdieusian practice theory has been argued to be inherently constructivist (Halkier and Jensen 2011, p.104). In the discipline of international relations, McCourt (2016) goes as far as to argue that practice theory, in particular in the relational stance highlighted above to be characteristic of Bourdieusian sociology, constitutes itself a type of constructivist ontology.

It is in this practice-theoretical orientation that the Bourdieusian framework departs significantly from social movement theory. As Welch and Yates (2018) point out, there is a tension between practice theory and perspectives commonly found in the analyses of social movements in that the latter tend to build on assumptions of agents in intentional, rationalised pursuit of shared objectives against whatever structural constraints they are faced with (pp.3-4). In relation to the abovementioned influence by the work of Mancur Olson, this rationalism underlying many of the perspectives in social movement theory has been referred to respectively as the "Olson 'economic' model" (Whiteley et al. 1994, p.84). Practice-theoretical considerations meanwhile are explicitly reserved in assuming agents in rational, intentional pursuit of objectives, instead pointing to the habitual, non-deliberative, dispositional factors that practices emerge from and are embedded in. All three of the earlier discussed foci within social movement theory have been so criticised as resting on a simplistic rational choice paradigm that fails to account for the various conditions from and under which people make decisions and engage in actions (Buechler 1993, Jenkins et al. 2003, p.281, Chant 2011).

It is in these conditions that practices are actively enacted by structurally positioned and disposed actors. They are as a matter of the theoretical framework not only dependent on habitus and other

guises and forms of capital, but on the social spaces in which they are practised. These social spaces are conceptualised by Bourdieu as the already above-mentioned fields, i.e. sites of structured power relationships that enjoy some degree of autonomy (Bourdieu 1988, p.119). Autonomy here means that fields generate their own doxa, i.e. "the fundamental presuppositions of the field" (Bourdieu 1990, p.68), and field-specific capital, or rather, that the above-mentioned particular forms of capital align with and are recognised within particular fields (Bourdieu 1988, p.96)—recall here also the need for capital conversion. These doxa, i.e. that which, in their respective fields, is presupposed to be true, establish the relationship "between a habitus and the field to which it is attuned" (ibid.). As stated in the introduction, it is this relationship between fields and their doxa, habitus, and capital that throughout the discussions of this thesis I attempt to capture with the term sensibilities and commitments, that is, the "emotional, intellectual, aesthetic, and moral dispositions" (Wickberg 2007, p.669) that inform and are informed by commitments to particular but intersecting social fields, their "fundamental presuppositions" (Bourdieu 1990, p.68), and the practices therein for which particular forms of capital are operationalised.

As laid out above, fields are sites of competition insofar as the social interactions within the fields are struggles over structural positions and success therein that affect the distribution and redistribution of capital—and thus the reproduction of social order—among those participating in them (Vincent 2016, p.18). The central field in which all other fields play out is the field of power, defined by Bourdieu as the site of struggle over "the relations of force that obtain between the social positions which guarantee their occupants a quantum of social force, or of capital, such that they are able to enter into the struggles over the monopoly of power" (Bourdieu and Wacquant 1992, pp.229-230). Just as one's capital is thus an expression of one's position in the social order, so too is the social order the product of the struggles in which this capital is employed. It is in the context of this field of power that Bourdieu converges the discussions of capital in its various guises above to its effect in providing the actors that operationalise it with symbolic power, or efficacy—this efficacy resulting from, or being the effect of, the likewise converged concept of symbolic capital understood as "not a particular kind of capital but what every kind of capital becomes when it is misrecognized as capital" (Bourdieu 2000, p.242) in its respective field.

Fields are not only contentious in the struggles of individuals and groups within them over their positions in power relationships, but the fields themselves intersect and compete with each other over their position in society, such as the degree of their relative autonomy (Bourdieu 1988, p.119).

Fields and the competition within and between them have as already highlighted earlier been referred to as games both by Bourdieu himself and scholars since (Bourdieu 1990, p.66, Crossley 2001, p.323). The analogy is helpful especially when the concept is considered together with the related concepts of habitus and capital. Take board games. The field, in the abstract sense, is the idea of the game itself, say chess. Chess has its presuppositions, or doxa—rules on how to play the game, what kind of pieces get to do what—and it competes with other games, say checkers, over its position (significance or recognition) in society. In the concrete sense, the field is the chessboard, the space in which chess is being played. Capital are the various pieces that players of the game can place, move, and position in the field in relation to other players' pieces in such a way that they strengthen or weaken their chances of success in the game. Habitus meanwhile structures the taste for and understanding of the game, providing the interest to play it and the meaning the game has acquired for its players by them having played or having been exposed to it. As practices take place in fields and are informed by their doxa, insights into established fields can be used to explore the practices emerging within and between them, such as exploring environmentalist practices as taking place in and emerging from the fields of movement activism and political debate (Crossley 2003).

Theoretical Considerations

The analysis of the practice of medical climate activism and advocacy is an analysis of a range of efforts that move beyond any one particular form, including for example political advocacy on the one hand and actions aimed at changing what healthcare organisations are doing, i.e. how medicine is practised, on the other. In the related literature on theories of civic engagement and activism, scholars have attempted to break down the sensibilities and commitments that inform practices of activism and advocacy surmised in such a practice-theoretical way into sets of distinct incentives that underwrite them. Seyd and Whiteley's general incentives model presents a prominent theoretical approach in this literature (Pattie et al. 2003). The model has been refined through several iterations, different versions breaking activist reasoning down to different central factors. Four such central factors concern the benefits assumed to be achieved by activist efforts, the expressive motives and social norms that inform such engagements, the perceived efficacy for achieving their desired outcomes, and the potential costs for those involved (Pattie et al. 2003, p.444). A summary of these central dimensions is provided in Figure 4.

Incentive	Description	Example	Relates to
Benefits	The good perceived to be derived from the pursued and desired outcomes.	A healthy planet means healthy patients, a more just society can provide better healthcare.	Doxa, i.e. presuppositions.
Expressive motives and social norms	The ideals, commitments, and normative perceptions of those engaged in activism.	A medical professional duty to care, environmentalism, the no harm principle.	Habitus, i.e. dispositions.
Efficacy	The activist's perceived position to affect the achievement of desired outcomes.	The ability to operationalise trust, expertise, or connections in the pursuit of their efforts.	Capital, i.e. capacities.
Costs	The perceived costs of activist engagements.	Loss of credibility, patient mistrust, animosity from colleagues.	

Figure 4: *General Incentives Model*

It is notable to what degree the categorisations of the general incentives model align with the Bourdieusian framework described in the discussions above. Central to this is that the incentives discussed in the model are posited as they are perceived, considered, felt, and expressed by those engaged in said civic efforts, i.e. relating to the sensibilities and commitments of practices rather than cost-benefit analyses of rational actions. Seyd and Whitley's model was indeed developed in explicit critique and response to the rationalism of the earlier "simple Olson 'economic' model" (Whiteley et al. 1994, p.84) whose influence was already mentioned in the discussions of social movement theory above (cf. Chapter 2.4, p.38). This critique of rationalism is also similar to the broader critiques of rational choice perspectives by practice-theoretical approaches mentioned earlier (cf. Chapter 2.4, p.43). We can further see alignment in terminology, with efficacy and costs constituting equally central aspects in the Bourdieusian analysis, particularly in relation to capital and its operationalisation in fields—efficacy being the capacity to affect a field and the practices therein that is operationalised, at a cost, from capital. We can likewise understand benefits in light of the presuppositions that inform them. It is by presupposing that better environmental conditions mediate better health conditions that environmentalist concerns and efforts accrue their human health benefits—a central dimension of the negotiation of practice that will be discussed throughout this thesis. What in the model concerns ideals and normative perceptions meanwhile relates closely to the disposed principles, tastes, and appreciations that are expressed in the concept of habitus. It is, again, in their interrelation as one system that this thesis

will explore these dimensions as two distinct sets of sensibilities and commitments—medical and radical ecological.

In light of these considerations, the Bourdieusian framework can be posited as bridging the relevant dimensions of social movement theory, practice theory, and theories of civic engagement more broadly. Equipped with such a theoretical perspective resting on a Bourdieusian framework, concerns for efforts such as those that are more squarely located in the context of social and political movements, such as protest marches, can be incorporated into a broader but coherent analysis of practice—of wider civic engagements and efforts such as patient communication and organisational change efforts. Indeed, Bourdieu's theoretical framework has been so applied to the analysis of practices relating to climate change in such a broad fashion, including such aspects as media representations, science communication, climate policymaking, and activism and advocacy efforts of environmental NGOs. Sonnett (2010) uses Bourdieu's ideas of capital and field to analyse media representation and constructions of climate change, focusing particularly on the competition between US media professionals and organisations in the field of journalism surrounding climate risk and knowledge construction. Hughes (2015) analyses the role of the IPCC in international climate politics by applying Bourdieu's concepts to an organisational level, looking at how the organisation employs its capital and that of its members to "construct the meaning of climate change" (p.93) in the field of climate politics. Hughes and Paterson (2017) later deepened this Bourdieusian lens in the analysis of the IPCC's authorship, highlighting how habitus structures authors' constructions of climate change in their contributions to the IPCC's Fifth Assessment Report. McDonald (2016) similarly uses Bourdieu's framework to analyse the activism and advocacy practices of environmental NGOs in Australia, focusing again in particular on the distribution of capital between actors in the field of climate politics.

When exploring the practice of medical climate activism and advocacy, the analysis includes the medical profession as a group and the individuals that constitute it. While, as discussed earlier in this chapter, there exists scarcely any literature on medical climate activists and advocates, the medical profession as such has been subject to extensive research broadly based in the sociology of professions (Evetts 2003). This research provides a rich literature that can be consulted in the analysis of medical professionals, including in such aspects as public perceptions (Wensing et al. 1998, Calnan and Sandford 2004, IfD Allensbach 2013, GfK Verein 2016, Ipsos 2018), occupational change (McManus et al. 2000, Grimshaw et al. 2002, Colyer 2004), education and

professional identity formation (Adams et al. 2006, Weaver et al. 2011, Wald et al. 2015), and knowledge and expertise (Hardey 1999, Naumanen 2007, Stein-Parbury and Liaschenko 2007). This literature generally points towards historically established unique positions of medical professionals in society, in particular in terms of responsibilities and duties for human health, eminent expertise and knowledge in health matters, and exceptionally high levels of public trust (see also Royal College of Physicians 2005). The analysis of medical professionals who are still in training in this literature also suggests that through their educationally acquired expertise and identity as medical professionals, advanced medical students in particular can be considered pending members of their respective professional group (Williams et al. 2015, p.124, Smith et al. 2017, p.6). When I thus speak of medical professionals throughout this thesis I include medical students in the term. Throughout the three findings chapters, in particular in their respective introductions, I will discuss this existing literature on the medical profession in its relevance to the analysis of medical climate activism and advocacy in more detail.

It needs to be pointed out here that Bourdieu himself was critical of the concept of professions, the use of which he saw not as a sociological approach allowing for critical analysis but an inherently uncritical reproduction of a "social product of a historical work of construction of a group" (Bourdieu and Wacquant 1992, pp.242-243). Research has however since integrated Bourdieu's considerations into an analysis of professional groups and professional practices, including medical professionals specifically (McDonald 2009, McDonald 2014, Waterfield 2015, Aitken et al. 2019). Schinkel and Noordegraaf (2011) in particular point out that, in line with Bourdieu's own argument against the concept, professionalism and belonging to a professional group can be conceptualised as cultural and social capital. One may think for example of the institutionalised cultural capital of medical qualifications and professional licences, or the social capital of membership in professional networks and organisations. Recalling the earlier discussion of Bourdieu's theoretical framework, capital is similar to the construction of a professional group the product of accumulated labour, i.e. historical work (Bourdieu 1985, p.245). The social product of what Bourdieu calls a historical work of group construction, i.e. the professionalism of an occupational group, is itself then capital held to varying degrees by said constructed group and its members.

Scholars in the field of science and technology studies have similarly argued that professional groups are constructed products of labour rather than natural givens. Desrosières (1990) positions

professional classes as constructed by the state through classification and statistical, socio-economical enumeration in light of its need to manage resources and people. It is in this context that Desrosières shows how different professional classes have been constructed and reaffirmed in such ways that their contingent construction is misrecognised as an expression of an apparent natural social order (Desrosières 1990, p.196). The professions as classifications positioned in this social order acquire their significance through their misrecognition as so-positioned classifications—precisely in the same way that Bourdieu in the discussion above posited symbolic capital as what capital becomes when it is "misrecognized as capital" (Bourdieu 2000, p.242). Following Hilgartner's (2000) "first order approximation" (p.15) that the actors within institutionalised groups have an interest in self-preservation, the members of these so-constructed professional groups can be assumed to be concerned with and involved in the preservation of their professional categorisation. Just as professionals have an interest to preserve this professional categorisation, so too will they have an interest in preserving the capital that derives from their so-affirmed position in the social order. Two important presuppositions follow from these considerations. Firstly, different professions occupy different positions in the social order that provide them with different capital that is varyingly recognised in different fields (Schinkel and Noordegraaf 2011, p.105), the two fields of particular interest here being those of medicine and climate politics. Secondly, these professions, i.e. the professionals within them, are assumed to be concerned with maintaining their professional categorisation and the social position—and thus capital—thereof. Analyses of the practices of members of particular professional groups need to illuminate thus not only what it is they are saying and doing but how they position themselves within the sites of these practices (the fields), the presuppositions that underlie them (the doxa), the meaning-making that dispose them to this engagement (the habitus), and the capacities they draw on and are concerned with losing in the pursuits thereof (the capital)—in short, their sensibilities and commitments.

The above-mentioned concerns for an analytical grouping by profession do however beg acknowledgement insofar as no constructed groups, their members, nor the fields in which they engage are, despite the ties and similarities that allow for their analytical grouping, homogenous entities. This reflects to some extent a more general earlier mentioned aspect of Bourdieu's theoretical framework, namely its relationality. Concretely this means that to comprehensively understand the social position of a particular actor, be it an individual professional or a group,

would ideally include not only an understanding of their various characteristics such as profession, ethnicity, gender, and age, but the web of relationships between these various characteristics and those between the actor and other actors that share and do not share them. Methodologically it is unfeasible to account for the full depth of these complexities in any one research effort. Their consideration provides however an important qualification for any claims derived from such necessarily limited research and challenges the researcher to reiteratively and reflectively consider the various factors in the system of factors that are revealed during the research process, particularly those they may not have considered previously or that by the necessity of analytical focus they may not consider in the analysis. I thus want to acknowledge the limitation of this thesis in not presenting an analysis of possibly equally valid analytical lenses that focus instead on such aspects as ethnicity or gender.

The discussions in this section can be summarised into a set of presuppositions. Firstly, the sites in which medical professionals operate and the climate activism and advocacy they pursue within them are understood in a Bourdieusian framework as fields and practices that inform each other. Secondly, what underlies such practices is not objective rationality but subjective sensibilities and commitments, for which it is central how these so-positioned practices are perceived and given meaning by the so-involved medical professionals. Thirdly, these subjective sensibilities and commitments, while held individually, can be explored as and through the sensibilities and commitments of the medical profession as a group. In line with the epistemological implications of these considerations, the discussion thereof will be held on methodologically constructivist-interpretive grounds, exploring the expressed sensibilities and commitments not quantitatively on the basis of their ability to explain or predict behaviour, but thematically on the basis of their meaning. A detailed discussion of these epistemological questions and how I will apply the so-structured framework to the research at hand will be laid out in the upcoming chapter on methodology.

Before closing this section I want to again briefly clarify my principally synonymous use of the terms dispositions, habitus, and sensibilities and commitments. The term dispositions is used in its conventional meaning of referring to propensities or inclinations of a person (Bourdieu 1996, p.344). Habitus meanwhile is a further theorised form of these dispositions, stressing the disposed patterns of meaning-making that structure practices and the perceptions of practices. The term sensibilities and commitments meanwhile is used to capture, as one interrelated system, the

emotional, intellectual, aesthetic, and moral dispositions that inform and are informed by commitments to particular but intersecting social fields, their fundamental presuppositions, and the practices therein for which particular forms of capital are operationalised. The terms are thus to be understood as roughly synonymous, but with different foci to their use—I will speak of dispositions to refer to aspects of inclination or propensity generally, habitus to explicitly position the discussion within the theoretical framework, such as when speaking of an attunement of habitus to a field, and sensibilities and commitments to more broadly capture the structural causality (Bourdieu and Passeron 1990, p.87) of a practice, field, doxa, and habitus as an interrelated system (cf. Glossary, p.8).

2.5 Conclusion

This review has sketched out the existing literature on three subject areas, namely the issue of climate change and its discussion in natural and social scientific research, the reception of the issue by the medical profession, and the theoretical basis for the analysis of medical climate activism and advocacy within a Bourdieusian framework. The first section on climate change and its contestation has highlighted the vast scope of the issue and how this pervasiveness has translated into concerns within disciplines such as sociology, political science, and communication and media studies for how climate change is understood, represented, and contested by different actors and institutions. The second section presented a closer look at one particular such group of actors and institutions, namely that of the medical profession and the healthcare sector. It reviewed the dimensions of climate change as a health issue, the subsequent calls on medical professionals to engage with the problem, and the organisational landscape that formed around these efforts. In the third and last section, I reviewed existing theories on social movements, activism, and civic engagement to arrive at a framework for the analysis of the above-mentioned practice, outlining a practice-theoretical Bourdieusian framework that posits this analysis as one of fields and doxa, habitus, and capital as one interrelated system of sensibilities and commitments. The next chapter on methodology will throughout refer back to these discussions in how they inform the methodological considerations for the research at hand.

Chapter 3: Methodology

3.1 Introduction

As highlighted in the preceding literature review, there exists little in-depth insight into the climate change activism and advocacy efforts of the medical profession and the meaning thereof for the so-involved professionals. In particular, there are unanswered questions about how climate change is constructed as an issue of concern by and for the medical profession, why some of its members choose to engage in climate activism and advocacy, how this medical climate activism and advocacy is given meaning, and how the efficacy in the pursuit thereof is understood. This chapter on methodology will lay out how the inquiry into these unanswered questions was pursued in the research presented in this thesis. The central point of this chapter is to discuss the reasoning behind the research design, highlighting in particular the reasons for employing a constructivist-interpretive methodology resting on narrative data produced through in-depth interviewing to answer the three research questions that guided this research. Throughout this chapter, I will discuss the implementation of this research plan and the challenges encountered during the process.

3.2 Research Questions

This research aims to develop an in-depth account of medical climate activism and advocacy that addresses the lacuna in the understanding of its meaning—from constructions of climate change by medical professionals to their reasoning for engaging with climate activism and advocacy. As the preceding literature review highlighted, there exists no such account to date. For inquiries in research areas of which little is known, indicated here by the absence of research literature on the sensibilities and commitments that inform and are informed by the engagement of the medical profession with climate change, exploratory research has been argued to aid the effort to define, describe, deconstruct, and interpret the phenomena under scrutiny (Barker et al. 2002, pp.33-35, Elliott and Timulak 2005). In such exploratory research, the descriptive task of defining and describing a phenomenon and the characteristics it appears in exists alongside the interpretive task

of deconstructing and interpreting said phenomenon, exploring why the phenomenon takes place as it does and what assumptions and interests are made and served by it.

In light of the Bourdieusian framework laid out in the literature review (cf. Chapter 2.4), the exploration of the phenomenon that is medical climate activism and advocacy is an exploration of the sensibilities and commitments—systems of emotional, intellectual, aesthetic, and moral dispositions that inform and are informed by commitments to particular but intersecting social fields, their fundamental presuppositions, and the practices therein for which particular forms of capital are operationalised—that inform a perception of medical climate activism and advocacy as a meaningful, responsible, and appropriate practice for the medical profession to engage in. What lies at stake in this theoretical orientation is not the identification of causal factors that result in medical climate activism and advocacy, but how climate change is constructed, medical climate activism and advocacy is given meaning, and the efficacy in the pursuit thereof is understood by medical professional climate activists and advocates. Rather than asking what caused a practice, the question raised is what sustains it, or, how it is given meaning. It is, in particular, this concern for the disposed meaning-making of activist and advocacy efforts as they unfold that informs the interest in the narratives expressed by the so-involved medical professionals regarding their involvement. Following the theoretical considerations raised above, these narratives need to be analysed through the expressed sensibilities and commitments that condition them.

With these thoughts in mind, I have formulated the following research questions:

1. How do medical professionals involved in climate activism and advocacy understand climate change and construct it as an issue?
2. How do medical professionals give meaning to engaging in climate activism and advocacy in light of this so-constructed understanding?
3. How do the so-involved medical professionals understand their particular efficacy in these pursuits?

These three research questions are by nature of the Bourdieusian framework that this thesis employs and the relational analysis it calls for interrelated, informing and re-informing each other. In particular questions two and three together address what could alternatively be termed reasons for engagement. For the sake of discussion structure, they will nonetheless be addressed in three distinct findings chapters respectively, each relating to and successively building on each other.

Throughout these discussions, I will refer to their respective related discussions in other sections of the thesis. The remainder of this chapter on methodology addresses the design of the research approach pursued in the attempt to provide answers to the three questions above. Subsequently, Chapter 4 will principally address the question of climate change constructions through the lens of fields and doxa, Chapter 5 the question of meaning-making through that of habitus, and Chapter 6 the question of efficacy through the perspectives of capital and costs. Each of these three chapters will begin with a closer look at the particular theoretical dimensions of relevance to its respective research question and subject of discussion.

3.3 Constructivist-Interpretive Research and its Implications

At the outset of any methodological decision sits the question of what ends of inquiry are to be served by it. Kelle (2014) presents a summary of the ends suited for quantitative and qualitative research: Quantitative research, such as statistical analysis of the demographics of a group or its activities, provides the basis for generalisation, prediction, and insight into causal explanation. For the phenomenon of interest at hand, this approach would address questions such as to the probability, frequency, and distribution of medical professionals' engagement with climate change activism and advocacy efforts. Deductively structured, it allows for the assessment of hypotheses around pre-constructed units of analysis, such as the prominence of particular types of activism by particular activists. Qualitative research on the other hand, say thematic analysis of discussions with the members of said groups, provides the basis for exploration, particularisation, and insight into meaning-making. For the phenomenon of interest in this thesis, this approach would accordingly address questions such as to the perceptions of and meaning behind climate change activism and advocacy by medical professionals. Inductively structured, it allows for the construction of hypotheses around emerging units of analysis. Referring back to the argument concerning exploratory research in the preceding section, Barker et al. (2002, p.34) draw the deductive-inductive distinction between hypothesis-testing, confirmation-oriented research on the quantitative side, and exploratory, discovery-oriented research on the qualitative side. As highlighted in the definition of the research questions, it is these latter exploratory qualitative dimensions of meaning-making and understanding that this research is aiming to address.

This distinction between quantitative and qualitative research is however not only superficial but as a matter of demarcation schematically exaggerated. Quantitative research, while deductively oriented, draws on inductions from the data it produces to allow for the construction and calibration of hypotheses, albeit to a lesser degree. Qualitative research likewise, while inductively oriented, also draws on deductions from theoretical frames and the pre-constructed research subjects and sites to allow for the assessment of hypotheses, albeit equally to a lesser degree. This is to say that a simple bifurcated distinction between quantitative and qualitative research is methodologically misleading. As Bourdieu et al. (1991) posit, "the social fact is won, constructed, and confirmed" (p.57). The social world that is subjected to analysis has to, in the first instance, be recognised as demanding an inquiry and be constructed through the theoretical preliminaries by which we apprehend it. Processes of qualitative induction, i.e. the construction of the unit of analysis from the data during the research, and quantitative deduction, i.e. the construction of the unit of analysis at the outset of the research intervention, are not only overlapping but co-constitutive of each other. As Yanow and Schwartz-Shea (2015) put it, "methodological justification, then, cannot be made in the void of ontological and epistemological entailments" (p.6). Further problematising a distinction between quantitative and qualitative research along a deductive-inductive binary, Yanow and Schwartz-Shea (2015) go on to argue that researchers should instead be seen as facing a division between quantitative and positivist-qualitative methodologies on the one hand, and interpretive-qualitative methodologies on the other. The latter in particular, they argue, can more appropriately be considered and referred to as constructivist-interpretive methodologies, resting on the presupposition that "the social world is ontologically constructivist and epistemologically interpretive" (Yanow and Schwartz-Shea 2015, p.6). As mentioned in the literature review, Bourdieusian practice theory shares this commitment to a constructivist ontology and the presuppositions that this ontology entails at its outset (cf. Chapter 2.4, p.43). What then are the implications of committing this research to constructivist-interpretive methods and their ontological and epistemological presuppositions?

The ontologically constructivist presupposition posits two principal considerations. Firstly, the way in which the world empirically presents itself does not preclude how it is given meaning, or as Gergen (1985) puts it, the "experience of the world does not in itself dictate the terms by which the world is understood" (p.4). Secondly, it is these forms of so-constructed understanding that critically shape social order and the activities—in short, the social world—that people engage in

(Gergen 1985, p.7). In the Bourdieusian framework this presupposition is expressed in the social production and reproduction of the social world itself (refer to Chapter 2.4 for a detailed discussion), that is to say, that "social order rests mainly on the order that reigns in people's minds" (Bourdieu 1990, p.291). The epistemologically interpretive presupposition meanwhile posits the centrality of human meaning-making and the grasping thereof for the research endeavour, interpretation denoting the "processes through which one generates meaning and is able to understand another's meaning" (Yanow 2017, p.407). Posited in opposition to realist-objectivist perspectives that attempt to discover and develop claims to generalisable truths, constructivist-interpretive approaches aim at discovering and developing insights into particularised perspectives (Weinberg 2008). In this research these particular perspectives, the meanings of others that were interpretively pursued to be understood, were the perspectives of the interviewed members of the medical profession on the world as one whose climate is changing, on the meaning that these changes are given, and on the understanding of climate activism and advocacy efforts that this meaning of climate change is shaping and being shaped by. As already highlighted in the argument for deduction within qualitative research above, positing that this thesis will employ such a constructivist-interpretive perspective to address the above-mentioned research questions is to do so in the acknowledgement that these questions themselves have been co-constituted by precisely this set of ontological and epistemological presuppositions—the choice of methods informing the choice of research questions as much as the choice of research questions informs the choice of methods.

As an exploratory study of particularised perspectives—the exploration of the meaning-making of a group of medical professionals involved in (and producing) the phenomenon that is medical climate activism and advocacy—this research may also be understood as a case study: the methodological attempt to explore and comprehend the nature of a particular contemporary phenomenon, especially along lines of questioning the phenomenon's how and why questions (Andrade 2009, p.44). As Gerring (2004) notes, case studies are principally exploratory "'theory building' exercises" (p.350) that "tackle subjects about which little is previously known" (p.345) and aim for a degree of generalisation thereof—one that, as Andrade (2009) stresses, is a "theoretical generalisation as opposed to statistical generalisation" (p.42). This is to say that what is posited as attaining a certain degree of generalisability are the so-built and explored theoretical insights, not the particular perspectives from which these insights were developed (recall here the

opposition to a realist-objectivist epistemology above). Put differently, case studies present descriptions of particular cases—a "process of learning from social particulars" (Rustin 2000, p.168)—from which theoretical generalisations are developed. In the context of this study then, the theoretical development concerning medical climate activism and advocacy—the argument that it represents a negotiated practice of civic engagement at the intersection of the fields of medicine and climate politics that demands said negotiation of sensibilities and commitments—is posited as a general insight to both inform as well as be challenged or confirmed and thus elaborated and advanced by future research on the practice (as well as other practices). The particular sensibilities and commitments expressed and explored in the interviews discussed here on the other hand are understood as social particulars that ground the development of these theoretical insights. This account may as such stand for what sociologist Bent Flyvbjerg calls a paradigmatic case—an exemplar of the general characteristics of the here explored practice (Flyvbjerg 2006). This is not to say that any of the particular sensibilities and commitments discussed here may not well have a statistical prevalence among medical climate activists and advocates or even the wider medical profession, but rather that such claims are neither made nor of concern here. When I thus speak of particular sensibilities and commitments of medical climate activists and advocates, I am speaking of the here explored, presented, and analysed particular accounts of construction and meaning-making by particular interviewees that together reflect on the general characteristics of the practice of medical climate activism and advocacy.

Two additional clarifications are in order. Firstly, I do maintain that the phenomenon I will explore and discuss throughout the thesis is not any circumstantially grasped phenomenon but the phenomenon that is medical climate activism and advocacy. This is to say that the practice I present and speak of in these discussions is a coherent practice that medical professional climate activists and advocates engage in. This claim rests not solely on the basis of the multidimensional thick descriptions (Geertz 1973) of the efforts pursued in this practice expressed in the interviews on whom the analysis presented in this thesis rests, but on, one, the circumstance that these descriptions were found to be coherent across precisely this multidimensionality of the data in which they were expressed and, two, that this coherence extends to the descriptions and discussions of the practice of medical climate activism and advocacy that find expression in the wider (albeit scarcely existing and often grey) literature on the phenomenon that was discussed in the preceding literature review (cf. Chapter 2.3). This includes the efforts expressed in the various

calls for action by medical professionals, journals, and other institutions, as well as the discussions of medical climate activism and advocacy by the organisations that facilitate and organise such efforts, both within media discussions thereof and resources of these organisations themselves. This coherence of the practice of medical climate activism and advocacy may be informed by the boundary-crossing (Akkerman and Bakker 2011) nature of the phenomenon under analysis: an engagement with global climate politics (Jasanoff 2011b, Pearce et al. 2018) that, in the here assessed sites, intersects and is informed by a cross-cultural Western biomedical practice (Kleinman 2013) and ethics (Veatch 2000). Secondly, this coherence does not imply unidimensionality, but rather the opposite. It is, as mentioned above, precisely the thick description that the focus on social particulars allows that grasps the phenomenon under analysis in its multidimensionality, and accordingly itself calls for complexity and richness across the so-produced and analysed data—something I will elaborate on in Chapter 3.6 on constructivist-interpretive data quality.

As Broom et al. (2014) note in their Bourdieusian analysis of prescription practices of medical doctors, interpretive sociology serves "to achieve a detailed understanding of the varying positions adhered to" (p.83) by the medical professionals they interviewed, allowing the researcher to locate these positions in the sensibilities, commitments, and experiences of the interviewees and to interpret their meaning as expressions thereof. It is in this constructivist-interpretive stance that the here explored particular sensibilities and commitments of medical professionals regarding climate change acquire their significance precisely not in the "validity and reliability criteria that characterize quantitative methodologies" (Yanow 2003, p.10) and the positivist presuppositions they have grown out of, but in their multiplicity that reveals "the possibility of multiple interpretations of events" (Yanow 2003, p.11)—the aim of the inquiry being "an intentional grasping of the other's meaning" (ibid.). This research thus pursued from such a constructivist-interpretive stance aims to interpretatively grasp the meanings ascribed to medical climate activism and advocacy by the interviewed professionals involved in it. This research engages with the world as it is experienced, understood, and given meaning by those involved in these efforts, relating to and exploring their sensibilities and commitments. It is explicitly not interested in subjecting these sensibilities and commitments to classificatory categorisations of accuracy within regimes of scientific objectivity (Daston and Galison 2021) nor to assess their statistical prevalence. This also acknowledges the commitment of the participants to "being researched" (Clark 2010, p.2) and the

assumptions and expectations that motivated this participation. This research would not exist had medical professionals in the middle of a viral pandemic not volunteered to give up a substantial amount of time to share their perspectives and insights on their climate activism and advocacy. Positioning these perspectives and insights as central to the phenomenon that is analysed is not only methodologically and epistemologically sound, as outlined above, but it also acknowledges that the expressions of these perspectives and lived experiences were produced in and by this expectation. This is not to disregard scientific knowledge claims such as those of the science of climate change as irrelevant. Rather it is to acknowledge that they are as much a product as they are a producer of sensibilities and commitments. Throughout the findings chapters, I will accordingly highlight how participants drew on such knowledge claims in expressing and qualifying their understandings.

3.4 In-Depth Interviewing

The constructivist-interpretive method I employed in this research was that of in-depth interviewing. The reasoning behind this decision was principally informed by Joe Soss' (2015) discussion of in-depth interviews in interpretive research. In-depth interviews are characterised by two central characteristics—they are discursive, i.e. open to digression and progression from subject to subject, and they are dialectical, i.e. conversational with a give-and-take between individuals (Soss 2015, p.169). The characteristic of being open to digression is centrally an expression of a semi-structured format. While guided by an interview schedule setting out central areas of interest, semi-structured interviews pursue questions that dynamically emerge in the dialogue of the interview as it takes place. This semi-structured format is commonly employed to provide the research participants with the space to articulate and describe their own positions (DiCicco-Bloom and Crabtree 2006, p.315), ranging from perceptions and experiences to arguments and justifications (Soss 2015, p.169). Drawing further on the discussions of explorative research, induction, and deduction above (cf. Chapter 3.3), semi-structured interviews strike a balance between unstructured and structured approaches that allows the researcher to explore open-ended questions in areas that have been designated to be of interest to the research, for example through the existing literature or their theoretical presuppositions. However openly explorative such approaches may be, the central concern for the researcher in the execution of such

semi-structured interviewing remains the elicitation of information. As Roulston (2014) puts it, if the researcher intends to produce narrative data for their analysis they need to "conduct interviews in ways that encourage participants to tell stories about the phenomenon of interest" (p.298). The presuppositions upon which the research rests provide the necessary orientation for what the areas of interest to elicit information about are and how those researched relate to them.

The characteristic of being conversational on the other hand allows for an iterative probing, a dynamic adjustment and readjustment of the inquiry as it takes place. Conversationality, in particular the aspect of give-and-take, closely relates to the concern of building rapport that scholars have highlighted as crucial for in-depth interviewing. Rapport refers to the establishment of a mutually trusting, harmonious relationship between interviewer and interviewee to "encourage participants to feel comfortable opening up" (Wolgemuth et al. 2015, p.7). This importance of providing a comfortable and secure atmosphere for the participants to share their views and experiences thus relates equally close to the ability of interviewees to discuss issues on their own terms. The process of rapport building is shaped by the choice of method. Whereas in ethnographic research rapport may be built over extensive periods of time and throughout various stages (Spradley 2016, p.79), in the context of in-depth interviews the researcher has to rapidly develop a positive relationship with the interviewee (DiCicco-Bloom and Crabtree 2006, p.316). Scholars have stressed that the central quality to be expressed in this process by the researcher is "the ability to listen attentively to what is being said" (Gill et al. 2008, p.292) and, especially when intervention in a narrative stream is necessary, to do so with insight and tact (Kelly 2010, p.310). Soss (2015) however also qualifies the characterisation above, stressing that in-depth interviews are simultaneously precisely not just open and conversational. In-depth interviews are on the one hand dynamically responsive to changing understandings and shifting standpoints within the interview itself, but they are equally—recalling Roulston's (2014) above-mentioned observation regarding the production of narrative data in interviews—designed and conducted "to acquire specific materials needed for a research project" (Soss 2015, p.170). It is in this dynamic but targeted process that in-depth interviews constitute, as Soss argues, "an evolving dialogue between fieldwork and framework" (p.171), simultaneously producing, analysing, and thus refining the framework for the production of the data.

Due to their ability to generate detailed and authentic accounts of people's actions and experiences, in-depth interviews produce narrative data—"storied data which incorporates the 'whys' and

'hows' of experience, as well as the 'whats'" (Holt 2010, p.113). As Polkinghorne (1995) notes, this has led to interviews becoming "the most often used source of storied narratives" (p.12). Himself drawing on Bourdieu, Polkinghorne further stresses that the "particular meanings of happenings and actions" (1995, p.16) that find such narrative expression in interviews draw on dispositions that are developed and sustained by the milieu, or social environment, in which the interviewees find themselves. It is this circumstance that throughout the thesis, in light of the Bourdieusian framework discussed in the preceding literature review, will be discussed as the dispositions of the medical profession—the medical and radical ecological habitus—developed and sustained precisely in the milieus—the fields of medicine and climate politics—in which the interviewees find themselves. Due to the constructivist-interpretive stance of this research in particular, interviews were employed precisely because they allow those being researched to express their particularised meanings of these actions and experiences. Note that the constructivist-interpretive perspective acknowledges that the structure of the phenomenon as it is expressed during the interviews is also reflected in the structure of the data. Data is neither raw nor theoretically neutral, but rather "the product of theory-laden observation" (Schatz and Maltseva 2012, p.449). In line with this acknowledgement, I have previously and will going forward speak of data as being *produced* rather than gathered or collected, accounting for the understanding that narrative data is considered a product of this research rather than a recovered impartial entity.

Soss (2015) lays out three central considerations when pursuing in-depth interviewing for interpretive research. Firstly, Soss argues interpretive research should exercise scepticism regarding the assumption of shared meaning. This is to say that the researcher should actively assess how different interviewees interpret concepts or questions differently and be prepared and open to adjust the presupposed meanings thereof throughout the interviews. Whereas in positivist research such adjustment would undermine constancy and thus generalisability, constructivist-interpretive research allows for "tailored, mutually negotiated communication" (Soss 2015, p.166) that allows the researcher to elicit and dig deeper into precisely these particular meanings. Arguing from the context of an inquiry into professional practice, Stein-Parbury and Liaschenko (2007) similarly suggest that interviews are useful not only for allowing the researcher to explore and understand the rationale of the interviewed professionals for their practices, in their case nursing care, but for giving the participating professionals the "ability to articulate and describe" (p.473)

what it is they are doing in their own words—thus painting the social world the researcher is attempting to grasp.

This latter aspect is of particular importance when considering the earlier discussed limitation that, in the multi-relational systems of factors that are practices, the researcher cannot from the outset of the investigation expect to be aware of how the social world they themselves are attempting to understand is understood by their participants. A particularly useful approach to having participants speak their minds freely that is discussed in the literature is the use of silence as an elicitation technique. As Ryan et al. (2009) highlight, silence "allows the interviewee time to pause and reflect" (p.311). However, in the telecommunicated interview setting necessitated by COVID-19, this technique proved challenging, as looking in the direction of the webcam and or monitor often seemed to keep the participant attentive to further questions rather than reflective (see also Lobe et al. 2020). To ameliorate this after a number of interviews, I began to more explicitly signal that I am listening or wishing to listen by nodding, looking down, and taking physical notes (see Appendix 1). This seemed to keep the participants in the role of the speaker, successfully eliciting more reflective responses.

Expressed in the epistemological implications of this so-posited method of interviewing is again the constructivist perspective highlighted above, positioning the particularised understanding of the interviewed subject as central to the inquiry into their meaning-making. One way in which this consideration proved crucial for the research at hand was that as I approached my initial interviews, I referred to what I understood to mean climate activism and advocacy as *climate change communication* (Moser 2010). Being conscious of potential incongruences of meaning I however quickly realised the latter to be understood to mean the particular effort of climate science communication by the interviewees and accordingly adjusted my expressions and the wording of the research questions to that of *climate activism and advocacy* as it was expressed by the participants—the term used for the practice in question throughout this thesis.

Secondly, Soss suggests placing the interviewees' understandings and meaning-making at the forefront of the inquiry to not primarily be concerned with accumulating reports of behaviours, attitudes, and beliefs, but with understanding the perceptions thereof, their reflexive or implicit constructions, justifications, and classifications—the "background premises" (Soss 2015, p.167) of the interviewees' choices and actions. Merton and Kendall (1946) were early to posit that in

interviews the "subjects' definition of the situation should find full and specific expression" (p.545). It is precisely these subjective positions that are the target of exploration in research interviews. In their study on perceptions of treatment provision by dental professionals and their patients, Gill et al. (2008) highlight that in order to develop a deeper understanding of such particularised phenomena or concerns as a professional's treatment philosophy, interviews are employed to allow the researcher "to explore the views, experiences, beliefs and/or motivations of individuals" (p.292). These concerns have found expression in the discussion of the constructivist-interpretive stance so far, in particular in the positioning of the research questions (cf. Chapter 3.2). This position will be reflected throughout the discussions in this thesis in the principal interest of this research not in the various characteristics of climate activism and advocacy efforts themselves but in how these efforts, as practices, are structured and sustained by the meanings given to them by the interviewees. This position also reflects the practice-theoretical presupposition that the sensibilities and commitments that organise practices and their perceptions are themselves expressions of social order—structuring and structured structure (Bourdieu 1996, p.170)—or, recalling the ontological discussions in the preceding section, that "social order rests mainly on the order that reigns in people's minds" (Bourdieu 1990, p.291).

Thirdly and lastly, Soss highlights that the so-produced understandings are not to be regarded as idiosyncratic expressions, but rather that their interpretive explanation is to be understood as resting on constructing a coherent account of these understandings that answers the question as to "why reasonable people [find] it sensible to choose and act as [the] interviewees [do]" (Soss 2015, p.167). This is of equally central concern to the framework employed in this thesis, embedding these understandings in a coherent structure of negotiated sensibilities and commitments that inform a perception of the involved fields and doxa, habitus, and capital as congruent and the practice of medical climate activism and advocacy as meaningful, responsible, and appropriate.

Soss (2015) goes on to highlight four strengths that this method of in-depth interviewing has for interpretive research exploring human meaning-making (cf. Yanow 2017, p.407). Firstly, the method allows the researcher to pursue intricate details on subject matters not commonly revealed in everyday interaction. In this research, this allowed interviewees to reflect on details of their climate activism and advocacy, at times dimensions that they themselves expressed as not having considered before. Secondly, the method provides at once enough flexibility and control to adjust and steer the tone of communication or course of conversation, while simultaneously providing

the controlled environment that allows the researcher "to record a verbatim transcript of the resulting dialogue" (Soss 2015, p.176) crucial for a detailed subsequent analysis. Thirdly, in-depth interviews highlight the agency of the interviewees by positioning them "as interpreters of their own experiences and tellers of their own tales [...] the central focus of their narratives [and] acting subjects of these narratives" (ibid.). This, as Soss notes, makes in-depth interviews invaluable for the analysis of the interviewees' fears, self-concepts, or aspirations, relating directly to the concerns for sensibilities and commitments in the theoretical framework of this research. In their Bourdieusian analysis of the medical field, Olsson et al. (2019) for example employ in-depth interviews to understand how medical habitus and perceptions of capital affect junior medical doctors' specialty choices and ultimately "what kind of people doctors consider themselves to be" (p.455). Lastly, in-depth interviews "map the conceptual world of participants in ways that illuminate both coherence and inconsistency" (Soss 2015, p.177). As I will highlight particularly in Chapter 5 on the taste for medical climate activism and advocacy, these so-highlighted congruences and incongruences between the medical profession and medical practice on the one hand and climate activism and advocacy on the other were elemental to the analysis of the negotiations between medical and radical ecological sensibilities and commitments.

3.5 Analysing Narrative Data

The discussions so far have highlighted that the analytical process begins with the very setting of sight on a phenomenon, or rather the reduction of the multiplicities of life to such discernable phenomena, and stretches throughout the research process from the construction of particular issues as issues of interest, the formulation of research questions about these issues, to the ensuing "evolving dialogue between fieldwork and framework" (Soss 2015, p.171). There is, however, a distinct act of analysis in its most explicit dimensions of the data this research produces—or, more accurately phrased in its verb form acknowledging precisely this evolving dialogue in interpretive research, the process of analysing the so-produced data, emphasising "the iterative nature of knowledge and knowledge making" (Yanow and Schwartz-Shea 2015, p.255) in this process. In this research, the process of analysing the narrative data produced by the in-depth interviews was pursued thematically. The thematic approach to analysing was used to identify and organise themes, or patterns, that were found across the narratives expressed in the interviews. As scholars

have noted, the thematic approach is particularly useful to "see and make sense of collective or shared meanings and experiences" (Braun and Clarke 2012, p.57). Analysing narrative data thematically gives structure to the particular understandings that find expression in in-depth interviews and as such represents a first step in the construction of coherence (Soss 2015, p.167) between these understandings. Thematic analysing further, as Saldaña (2013) points out, "allows categories to emerge from the data" (p.177), making it particularly suitable to the here pursued inductively driven exploratory research and its constructivist-interpretive methodology aiming for an interpretive inquiry into the so-far poorly understood meaning-making by medical professionals concerning climate change.

It is important here to distinguish themes from codes, or categorisations, of passages in the narrative data. Codes are labels of content—the characterisation of particular segments in the data—whereas themes are the abstract categories that represent the analytical outcome of this process of categorisation (Saldaña 2013, p.14). Themes are accordingly subtle and tacit narratives across the data that are produced, interpretatively, through the coding of the explicit types of content within it (Rossman and Rallis 2003). There exists a wide variety of approaches to this coding, all with their particular uses in the pursuit of different inquiries. Two coding approaches, or schemes, stand out in their suitability for the research questions of this thesis: values coding and narrative coding. Saldaña (2013) summarises the suitability of the two as follows. Narrative coding is particularly suitable for research interested in issues of identity development, socio-cultural perspectives, meanings, and presentations of the self within these narratives (p.132). Values coding, in a similar fashion, is suitable for questions on cultural and personal values, commitments, and intra- and interpersonal experiences and actions (p.111). Saldaña himself stresses that coding schemes are neither monolithic nor exclusive, they can be adapted, customised, and combined into hybrid approaches (2013, p.64). Given the suitability of both approaches, I have decided to adopt the following coding scheme: a principal coding by expressions of emotional, intellectual, aesthetic, and moral dispositions (Wickberg 2007, p.669) as one interrelated system of sensibilities and commitments, with additional and particular attention being paid to the narrative positioning of the self as an agent in the expression thereof—that is, expressions of the interviewees as the "acting subjects of these narratives" (Soss 2015, p.176). This coding that served to facilitate the process of producing analytical themes was as such closely aligned with the Bourdieusian framework in which the research was grounded, assisting a targeted production of an

understanding of the sensibilities and commitments of the interviewees. In other words, the data was coded and explored to produce themes that address the areas of interest in the research questions: questions of presuppositions and constructions of climate change, questions of dispositions and meaning-making such as through perceived roles and responsibilities in and for climate activism and advocacy, and questions of perceived capacities for and costs of such involvements. What thus "emerge from the data" (Saldaña 2013, p.177) was not the categories of presupposition, disposition, and capacities that were of interest, but the meanings made and given by others therein (Yanow 2017, p.407). The reader may here refer back to the categorical questions guiding the analysis presented at the outset of this thesis (cf. Chapter 1.2, p.12).

I will briefly outline how the process of analysing guided by the discussions above was executed in this research. I began the process of analysing with what may on the surface appear as a strictly practical matter, namely the transcription of the interviews. The method of in-depth interviewing produces recorded spoken material. As mentioned in the discussion of the method above, the principal purpose of this recording is the production of a "verbatim transcript of the resulting dialogue" (Soss 2015, p.176), transcription being the process that underlies this production. Transcription is not a merely technical act that objectively reproduces its source, but an analytical process involving methodological decisions of inclusion and exclusion, structuring, and presentation. Riessman (2002) stresses that choices made during the transcription process "have serious implications for how a reader will understand the narrative" (p.8)—those readers, reflexively speaking, including the researchers themselves. They suggest a two-tiered approach to this process, starting with a preliminary rough transcription that focuses on capturing the narrative structure, i.e. spoken words, before re-transcribing the interview in more detail and adjusting paralinguistic elements such as punctuation, pauses, or interjections (Riessman 2002, p.27). In my transcribing of the interview recordings, I followed this two-tiered approach for both methodological as well as practical reasons. Practically speaking, producing a rough transcription capturing only spoken words first allowed for a near real-time transcribing with few interruptions—both for the first and the subsequent re-transcription. More importantly, methodologically it allowed me to rough transcribe a greater number of interviews at a faster pace first, highlighting particular dimensions of interest and thus allowing for a simultaneous development of preliminary ideas—"informed 'hunches'" (Yanow 2015, p.101)—as to how to interpret what was being transcribed. These then allowed me to already engage in targeted coding

of sections throughout the subsequent re-transcription process. This experience confirmed what Riessman (2002) discusses as the importance of not delegating the task of transcription given its evocative potential within the analytical process. The identification of segments within the recorded spoken material and the ordering and representation of them are already processes of interpretive unravelling during which thematic insights into the data emerge (Riessman 2002, p.28). Put differently, transcription is an essential aspect of the process by which the researcher gives meaning to their data and one that structures this data for its subsequent thematic organisation, as in the example of the application of coding in the re-transcription process above. From these structured, coded narratives, and the close reading of and familiarisation with the data it entailed, I then developed and defined themes—the "subtle and tacit processes" (Rossman and Rallis 2003, p.282) identified across the coded data. Throughout the thesis, these themes will be expressed in the structure of the presentation—represented in the chapter and section titles and their respective discussions, such as the theme of biomedical issue constructions (cf. Chapter 4.2) or the theme of congruence between the medical profession and climate action (cf. Chapter 5.2).

On the note of highlighting particular dimensions of interest during the transcription process, I should note that my in-depth interviews generated an immense wealth of data, the transcripts totalling just over 150,000 words—far too much to present in its totality within the confines of this thesis. The narrative data presented throughout this thesis was thus curated rather than accumulated and involved decisions by me as to what and what not to discuss. Esin et al. (2014, p.208) suggest that during the production of the transcripts and the selective presentation thereof the researcher ought to reflect on their involvement in this process, in particular on the decisions taken and on how these decisions have constructed the data in its analysis and representation. The aspect most relevant for this research was in particular the issue of translation. As this research is conducted across two different language contexts, namely English and German, but presented exclusively in English, the transcriptions of the German interviews had to be translated for their presentation and discussion in the thesis. Similar to their arguments on the process of transcription, Esin et al. (2014) argue that translation of interview transcripts from one language to another is not so much a distinct analytical operation but an additional layer to the already multilayered process of producing storied narratives and identifying themes therein (p.208). As such the transcript translations I undertook were themselves a process of close reading and familiarisation that produced new thematic categories and insights into the storied narratives from which their translation originated. In

addition to this however, translating the spoken narratives by the interviewees was a substantial analytical operation that affected aspects of the translated accounts, from minor nuances to their narrative structure. Translations involve "interpretive decisions" (Riessman 2008, p.42) concerning expressions and phrases that have no direct translation, and I here want to acknowledge that certain aspects and nuances will have been lost in the translated transcriptions of German interviews presented in this thesis, such as the German term *Klimaschutz*—climate protection.

The subject of reflexivity that has been raised in particular aspects throughout this discussion so far calls for a more general comment on the process of analysing that, as mentioned before, pervades this research from the first thought to the last word. Both the methodological dimensions preceding the research and those developed and refined during it call for a persistent reflexivity on part of the researcher (Berger 2015). This is not so much so to filter out the positionality of the researcher or to subject constructivist-interpretive research to an expectation of reproducibility (Leonelli 2018), but rather to allow the researcher a critical reflexivity that can, reiteratively, be used to reflect not only on their analysis of the data but the process of its production, such as in the structuring of interview questions. As mentioned at the outset of this chapter, the structure of this research and its discussion that emerged alongside the analyses is not derived solely from inductive processes directed at the data generated through it. The preceding discussions on the role of dispositions in structuring the practices of people and their perceptions of them can, in their totality, be turned inward and directed at the researcher themself. Thematic understandings of what a thing is and how it can be assessed and represented exist, as dispositions, before one takes to analyse it. It is these dispositions that provide the interest in conducting the analysis in the first place. As much as this research is committed to an interpretive analysis of meaning emerging from the interviews, it would be wrong to claim that I, on the basis of my extensive involvement in the subject of climate change let alone the preceding literature review, have not had preconceptions of which discussions are important to have prior to any original data production or analysis. An example of the importance of addressing these preconceptions reflexively was the above-mentioned necessity to change my characterisation of the phenomenon under analysis from one of climate change communication to climate activism and advocacy during the interview process.

3.6 Data Quality

Whereas concerns for rigour and systematicity in quantitative-positivist research are directed at potential biases in sampling and recruitment as confounding factors of statistical analysis, causal inferences, and generalisable claims (Heckathorn 2007), rigour and systematicity in constructivist-interpretive research refer to the soundness and cogency of the presented argument, its logically coherent construction, and persuasive support by the discussion of the evidence (Yanow 2015, p.102). Schwartz-Shea (2015) lays out several criteria for this quality of constructivist-interpretive research, three of which I want to briefly highlight here in their relevance to the research presented in this thesis: reflexivity, multidimensionality, and criticality. The criterion of reflexivity (Schwartz-Shea 2015, p.132) has been referenced throughout this chapter and is the basis of its very discussion here, namely the demand to remain explicit about the epistemological and ontological presupposition on which research rests, and being conscious of the ways in which these can affect the research process. Schwartz-Shea (2015) refers in particular to what she calls informant feedback (p.135) as an approach to this reflexivity as a way of ensuring that the words, meanings, and views that are being interpreted are those of the participants. One can here refer back to the earlier discussed importance of remaining sceptical towards the assumptions of shared meaning highlighted by Soss (2015) in his discussion of in-depth interviewing above. Following these concerns, I designed the interview guide to begin, in line with the first research question, by having the interviewees openly present their account and understanding of climate change and climate activism and advocacy, with me specifically asking them to describe what climate change is understood to be. Throughout the interviews I further suggested that interviewees ideally should assume that I, the researcher, am wholly uninformed about the issues discussed, so as for the participants to explain any concepts and their understood implications explicitly.

The criterion of multidimensionality (Schwartz-Shea 2015, p.134) meanwhile attempts to capture for interpretive research aspects of the triangulation technique usually associated with positivist methodologies. It principally concerns the establishing of complexity and richness across the produced data, opening up “possibilities for corroboration” (ibid.). Drawing on this technique of triangulation, multidimensionality aims to ensure that a multiplicity of perspectives find expression in the data. I pursued multidimensionality by recruiting from a diversity of sites, seniorities, and specialties, from students and junior doctors to senior specialists and retirees, working in a wide range of medical fields in three different countries, and interviewed over the

course of eight months. In doing so I attended to a multitude of social worlds and meanings concerning the phenomenon of medical climate activism and advocacy, each acknowledged for its particular significance, and subsequently ensured that this multidimensionality found expression in the discussions of the sensibilities and commitments of the participants.

Lastly, and closely related to the criterion of multidimensionality, is the criterion of criticality. Simultaneous to presenting the possibility for the data to corroborate each other, multidimensional data also presents the possibility for this data to contradict and conflict with each other. Rigorous interpretive research embraces these potential conflicts in the data and discusses them openly, "weighing competing interpretations" (Schwartz-Shea 2015, p.139) rather than pursuing a singular strain of argumentation. Reflexively this process can reassure the researcher that they did not unconsciously produce exclusively confirmatory evidence warped, for example, by their own singular perspective. For the discussions in this thesis, this criticality finds expression in an explicit focus on the tensions and conflicts between different expressed perspectives, with the presentation of the narrative data at length drawing out disagreements between the different sensibilities and commitments expressed by the interviewees therein.

3.7 Designing and Conducting Interview Research Amid a Global Pandemic

Research involving informed participants brings with it not only the above-mentioned epistemological questions of data analysis and quality but its own set of practical challenges for the process of participant recruitment. For this research, I employed a purposive recruitment approach aiming to recruit medical professionals involved in climate change activism and advocacy, while ensuring to engage a diversity of sites, seniorities, and specialties to account for the abovementioned criterion of multidimensionality with which the phenomenon of medical climate activism and advocacy was explored. Purposive recruitment involves the targeted elicitation of responses from a set of potential participants based on identified research priorities (Valerio et al. 2016). In the context of research concerned with professional groups and practices, this can involve a range of efforts including direct telephone and email contact with individuals identified through public resources such as professional registers, recruitment through projects or organisations in which the professionals of interest are involved, or distribution of recruitment material in professional networks as well as work or training sites (Kamphuis et al. 2005). Scholars

have argued that employing purposive recruitment is suitable in qualitative interpretive research due to the explicitly constructivist and particularising ontologies and epistemologies (Barker et al. 2002, p.187; Denzin and Lincoln 2011, p.245) that underlie its exploration of "social particulars" (Rustin 2000, p.168), i.e. the interest in particular meaning-making by particular people. Soss (2015), whose account of in-depth interviewing has been discussed at length earlier, highlights the purposive selection of informants as itself a dimension of the reflexive dynamic between framework and fieldwork—the act of interviewing in interpretive research itself being a, as Yanow and Schwartz-Shea (2015) call it, "purposive conversation" (p.150). Through the purposive recruitment of respondents the researcher can reflexively map the views within, in a Bourdieusian sense, the fields under investigation, filling the potential "patches of silent or silenced voices" (Yanow 2015, p.107) that their recruitment efforts may otherwise produce.

The purposive interview recruitment process I thus designed and employed for the research followed a multimodal approach that incorporated several different avenues of recruitment (McRobert et al. 2018). This included establishing contact with medical professional organisations formed around climate change (for examples of these see Chapter 2.3, p.37) to facilitate the distribution of my research invitation through available mailing lists, as well as directly establishing contact with their members through participation in public events such as online community calls. I further published public calls for participation in online fora and networks used by medical climate activists and advocates. I also directly emailed medical professionals identified through their various publicly accessible involvements in climate change activism and advocacy, including activity on public social media profiles and signatures of open letters and petitions, authorship of publications on the issue, as well as public membership in relevant organisations. Lastly, I asked the participants successfully recruited this way to provide further access to professional networks to expand my reach.

Regardless of the suitability of methodologically informed recruitment designs however, researchers can struggle to successfully recruit. Research by Kamphuis et al. (2005) highlights potential problems in the recruitment of medical practitioners in particular, with the professionals targeted for recruitment potentially declining participation despite support for the research and its purpose due to being "overextended and therefore unable to participate" (Kamphuis et al. 2005, p.223). This is particularly noteworthy here because in the research above scholars recruited for questionnaire and vignette participation, making the recruitment for more time-intensive

interviewing potentially even harder. One potential point of amelioration in the recruitment for this research on climate change activism and advocacy efforts by medical professionals was that the professionals subject to the investigation in many ways already displayed passionate engagement with the issue beyond their regular working hours and official professional responsibilities. The much bigger potential point of aggravation to this concern, however, was that this research was conducted amid a global pandemic.

As implied by the discussions of reflexivity, iteration, and processuality throughout this chapter so far (cf. especially Chapter 3.4), constructivist-interpretive research design and analysis is fundamentally an iterative set of processes (Srivastava and Hopwood 2009) in which questions and approaches emerge alongside insights and understandings, calling for "a flexible research design and an iterative, cyclical approach to sampling, data collection, analysis and interpretation" (Marshall 1996, p.523)—not as a process of mechanical implementation but "a deeply reflexive process" (Srivastava and Hopwood 2009). Constructivist-interpretive research design is consequently not one of monolithic structure from which a research programme is rigidly executed. The research process as it unfolds feeds back into the approach to the research taken, including the contingencies that happen to impose themselves onto this process. In the context of this project, this contingency is first and foremost that December 2019 saw the outbreak of the Coronavirus Disease 2019 (COVID-19) beginning in Wuhan, China. By March 11th 2020 the WHO declared that the virus had spread to become the global 2020 COVID-19 pandemic (Cucinotta and Vanelli 2020).

By the time this research entered the interviewing phase, more than 50 million cases and 1.2 million deaths were recorded globally. In the context of the UK where this research and I were based during this period, the disruptions that the pandemic caused to social life and the economy were felt equally forcefully throughout the academic sector—conferences were cancelled and postponed, travel bans made international fieldwork impossible, and universities and laboratories closed their doors as the state enforced strict lockdowns and curfews. With teaching and research moving to the remote and digital realm, methodologies had to be adapted to pandemic conditions (Jowett 2020). This research, originally planned to take place principally through face-to-face interviews, was moved to be conducted exclusively through online video-conferencing through Google Meet as the University of Sheffield's preferred conferencing platform. As economic insecurity, social distancing, and COVID-19 infections and deaths dragged on, rates of depression

and anxiety rose dramatically compared to pre-pandemic levels (Pieh et al. 2020). In conditions such as these, participant recruitment for qualitative research is challenged across the board. Participant recruitment within the medical sector, a particularly stressed sector at the time of a pandemic, was challenged to an even greater extent. In light of the at- and over-capacity operation of healthcare systems dealing with the pandemic, the recruitment process proved difficult. Several potential research participants, as medical professionals employed in these systems, who before the outbreak of the pandemic, at times unprompted by prior contact, eagerly expressed their interest to share their experiences and views on their involvement in efforts of climate change activism and advocacy could no longer be successfully reached.

I thus decided to look for additional approaches to strengthen the above described multimodal interview recruitment. The literature shows that similarly interested researchers have drawn on surveys as a supplementary method together with interviews. For the process of participant recruitment, the employment of preliminary surveys provides a practical advantage, namely that of providing an entry point to recruit for more time-intensive involvement of the survey participants in subsequent interviewing. Research by Weaver et al. (2011) on medical students employs such an approach, with the researchers asking survey participants at the end of their questionnaire to express willingness to partake in subsequent interviews, recruiting interviewees from the resulting pool of contacts. These so-conducted surveys further provide an opportunity to refine the understanding of the phenomenon of interest to attune the subsequent interviews to their respective interviewees and practices. Such preceding survey research provides the first step to the exploration of the practices under investigation and contributes to the development of interpretive themes for subsequent thematic analysis of interview data. As Hui (2010) discusses, surveys are useful to capture an overview of general perceptions and actions of different professionals and a sense of the tensions and similarities between them, before more in-depth narrative data can allow for the analysis of the sensibilities and commitments behind these so-explored practices (pp.754-755). The above-mentioned research by Weaver et al. (2011) follows such a process, building the interview research structure and approach on preceding survey research among the same people.

In light of the potential difficulties I expected to face during the interview recruitment, I began the recruitment process by recruiting participants for an antecedent survey.[2] This initial survey recruitment followed the same multimodal approach laid out above, with the addition of asking participants to support the recruitment through snowballing survey distribution by forwarding the survey invitation directly to colleagues. The survey was administered online through the platform Qualtrics, with participants being recruited from March to August 2020. As outlined above, the principal use of the survey was to assist the recruitment for interview participation, thus closing with an invitation and optional interest declaration to participate in in-depth interviewing. Results from the survey responses were also used, alongside the preceding literature review, in the construction of the interview guide.

This discussion of participant recruitment raises another underlying methodological question, namely that of data saturation, or, how many participants to recruit and when to consider the number of participants sufficient. Francis et al. (2010) suggest that in interview studies where conceptual categories are pre-established on the basis of existing theory the researcher should define an initial analysis sample and a subsequent stopping criterion. The initial analysis sample is the initial number of interviews to be conducted depending on the range of dimensions of interest to the research, with the participants purposively recruited according to these dimensions. The stopping criterion meanwhile refers to at what number of consecutive interviews not producing new emergent concepts or issues, i.e. emerging new themes, one can consider the number of participants to be sufficient. For the interview study that Francis et al. present, concerned with the clinical behaviour of healthcare professionals for which they define three dimensions of interest, they suggest an initial analysis sample of ten and a stopping criterion of three (Francis et al. 2010, p.2). Following this suggestion with the three dimensions of constructions, meanings, and efficacies in mind, I recruited interview participants through an initial recruitment of a set of ten interviews, at which point it was assessed whether new themes kept emerging across the last three interviews. In the case of the latter, another ten interviews would then be scheduled, completed, and subsequently assessed on whether new themes emerged across the last three.

[2] While conducting this preliminary survey research I remained open to the option of using the method as a supplementary data production approach. The limited number of responses, its primary function for recruitment and initial grasping of the phenomenon, as well as its overlap with the subsequent higher quality interview data from many of the same respondents made me decide not to report this data here.

Although this recruitment still proved challenging given the circumstance of the pandemic, it was ultimately successful in reaching saturation within the above-described parameters. The initial wave of interview invitations commenced in September 2020. Ten interviews were successfully scheduled and completed from November to December 2020, the majority of participants in this first wave being recruited through their preceding survey participation. Every individual interview conducted during this wave continued to produce additional topics of interest. A second wave of interview invitations thus commenced in January 2021. Another ten interviews were successfully scheduled and completed from February to July 2021, the majority of participants in this second wave being recruited through direct email contact based on their identification through public social media profiles, organisational membership, as well as authorship of related publications. Halfway through the second set of interviews, no new themes were emerging anymore. With the last four interviews not producing new concepts or issues of interest, the stopping criterion was thus reached and recruitment ended. Of the 20 total interviews conducted this way, five were with medical students, three with junior doctors, eight with senior doctors, and three with recently retired doctors.[3] See Figure 5 for a tabular overview of the interview participants.

The interviews were scheduled for one hour and ended up in precisely that time range, with the shortest interview taking just below 50 and the longest just above 60 minutes. An interview guide was developed and used to elicit discussions on all areas of interest, drawing especially on the related categorical questions guiding the analysis discussed in the introduction (cf. Chapter 1.2, p.12) as well as the preliminary insights developed through the preceding survey assisted recruitment. During the interviews it proved particularly effective to use circular referral to earlier points of discussion from different angles, for example by exploring the role perceptions of medical professionals in first their self-perception, then that of colleagues, and lastly that of their broader social environment, raising new reflective dimensions at each of the questions' iterations. Participants showed proactive interest to discuss the broader socio-political dimensions of climate change, with these aspects often taking centre stage in the discussion over more narrow scientific or medical dimensions such as its human health impacts. Following the discussion of the

[3] Due to the variety of terminology, junior and senior are here used to distinguish between work experience rather than position titles. Junior refers to medical professionals with fewer than ten years of work experience (equivalent to the upper ends of two years of foundation plus eight years of specialist training in the United Kingdom or seven years of residency plus three years of fellowship in the United States).

importance of treating the interview process as a negotiated communication (Soss 2015, p.166) and an iterative dynamic between fieldwork and framework (Soss 2015, p.171), I adjusted my questions according to the so-expressed topics of interest. Towards the end of the first wave of interviews, this had prompted me to ask more directly about existing and envisioned socio-structural changes, raising such subjects of discussion as climate justice and health inequalities. The interview guide, having been designed to be broad and open from the outset, required only minimal adjustment, the final version of which can be found in Appendix 2.

Pseudonym	**Seniority**	**Specialisation**	**Location**
Maiev	Student	-	Germany
Sebastian	Student	-	Germany
Anna	Student	-	United Kingdom
Christian	Student	-	United States
Sophia	Student	-	United States
Leonie	Junior	Infectious Diseases	Germany
Gill	Junior	General Practice	United Kingdom
Tara	Junior	General Practice	United Kingdom
Moritz	Senior	General Practice	Germany
Barbara	Senior	Psychiatry	Germany
Moa	Senior	Psychiatry	Germany
Fred	Senior	Anaesthesiology	United Kingdom
Malon	Senior	General Practice	United Kingdom
James	Senior	Physiology	United States
Armaan	Senior	Lifestyle Medicine	United States
Mahnaz	Senior	Occupational & Environmental Medicine	United States
Sarah	Senior	Paediatrics	United States
Lothar	Retired	Internal Medicine	Germany
Peter	Retired	Emergency Medicine	United States
Jaina	Retired	Paediatrics	United States

Figure 5: *Participant Overview*

3.8 Ethics

Important to any research involving participants is the welfare of those involved. To avoid potential harm to the research participants and ensure that their participation is both informed and voluntary, the University of Sheffield's Research Ethics Policy was followed at all stages of the research design and implementation. Informed consent and voluntary participation concerns three dimensions in particular. Firstly, participants need to be informed about the context, purpose, and

scope of the research project and their participation in it. This involves their ability to ask clarifying questions as to this context, purpose, and scope, their right to reject in total, skip in parts, interrupt, or withdraw their participation therein, as well their ability to contact third parties to express concerns or complaints as to this involvement. This was ensured by establishing a transparent recruitment process open to questions and providing the necessary contact details for third parties.

Closely connected to this is that, secondly, participants need to understand how the information they express during and through their involvement will be used for and represented in the resulting research. This concerns in particular the circumstance that their expressions will be quoted and otherwise represented in the resulting research, and that they are free to withdraw their consent as to the use and presentation of any part of these expressions. Both this and the preceding dimension of informed participant consent were ensured through the provision of a comprehensive participant information sheet during the recruitment and the obtainment of respective consent forms before each in-depth interview. Participants invited to the interview process were sent a comprehensive participant information sheet ahead of their recruitment and a separate consent form prior to their participation in the interviews. The participant information sheet and consent form were designed in accordance with the University of Sheffield's Research Ethics Policy. The participant information sheet and consent form can be found in Appendix 3 and Appendix 4. All consent forms were sent out to the participants ahead of the interviews with the request to return them digitally signed. At the beginning of each interview, participants were asked to reaffirm their consent and asked to raise any remaining questions or uncertainties. If consent forms were not received back signed at this point, the form was completed during the video conferencing with the interviewee and sent out again for digital signature before the beginning of the interview.

Third and lasty, of central importance to the ethical considerations involved in participant research is that those involved remain unidentifiable, assuring that the perspectives and opinions they shared during their participation cannot be traced back to their person. The interview recordings that were thus transcribed using NVivo had all clear name references to participants, locations, and most organisations pseudonymised. As interviewees presented detailed accounts of their workplace experiences and activist involvements, participants could be identifiable based on the full interview transcripts by those familiar with said environments or efforts (Clark 2006, p.6). As participants disclosed sensitive information regarding their opinions of colleagues and employers in these descriptions, the full transcripts are not attached as supplementary material alongside this

thesis. As explained in the participant consent form, full transcripts can be requested by researchers wishing to conduct further, ethics board approved research that ensures the maintenance of the participants' pseudonymity. As all interviews were conducted via Google Meet conferencing registered to my University of Sheffield's email account, all recordings thereof were directly stored within the Google Drive storage administered by the University of Sheffield. All dimensions of this so-devised research methodology were subject to the Research Ethics Approval procedure of the University of Sheffield, and were approved by the Research Ethics Committee of the Department of Sociological Studies prior to being implemented.

3.9 Conclusion

At the outset of this chapter, I have laid out the three research questions guiding this thesis: how do medical professional climate activists and advocates understand climate change, give meaning to engaging in their activism and advocacy, and position their particular efficacy in these efforts. I have further discussed how these questions, from the perspective of the Bourdieusian framework in which answers to them will be pursued, are questions of fields and their doxa, habitus, and capital as an interrelated system of sensibilities and commitments. The ensuing discussion detailed why the questions of meaning-making—the efforts of grasping "another's meaning" (Yanow 2017, p.407)—are best explored through constructivist-interpretive methodologies, providing in-depth accounts of the sensibilities and commitments of the so-involved activists and advocates. The method of in-depth interviews was highlighted as the particular approach to narrative data production employed in this research. I then discussed the thematic analytical approach and the importance of reflexivity in the transcription and analysis of these so-produced interviews. The remainder of the chapter addressed concerns for the quality of the analysed data, the design of the recruitment for its production and the challenges in the implementation thereof, and data management. In the following three chapters I will discuss in detail the findings and insights that this research approach outlined here has produced. These discussions will be layered upon each other, the analysis beginning with an exploration of constructions of climate change in Chapter 4, relating these constructions to patterns of meaning making in Chapter 5, and finally culminating in the discussion of the operationalisation of capital in the so-positioned, so-engaged practice of medical climate activism and advocacy in Chapter 6.

Chapter 4: Constructions of Climate Change

4.1 Introduction

This first findings chapter will principally address the first research question regarding the construction of climate change by medical climate activists and advocates. The meaning of others (Yanow 2017, p.407) explored in this way concerns the understanding of what issue these activists and advocates see themselves addressing by their efforts. For this process, the discussions in the preceding chapter have stressed the importance of approaching what climate change is understood to be with scepticism toward shared meaning (Soss 2015, p.166), ensuring that what is explored as climate change is what the interviewees, whose meaning this research is attempting to grasp, themselves understand it to be. This then is an essential first step in the exploration of how the interviewees give meaning to the issue of climate change and their engagements therewith, the central question of concern stretching throughout this thesis.

As discussed in the preceding chapter, constructivist-interpretive insight is not empirically plucked from the world as it presents itself (cf. Chapter 3.3). Rather, "the social fact is won, constructed, and confirmed" (Bourdieu et al. 1991, p.57). Our understanding of the social world, in turn, is produced through the theoretical lenses by which we apprehend it. The principal theoretical lens of this thesis, as laid out in the literature review, is that of Bourdieusian practice theory. Through this lens, I will explore two contrasting constructions of climate change expressed by medical professionals engaged in climate activism and advocacy as presuppositions, or doxa, of two respective social fields: One, as a biomedical issue in the field of medicine and, two, as a socio-structural issue in the field of climate politics. The negotiation of these constructions produces the negotiated construction of climate change that informs the practice of medical climate activism and advocacy. While I refer to these constructions as simply doxa, the reader is advised to appreciate their partiality, representing partial dimensions of the presuppositions of their respective fields.

The concepts of field and doxa were previously outlined in the literature review (cf. Chapter 2.4). Fields are sites of positional struggles both within and between them, themselves being positioned in the field of power as the field of fields (Schmitz et al. 2017). To distinguish two distinct fields is to distinguish two social games in which different positions are assumed and different capital

becomes operative (Bourdieu 1996, p.113). A central related concept is that of doxa, defined as "the fundamental presuppositions of the field" (Bourdieu 1990, p.68) that establish the relationship "between a habitus and the field to which it is attuned" (ibid.).[4] Existing research has, similarly to what I am setting out to do here, positioned issue constructions, for example of sustainable development, as doxa of their respective fields (Storey et al. 2017, p.95). By positing these two constructions of climate change as presuppositions I do however not intend to imply that the medical professionals in question uncritically adopt either of these constructions as universal common-sense beliefs, but rather that the engagement with climate change in either of these fields presupposes, for and in this engagement specifically, a commitment to their respective construction. Put differently, the doxa discussed this way concern the constructions of climate change that are presupposed alongside a range of other doxa in their respective fields. This is also to say that the concept of doxa here does not posit a universal knowledge construction that extends beyond a field or the engagement therewith. Engagement with a field is further not to be understood as a rational choice to play the social game that the field represents, but rather as the result of the mediation between the taste for and understanding of a field—its attuned habitus—and a commitment to its doxa (Bourdieu 1990, p.66). It is in this mediation between presupposition and disposition that doxa establish the above-mentioned relationships between habitus and fields. To reiterate what I have stated in the earlier discussion of theory and framework (cf. Chapter 2.4, p.44), it is this relationship between fields and their doxa, habitus, and capital as a system that throughout the discussions of this thesis I attempt to capture with the term sensibilities and commitments. These are to be understood as sets of "emotional, intellectual, aesthetic, and moral dispositions" (Wickberg 2007, p.669) that inform and are informed by commitments to particular but intersecting social fields, their "fundamental presuppositions" (Bourdieu 1990, p.68), and the practices therein for which particular forms of capital are operationalised.

The particularity and partiality of this discussion of doxa is a necessary clarification because the concept has been employed in macro-sociological analyses to refer to universal beliefs of entire social orders. This finds expression in this thesis insofar as some dimensions of medical doxa have

[4] To avoid conceptual overload (Guzzini 1993), Bourdieu's granular differentiation between doxa, the presuppositions of a field, illusio, the belief in its meaningfulness, and nomos, its normative belief structure, will not be employed. Likewise I won't detail a discussion of medical climate activism and advocacy as its own field with its own doxa, but subsume such conceptual dimensions in its discussion as a practice.

become naturalised (Roenn-Smidt et al. 2021, p.7) to the extent that certain aspects of the discussion, such as what is or is not subject to medical concern within a presupposed biomedical understanding of health, may appear self-evident to the reader. As this chapter will highlight however, my interest is precisely in the non-universality of contrasting doxa at the intersection of fields. In the context of the contrasting constructions of climate change in particular, this is the circumstance that both constructions of climate change find expression, oftentimes explicitly, by the same interviewees. They are as such not to be understood as different understandings held by different people, but contrasting dimensions of the presuppositions of two distinct but intersecting fields—that is, two constructions of climate change that align with the fields that they inform and are informed by. When I, during the discussions presented in this thesis, speak of these or other presuppositions as the doxa of a field the reader is reminded that I am referring to particular and partial dimensions of the total presuppositions of a field, i.e. those of interest to the analysis.

It is precisely because both constructions are expressed in their distinct characteristics by the same medical professionals that the tensions between them, and with them the tensions between their respective fields, and through the intersection of their respective fields and the practices therein the tensions between their respective habitus, emerge. Put differently, the tensions emerge at the intersections of different dimensions of different practices that medical professional climate activists and advocates engage in—based on different sensibilities and commitments, at different sites, and through the operationalisation of different capital (Bourdieu 1996, p.113). As Nilan (2017) notes, what is presupposed (orthodox) within a field is controversial (heterodox) outside of it, the tension between fields thus producing contestation between different doxa and creating new ones (p.371). As this chapter will show, this controversy or tension expresses itself in the context of this research by interviewees acknowledging climate change as exceeding the delimited issue of biomedical human health, while simultaneously acknowledging a commitment to the field of medicine that presupposes such a particular focus on human health concerns. It is, most crucially, a balancing between positing concerns for climate change beyond the subject of health while simultaneously tying them back to it. It is through this careful balancing between departing from and remaining tethered to the field of medicine and its delimited human health concerns that medical climate activism and advocacy finds expression as a "negotiated practice" (Patton and Loshny 2008, p.173) in which medical professional climate activists and advocates attempt to negotiate between, i.e. align and adjust, two contrasting presuppositions or, more broadly, two

contrasting sets of sensibilities and commitments. Why does this matter? Because as argued above doxa establish the relationship between a habitus and the social field to which it is attuned. As such, they establish the basis for the discussion of the relationship of medical professionals to climate activism and advocacy in the remainder of this thesis, in particular the next chapter exploring the medical and radical ecological habitus as they relate to climate change.

There exists no body of literature that theorises a practice of medical climate activism and advocacy or the fields in which it takes place or their presuppositions. As mentioned in the literature review however, insights into established fields can inform the exploration of practices that emerge in and from them (cf. Chapter 2.4, p.45), the particular practice of interest here emerging between the fields of medicine and climate politics. Research by Collyer (2018) theorising the healthcare sector as a field has argued that the doxa of this field are aligned strongly with economic interests, employing a biomedical model of health characterised by value neutrality and technicality that offers solutions to the various pathologies of a capitalist workforce. Collyer argues that these presuppositions explicitly "diverted attention from the social and structural causes of disease" (Collyer 2018, p.122) to those resting in the individual human body. Abrahams et al. (2019) similarly identify the biomedical model of health in medical practice as underpinned by curative approaches to the restoration of a "disordered part of the individual" (p.2), highlighting, in particular, the exclusion of concerns for social justice from the so-posited biomedical practice. Contrastingly, research on the field of environmental activism has argued that the field is marked by anti-capitalist beliefs, positing environmentalism as a resistance to dominant economic forces (Alam 2020). Nilan (2017) similarly found that the doxa of environmentalist fields are marked by a critique of a perceived orthodoxy of economic growth and an entrenched inertia to change unsustainable behaviours. As mentioned in the literature review, research analysing environmental movements has also argued that environmentalism is not merely concerned with particular political contentions but a broader "effort to create sociocultural change" (Haluza-Delay 2008, p.206).

In the distinct but related field of public health, the relationship between practitioners and climate change has been discussed, in similar ways as I am setting out to do here, as an emerging field and practice (Buse et al. 2021). The research by Buse et al. stresses in particular the negotiation of multiple doxa and the re-alignment of habitus and doxa in light of the "exogenous challenges to conventional ways of practising environmental public health" (Buse et al. 2021, p.6), such challenges here concerning climate change. As the discussions in this chapter will show, the

construction of climate change as a socio-structural issue closely relates to and draws on public health perspectives as distinctly different from those of the biomedical model of health—in particular the social determinants of health model concerned with "the social, political, economic, environmental and cultural factors that greatly affect health status" (WHO 2008). As I will explore further in the next chapter on the taste for medical climate activism and advocacy, these presupposed socio-structural concerns mediate radical ecological dispositions and as such align with radical ecological practices, radical here meaning directed at a critique or contention of an established field or practice (Crossley 2003, p.45). It is in part through this contention of the concept of biomedical health by public health and social determinants perspectives that the above-mentioned negotiation between departing from and remaining tethered to the field of medicine and its biomedical health concerns finds expression. In the area of climate politics, Hughes (2015) has employed a Bourdieusian framework to explore the contentions over climate change as the field of climate politics—the site of "struggle over the social and political meanings of climate change" (p.86), focusing on the power of the IPCC to position authoritative claims within this field. As stressed above, the field of climate politics is, next to the field of medicine, one of the two fields of interest to this research, and this chapter will show that medical climate activists and advocates draw substantially on these knowledge claims of the IPCC in their constructions of climate change.

The earlier literature review has highlighted the various accounts by medical professionals calling for an engagement with climate change (cf. Chapter 2.3). The review of this existing literature has stressed that there are numerous first-hand accounts in the form of editorials, commentaries, and opinion pieces presenting climate change as a biomedical issue by medical journals and organisations. These accounts stress the data presented by bodies such as the IPCC concerning the direct human health impacts of climate change such as increased extreme weather events or the spread of infectious disease vectors. Based on these medical impacts, this literature has argued for the medical profession to take on concerns for climate change as part of their professional duty. As this chapter will highlight, these existing accounts of climate change as a biomedical issue only show an incomplete picture of how the issue is constructed and understood by medical professionals who are engaged in climate activism and advocacy.

As already mentioned above, the two contrasting constructions so posited as doxa of their respective fields are that of climate change as a biomedical issue in the field of medicine and that of climate change as a socio-structural issue in the field of climate politics. As this chapter will

further show, both these constructions are embedded in wider presupposed biomedical and social determinants models of health. See Figure 6 for an illustration of the intersection of the two fields and their respective doxa.

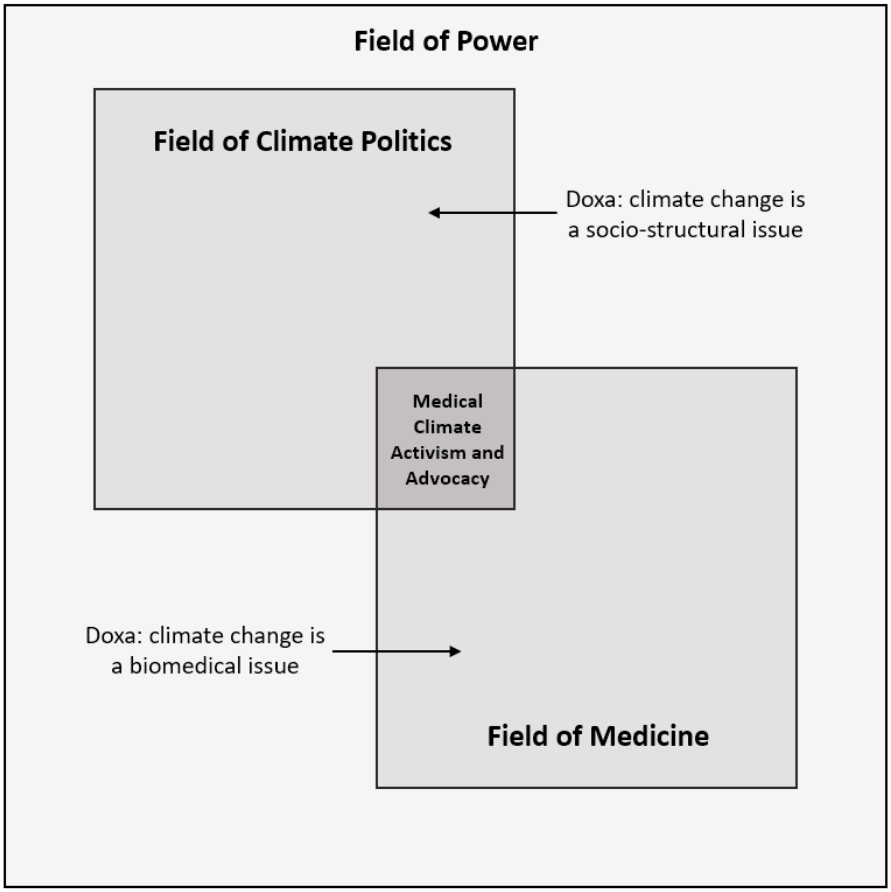


Figure 6: *Fields and Doxa*

This figurative representation of these fields is by nature of its form a gross simplification. Neither the displayed fields nor the doxa are exhaustive but illustrate the dimensions most relevant to the sensibilities and commitments under analysis. This is to again say that what I will refer to as doxa throughout this thesis is not the totality of presuppositions of their respective field, but those aspects of these presuppositions that are of concern to an engagement with the issue of climate change and thus are subject to the analysis. Likewise, the positioning of the fields is neither meant to represent a quantification nor qualification of these fields or their intersections.

To summarise, this research is first and foremost concerned with a particular professional group, that of the medical profession, and a particular practice, that of medical professional climate activism and advocacy, across a range of scales and settings, from patient communication and

organisational change efforts to political lobbying and direct action. From a Bourdieusian perspective then, this is an analysis of the intersection between the fields of medicine and climate politics as well as the engagement of the medical profession therewith. In this chapter, I will show that the doxa of these two fields involve two respective constructions of climate change that themselves draw on two contrasting perspectives: the first drawing on a biomedical perspective in which climate change is positioned as a concern for the human body and its treatment, and the second drawing on environmentalist and public health perspectives that stress the socio-structural dimensions of the issue and the need for transformative responses to it. It is at the intersection of the two that medical climate activism and advocacy takes form as a negotiated practice.

4.2 Climate Change, a Biomedical Issue

To reiterate what I stated in the introduction, what this chapter is demonstrating is that two distinct constructions of climate change are simultaneously expressed by medical professional climate activists and advocates. The first of these is the construction of climate change as a biomedical issue. As this section will highlight, the earlier discussed literature on climate change and human health as well as the resulting calls for medical professional involvement are here integrated into the construction and expanded upon by other related concerns for human health and wellbeing.

Human Health, Here and Now

The central pillar of the construction of climate change as a biomedical issue is a focus on the impacts of climate change on the human body. In the expressions of this construction, participants drew explicitly on the aforementioned literature positing such an understanding, as senior British anaesthetist Fred is here:

> As time has gone on, I really, really believe more and more the Lancet's line about climate change as a human health issue, you know, it is first and foremost a human health issue, and the longer we delay on climate change the more human suffering and misery we will have to endure. (Fred)

The Lancet's line that Fred is referencing refers to the earlier mentioned (cf. Chapter 2.3) effort by the British medical journal The Lancet to, through the publication of the annual *Lancet Countdown* report on health and climate change as well as the report by the Rockefeller Foundation–Lancet Commission on Planetary Health, position climate change in the realm of medical literature and

practice. Fred here also clearly draws on the notion of the urgency of action that the theme of countdown underlying the Lancet report implies. Note also how he describes his own subscription to this construction as having developed and strengthened over time, implying some initial and partial resistance to the belief of climate change being first and foremost an issue of human health. American medical student Christian equally explicitly references the Lancet in this description of climate change as an issue of human health while similarly stressing the notion of urgency:

> We're already seeing a lot of poor impacts that can be traced back to climate change, and I think the Lancet 2020 Countdown encapsulated a lot of this. We're seeing, you know, increased levels of malaria transmission in areas that have been largely protected before due to the rising temperatures. Those same rising temperatures are causing an increased duration of heat wave susceptibility which is the number one weather-related cause of death in the United States. So these are issues that we are already seeing and they're only going to get worse. (Christian)

Christian gives concrete examples of the human health impacts of climate change, both in terms of vector-borne diseases and environmental conditions such as extreme weather. As discussed earlier in the literature review, these impacts are similarly described by the IPCC in its Fifth Assessment Report (Smith et al. 2014). Note that Christian draws on notions of both presence and urgency of the issue, marrying the existing circumstance of heat being already the greatest cause of weather-related deaths to the expected further increase of extreme temperatures. This notion of the issue being inevitably present but only getting worse was a central dimension through which the issue of urgency was expressed. Junior German infectious disease doctor Leonie expresses this concern for the urgency of climate action as tied to the presence of climate change as follows:

> We don't have much time to… not even stop, we can't even stop it. But divert it into a direction with which we can live […] Everyone knows it is coming, it's here, it's getting more, one could still do something, but can't quite bring oneself to. And eventually, it is too late. (Leonie)

It is notable that Leonie implicitly rejects the idea of ignorance within an information deficit model (Suldovsky 2017)—the notion that a lack of comprehension or awareness is a crucial dimension underpinning climate inaction—that was highlighted as prominent in the previously reviewed climate change communication literature (cf. Chapter 2.2, p.23). The issue she expresses is not one of ignorance towards climate change as already here and getting worse, but a lack of willingness to act towards it. In our discussion Leonie compared this, on the one hand, sense of urgency but, on the other, simultaneous unwillingness to act on climate change to the issue of antibiotic

resistance in which she sees a similarly existential but inappropriately addressed issue facing humanity—antibiotic resistance itself being a concern located in the field of medicine that has not only been linked to climate change in its impacts and causes (Fouladkhah et al. 2020) but has been discussed with reference to climate change as an issue facing similar challenges in its communication and public understanding (Mendelson et al. 2017). Note also that Leonie expresses her concerns for climate action as the necessity of steering into a direction that allows for human survival, extending human health concerns to their existential extreme of death. This existential dimension of the scope and magnitude of the health impacts of climate change also found expression in the extrapolation of concerns for the health and wellbeing of the human body to extinction and the inhabitability of the planet. Junior British general practitioner Tara states:

> The more human activity there is, and the more that we don't make changes, the more we are in this mass extinction, and the planet is becoming more uninhabitable by humans. (Tara)

Tara positions the agency over both the causes and the prevention of these existentially threatening consequences of climate change and its related processes in the hands of ongoing human activity or interaction with the planet. Similar to Leonie's account, these deleterious consequences are posited as already and increasingly taking place. It is in response to the aspect of inevitability in this construction of the issue that interviewees prominently expressed and stressed the importance that ought to be given to adaptive responses. Here are Christian and retired American emergency physician Peter expressing these concerns:

> We need to be prepared to adapt, to understand what those changes are going to be, to adapt to minimise the adverse health events and address adverse events in general that are going to result from those baked-in changes. (Christian)

Peter further explains:

> I think everybody has to adapt now. It's you know, I'll just use the wildfires as an example, they're not hypothetical. They are going to occur every year with increasing ferocity for the foreseeable future. (Peter)

Similar to Leonie's notion of an inability to stop climate change, its impacts are posited here as already baked into the system, stressing the question of how to adapt to these eventual consequences. As we will see in the next chapter, adaptation responses relate closely to a medical habitus in the perception of appropriate interventions, whereas mitigation responses do explicitly not. This is partially self-contained in the very nature of the type of respective responses, with

mitigation efforts necessarily taking place on a more socio-structural level pre-emptively addressing the causes of climate change, whereas adaptation responses are curative and can be taken by or supplied to individuals, such as on an individual patient level. Take for example a doctor telling a patient how to adapt to increasing risks of heat strokes in light of increasing temperatures against a doctor telling a patient to reduce, i.e. mitigate, their carbon footprint to reduce the radiative forcing of atmospheric gases producing said heat. If anything, the naturalness with which a reader may perceive the distinction between these two highlights the extent to which elements of the doxa of the field of medicine can be naturalised into taken for granted presuppositions (cf. Chapter 4.1, pp.80-81). American medical student Sophia describes a related experience, highlighting the circumstance that adaptation is receiving more attention in the context of other medical students taking a course on climate change and health that she developed:

> The student interest was much more on the adaptation side of things, so kind of understand how will it impact our patients? And what can we do to reduce that impact? And I think in general clinicians are more interested in the adaptation side of things. (Sophia)

A dimension in these expressions that may require a more theorised analysis is that the positing of the presence and urgency of an issue allows for precisely the type of individual patient diagnosis of pathology and the curative, adaptive response towards it that the literature discussed in the introduction to this chapter highlighted as central aspects of the dominant biomedical approach to medical practice (cf. Chapter 4.1, p.82). Future-oriented mitigation on the one hand concerns more abstract, socio-structural concerns and pre-emptive responses that lie outside of or move beyond this biomedical patient body and its treatment. Climate change as it concerns the need for adaptation on the other hand is, as the interviewees already stressed above, not a future abstract but a contemporary present, presenting itself and its symptoms in much the same way an individual patient presents themselves and their symptoms to a medical professional. This connection was explicitly expressed in the interviews, with descriptions highlighting climate change as being rendered visible and relatable to medical professionals in particular through the human health impacts taking place in the present. In these descriptions, the focus is not on the threat posed by future impacts of climate change preventatively bringing the issue to the attention of medical professionals but on the present and ongoing health impacts that call for curative responsive care. Senior German general practitioner Moritz expresses this visibility of the health impacts, again in

their concluding extreme of human death due to heat, as one that became apparent to him due to his position as a doctor:

> As a doctor, I already see concrete problems that we have. Heat days or heat weaves that are already stretching over weeks, where every doctor sees that more patients are dying. That's simply an observation we have made, that over the summer more people die due to the heat. At first, we didn't connect it all that much with the climate, but it's a longer-standing observation where we can see that it is increasing more and more. (Moritz)

Moritz here describes this idea of front-line, first-hand experience with climate change health impacts rendering the issue visible for those in the position of a medical professional. Similar to Fred's description earlier, Moritz points out the processual awareness for this connection between climate change and health as one developed over time, here connecting it to the observable long term trends that support such awareness. Senior American occupational and environmental physician Mahnaz describes a very similar experience and perspective:

> We've been having a higher number of days where the temperatures are so high that folks actually have come to the hospital to be treated for dehydration, heat stress and in some instances heat strokes. And we've actually been seeing an increased number of these types of days […] And I think you can look at the meteorological data over the last twenty to thirty years and you can start to see those incremental changes in our climate, so that's something that I can relate to at least as a clinician. (Mahnaz)

Note how in Mahnaz's description the knowledge claims posited by meteorological data on climate change over the past decades are expressed as being demonstrated, observed, and attested (Ezrahi 1990, p.74) and thus becoming relatable through their human health impacts that she in her position as a clinician sees and has to confront in their embodiment in hospitalised patients, and increasingly so. Meteorological data effectively becomes translated through and into its human health dimensions, imprinted in its effects on the pathological human body presenting itself to the medical professional. Mahnaz however, compared to Moritz, is slightly more reserved in positing the magnitude of these impacts, qualifying the frequency of the most severe heat-related condition she lists, heat stroke. The contrast between the curative, adaptive perspective in this construction of climate change as a biomedical issue, presenting itself in human pathologies in the present, and preventative, mitigative perspectives in the construction of climate change as a socio-structural issue will become clearer in the discussions of the latter later in this chapter (cf. Chapter 4.3).

Crisis, Anxiety, and the Tether of Biomedical Practice

The stressing of presence and urgency discussed above are aspects of what some scholars have referred to as the crisification of climate change (Paglia 2018). Some literature in the social sciences has explicitly adopted the term climate crisis in its discussions due to the term's perceived more accurate representation of what is posited as the "condition of urgency and danger" (Klinenberg et al. 2020, p.62) of climate change. Scholars have however also problematised the discursive ramifications of the so-posited "crisification lens" (Paglia 2018 p.5), for example in terms of its relationship to securitisation and militarised responses to climate change (Buxton and Hayes 2016). It should be noted that the very concept of crisis emerged historically out of medical discourse as the decisive turning point in the progress of a disease, having been first developed in discussions of medicine and human health in ancient Greece and sustained through medical terminology from where it was imported into European vernacular (Shank 2008). In these elements of progression and decisiveness, the notions of presence and urgency are already implicitly brought to the forefront of what a crisis is.

The idea of a health crisis was however not only implicitly expressed through references to the presence, severity, or urgency of climate change. Crisification found explicit expression in the interviews by participants describing climate change as a human health crisis, as senior British general practitioner Malon does here:

> I think that the climate crisis is being increasingly framed in terms of being a health crisis. And I have been involved in teaching on this to GPs over the last year or 18 months. And there is bountiful evidence of the way that rising temperatures are impacting people's health and the way that can get a whole lot worse. In terms of the effects of severe weather events, very obvious effects on people's health, effects of change on crops and reduced food production, effects of changing vector-borne diseases, mental health impacts, and sort of just the fairly obvious effects of large scale population movements, and the increased risk of conflict resulting from climate change. (Malon)

The large scope of impacts that are subsumed under the concern for climate change as a health crisis expressed by Malon include not just directly medical issues but processes that will indirectly affect human health, such as crop failure and conflict that imply subsequent malnutrition and violence. These various indirect health aspects are again similarly considered by the IPCC in its discussions of climate change impacts on human health (Pachauri et al. 2014, pp.67-69). Malon further mentions how she has engaged in teaching efforts to communicate this notion of climate

change as a health crisis to other general practitioners over the past year, presenting an example of the kind of advocacy efforts within the healthcare sector as a form of inter-organisational change and mobilisation. She also explicitly refers to the notion of climate change being a health crisis as a framing of the issue, foreshadowing the discussion of health framing in Chapter 6.3 on medical professional capital. Finally, Malon highlights mental health as one of the dimensions of the impacts of this climate change health crisis, an issue I will delve into a little deeper.

I have earlier in the literature review shown that in the scholarship on human health impacts of climate change the issues of ecological grief and climate anxiety have found discussion (cf. Chapter 2.3, p.29). The literature concerned with these mental health impacts itself positions these dimensions of grief and anxiety in the context and acknowledgement of climate change as a "profoundly consequential global crisis" (Hayes et al. 2018, p.8). As Panu (2020) stresses, it is in this characteristic as a crisis that climate change causes a disturbance to life-worlds and ontological security that provokes such responses as depression and anxiety (p.6). During the interviews, these mental health dimensions of a perceived climate crisis found expression principally along the lines of climate anxiety and the experience thereof by patients in light of this crisis. Moritz describes how he encounters this anxiety in his patients within his medical practice:

> The situation is causing anxiety. I mean we have, from what I experience in my practice for many years already, an increase of insecurity and, yes, of anxieties and depressions, in a pathological sense but also emotionally that you can't always necessarily call a pathology. That, I find, has very much increased. (Moritz)

Moritz, similar to the earlier discussion of climate change presenting itself to the medical profession, posits his first-hand experience with the anxieties surrounding the issue as they are manifesting themselves in the patient bodies that are the objects of the medical care he is providing. Junior British general practitioner Gill similarly expresses that "from a doctor's perspective, we're not happy. 25% to a third of my consultations are people who are depressed and anxious" (Gill). More importantly however, Moritz posits that the depressions and anxieties that he sees emerging from this are not necessarily pathological, but can equally be understood as expected emotional responses to the situation posed by climate change. I have already mentioned this distinction between pathological and non-pathological anxiety being discussed in the literature on the topic earlier in the review on climate, health, and the medical profession (cf. Chapter 2.3, p.29). This distinction is very similarly made by senior German psychiatrist Moa:

> Besides the bodily repercussions, there are of course many psychological repercussions. There is already a range of studies that prove that the increase in natural catastrophes and the knowledge of what is in store for us is causing an increase in climate anxiety, which however isn't a neurotic anxiety ['neurotische Angst'] but simply a realistic anxiety ['Realangst']. (Moa)

Moa, being a psychiatrist rather than a psychologist, here employs the psychoanalytical distinction between realistic and neurotic anxieties to refer to what the aforementioned literature discusses as adaptive and maladaptive responses. Realistic anxieties here refer to anxiety over the dangers posed by real and known conditions, whereas neurotic anxieties are exaggerated reactions to unknown threats (Starkstein 2018, p.238). Within this distinction, she posits, more strongly than Moritz's partial questioning of its pathology above, that climate anxiety is a realistic anxiety, a justified and non-pathological response to the threat posed by climate change. As mentioned above, the literature on the subject of anxiety in light of a perceived climate crisis has proposed similar distinctions, arguing that climate anxiety may represent a future-oriented adaptive response to prospective climate change impacts as much as it represents a maladaptive mental health pathology (Clayton 2020, Verplanken et al. 2020, Wullenkord et. al 2021).

Note that with the Bourdieusian framework introduced in the literature review (cf. Chapter 2.4) and elaborated in the introduction to this chapter, we can theorise the implications of a conception and potential pathologisation of climate anxiety further, positing it as an act of tethering the concerns for climate change themselves to the field of medicine as potentially pathological anxieties in need of medical attention. In this context, discussions of climate anxiety represent efforts to negotiate ecological concerns for the climate on the one hand and medical concerns for anxiety on the other. This latter concern for mental health then allows for tying in the former concern for climate change into a negotiated practice of medical climate activism and advocacy. Whereas this act of negotiation is implied in the discussions above, retired American paediatrician Jaina expresses it explicitly:

> Climate anxiety, that's real right. So we do anxiety [in paediatric consultation] every day, why can't we do climate anxiety? We do pandemic anxiety. Climate anxiety is a very easy entrée into the medical world. (Jaina)

The idea of entrée into the medical world that Jaina expresses describes what she perceives as an opportunity to include discussions of climate change in the practice of paediatric consultation by positioning climate anxiety, and with it climate change, within the field of medicine as a suitable

health concern. She here relates climate anxiety to other anxieties that are already being discussed in paediatric consultations—anxieties that as mental health issues have already been established as concerns within the field of medicine. She does so to exemplify the possibility of tying climate change into medical practice through the lens of its mental health impacts. Mental health here becomes another dimension of a construction of climate change as a health issue and its relation to established medical practices. Importantly however, in the questioning of the pathological character of this anxiety expressed by Moritz and Moa above we see a partial subversion of this tethering of the issue to the field of medicine. While anxiety even in its adaptive, non-pathological form, too is subject to practices of health counselling, it detaches the issue from a clearer cut biomedical construction and practice concerned with pathologies that rest on a "disordered part of the individual" (Abrahams et al. 2019, p.2) patient. What is expressed here is once more the negotiated, carefully balanced positioning of climate change, here through its mental health dimensions, as at once beyond the practice of biomedical treatment of pathologies while simultaneously being tethered to it. It is in this light that we have to understand what other interviewees contrastingly expressed as the explicit integration of climate anxiety, and mental health concerns more generally, into biomedical concerns in their most fundamental form—the physical health of the human body. Senior American lifestyle physician Armaan explains:

> People are quite anxious because they're worried about their property, their health, their jobs, and so it causes anxiety. Okay, is this going to be a good year or a bad year for us in terms of hurricanes? Or the heat if somebody has to work outside, their job is to work outside or they're an athlete, am I hydrating enough, am I getting enough cooling time? That creates its own anxiety. And having anxiety… and this has been known for probably a hundred years, that your mental health directly affects your physical health. (Armaan)

By linking mental well-being to physical well-being from two directions—one via climate anxiety itself being a consequence of concerns for the physical threats of climate change, and two by mental health equally directly affecting physical health—concerns for climate change are embedded deeply into the biomedical concerns for physical health in the field of medicine. In Armaan's description, the concerns for the physical impacts of extreme heat and the mental health concerns for the anxieties in light of such impacts become one. Moving our discussion back to a more general concern for biomedical health, this particular interest in heat and other environmental conditions of climate change found striking emphasis throughout the interviews. Particularly in descriptions of these environmental impacts of climate change, interviewees were keen on making

clear the critical severity of these expected consequences to human lives and health. Here is Sophia's exemplary description of the range of impacts in such a way:

> But, you know, temperature can kill you. Like, heat waves can kill you, and we've seen it happen. And acute infrastructure destruction after storms can kill you, it can knock out a hospital. And infectious vector-borne and water-borne diseases, like their dynamics are changing, they're becoming more dangerous to us. And you know air pollution, ozone, are dangerous, it can kill you. (Sophia)

Note that the one impact that is not explicitly posited as potentially lethal is that of diseases and disease dynamics. One approach to explaining this circumstance of stressed environmental impacts is that in their construction of climate change as an issue informing medical climate activism and advocacy, medical professionals negotiate the socio-structural concerns for ecological conditions and the biomedical concerns for human bodies by drawing on explicit links between environmental and medical dimensions to align the former with the latter. This is to say that the negotiation between the commitments to two contrasting fields is aimed precisely toward those elements that are in need of being negotiated, of being balanced and aligned with each other. Here this negotiation principally demands the integration of environmental conditions into concerns for biomedical health. Impacts such as diseases are so closely related to the concerns of established biomedical practice that they may be perceived as requiring no such exceptionally critical severity or danger to human life and survival when posited as a dimension of the construction of climate change as a biomedical issue. This relates to a more general observation that during discussions of the presence of climate change impacts interviewees generally stressed environmental aspects related to weather events and other environmental changes and explicitly connected those to human health, rather than discussing such more directly health-related issues as diseases. This, it needs to be again stressed, is not for a lack of discussion of such issues in the literature on the topic, with water- and food-borne diseases, the spread of disease vectors, allergens and airborne toxins et cetera all presenting equally major areas of concern (Pachauri et al. 2014, pp.67-69).

What is expressed in these negotiation efforts is once more what Jaina above described as an "entrée into the medical world" (Jaina): the positioning of concerns for climate change health impacts as a negotiated amalgamation that simultaneously allows biomedical concerns into the field of climate politics and climate concerns into the field of medicine. The entrée for the medical profession is the construction of climate change as a biomedical issue, positing the issue as a responsible and appropriate point of concern and intervention for medical professionals precisely

within established medical practice. This circumstance will be explored in more detail in the next chapter on the taste for medical climate activism and advocacy, in particular the discussions of medical and radical ecological habitus. For now, it suffices to say that this positioning of climate change as a biomedical issue posits a meaningful and salient construction for medical professionals that informs their engagement with climate activism and advocacy. In other words, it negotiates a construction that is informed by ecological concerns for climate change but compatible with the field of medicine and attuned to the respective sensibilities and commitments of the professionals within it, i.e. attuned to said field. As Edwards (2011) states, "to belong to the field is to adopt the doxa" (p.62) of the field, i.e. its fundamental presuppositions. Here the adoption of the doxa of climate change as a biomedical concern allows for purchase in accordingly structured climate change activism and advocacy from within the field of medicine—structured insofar as this negotiation does not come without limitations. A particularly notable dimension in which these limitations of the biomedical issue construction found explicit expression was in a problematisation of the individual patient perspective that is dominant in biomedical practice:

> With climate change you are, especially here in Germany, quickly talking about bigger groups, simply because it is very, very hard to break climate change down to the individual patient. It's very, very hard to say this patient is dying to the impacts of climate change or has fallen ill because of the impacts of climate change. That's almost impossible to do, also because almost no illness or cause of death that we know can be traced back to a single cause. (Leonie)

Note that the limits to tracing particular causes of individual illness are here expressed as not solely reserved to the links between climate change and health, but as limitations that Leonie sees extending to medical practice at large—in contrast to the focus on treating a particular "disordered part of the individual" (Abrahams et al. 2019, p.2) that was highlighted as characterising the biomedical model of health. Retired German internist Lothar similarly posits that the ability to draw direct connections between climate change and particular health impacts is limited:

> Climate change and health, of course a lot of illnesses get named there. But if we're completely honest, there aren't overwhelmingly many really hard facts. In Germany it surely is particulate matter, meaning air pollution, that is indirectly connected to it. And of course first and foremost the temperatures. What we experienced in the last ten years with the heat waves… that really is enormous. (Lothar)

Note that in both descriptions above the problematisation of the biomedical individual patient perspective is posited simultaneously to a maintaining of precisely this biomedical focus on the

patient body. Lothar in his description again stresses heat as the principal health dimension, relating back to the earlier discussions of a focus on this subject during the interviews. Lothar here also explicitly refers to indirectly connected health impacts, an idea relating closely to the concept of health co-benefits that was described in the literature review (cf. Chapter 2.3, pp.28-29). As mentioned there, health co-benefits allow for an extension of medical concerns to such indirectly health-related dimensions as diet, transportation, or even residential heating. Similar to the earlier discussed "easy entrée into the medical world" (Jaina), the co-benefit concept allows for a positing of climate concerns within the field of medicine, here even in non-directly health-related dimensions. The move from individual patients to larger groups that Leonie meanwhile is hinting at is a central dimension of the next construction of climate change as a socio-structural issue which I will discuss next.

To summarise then, the discussions above have highlighted how medical professionals adopt and elaborate on a construction of climate change as a biomedical issue. This construction explicitly draws on a body of literature that posits such a focus on the various consequences of climate change on the individual human body. At the same time, participants express concerns beyond the field of medicine and biomedical practice, raising existential concerns and problematising the individualisation and pathologisation of the issue and its impacts. That these are not mere idiosyncrasies in the expression of the issue by individual interviewees but the fissures through which shines the tentative negotiation with a contrasting socio-structural construction of climate change will become clearer after the discussion of this second construction that I will turn to now.

4.3 Climate Change, a Socio-Structural Issue

> "I am not very compelled to think about changing climate change without disrupting the whole world order." (Jaina)

This second construction of climate change groups variously expressed concerns for social justice, economics and politics, and transformative change, the three presenting closely interwoven dimensions of the implicit complexity of the issue. All dimensions of this so-posited issue draw on an underlying construction of climate change as embedded in socio-structural issues, from the perspective of the various perceived dysfunctions and injustices of these structures to the transformative changes posited as necessary to address them and, with them, climate change. The

principal takeaway from the discussions in this section is that the medical professionals engaged in climate change activism and advocacy express, simultaneously to the perceptions discussed above, a construction of climate change that revolves around socio-structural concerns—as an issue grounded in, affected by, and in its impacts distributed along existing lines of systemic inequalities and socio-political and economic structures.

Social Determinants, Social Justice

As mentioned in the introduction to this chapter, the understanding of climate change as being embedded in social structures is not only closely related to the doxa of environmentalist fields and critiques of the biomedical model of medicine more generally, but to the understanding of human health as being conditioned by social determinants in particular (cf. Chapter 4.1, p.83). It is through this social determinants of health model that a medical concern for human health is, albeit in a different conception thereof to the biomedical model discussed in the section above, maintained in this socio-structural issue construction, tethering this understanding of climate change to the field of medicine. The idea of the social determinants of health is, again, defined by the World Health Organization as a "shorthand for the social, political, economic, environmental and cultural factors that greatly affect health status" (WHO 2008). Note that the environment is explicitly considered a dimension of social structure in the same way that the environment, in such aspects as heat stress, was considered a dimension of biomedical health concerns in the discussions above. This is to say that the distinction between biomedical and social determinant health should, despite their stark contrasts, not be understood as absolute. In this section I will discuss how interviewees described the issue of social determinants of health and the public health perspectives to which they relate more broadly throughout the interviews. Christian describes the idea as such:

> Individual patient diseases and outcomes don't exist in a vacuum. They are caused by in large part due to the factors that public health is focused on which are generally referred to as the social determinants of health. (Christian)

The idea of social determinants of health explicitly covers behavioural risk factors as embedded in structural inequalities. Its concerns are as such not limited to the various exposures a patient may involuntarily be subjected to but, resting on an acknowledgement of the limitations of agency of the patient, include their potentially detrimental behaviours and choices (Cockerham 2005). Importantly, public health perspectives stress a "prevention model" (Marvasti and Stafford 2012,

p.889) that focuses on approaches to mitigate and forestall the socio-structural causes of health concerns rather than the treatment of their symptoms. It should be noted here that scholarly work on the concept of social determinants of health has drawn extensively on Bourdieusian frameworks to understand the practices that people engage in (Williams 2003, Cockerham et al. 2017) including, notably, the WHO itself (WHO 2010). The idea of health practices being structurally disposed as such effectively represents an actors' category—"articulated notions" (Pickering 1993, p.584) concerning an analytical concept by those analysed—of important dimensions of the theoretical underpinnings of this research. Peter expresses how he sees this idea of the social determinants of health translating into a perspective towards climate change in which the sensibilities and commitments of people and their ability to act towards the issue are subject to the socio-structural conditions they find themselves in:

> My biggest awakening in the last decade has not been to the climate change issue. That has come along gradually. It has been to the social determinants of health. It's been to the impact of everything on the health of my patients. […] If they're not safe, if they're not fed, if they don't have adequate shelter, if they're living in dangerous circumstances, I can't expect them to do what I can expect my next-door neighbours to do who are just much more privileged. And that is a defining factor in this crusade to change how we live our energy lives in order to combat climate change and global warming. (Peter)

Peter expresses two central elements to the construction discussed here. First, he draws on the idea of privilege and inequality to qualify the justified expectation that can be directed towards individuals when engaging in efforts to change their behaviours or engagements with climate change. In the same way that a social determinants perspective of health would problematise interventions aiming to tell economically disenfranchised groups living in urban food deserts to consume more fresh organic produce, a socio-structural perspective of climate change problematises interventions aiming to tell the same group to switch to a renewable energy provider. In this light, improving the socio-structural conditions people live in improves their ability to concern themselves with climate efforts. Second, he posits the objective of these efforts, which he refers to as a crusade to combat climate change, as changing the ways people live their energy lives, ways embedded in the economic and political structures in which people live and consume. I will discuss these two elements separately, starting with the issue of privilege and inequality.

The issue of privilege and inequality, in particular concerns for environmental or climate justice, found expression as a two-sided unequal relationship. The one side of this relationship was

expressed by interviewees as marked by the circumstance that those who live in wealthier communities or countries have contributed most to climate change while being affected by it the least. Accordingly, the other side is the circumstance that those who live in poorer communities or countries have contributed least to climate change while being most affected by the issue and the various conditions that contribute to it, such as environmental degradation. Leonie's description of the environmental justice issue and its relationship to health justice summarises these perceptions expressed by the interviewees, both in terms of intra- and inter-societal inequality:

> I believe it's not just environmental justice, but really also health justice in that sense. There's inequality within societies and between societies. Within societies we clearly see, those who are richer in Germany have nicer housing in areas that have more vegetation, less noise, better air, and can insure themselves in case that there will be stronger storms for example. The more you earn, the more you can avoid the direct consequences, at least in the short term. (Leonie)

She goes on to describe the parallel issue of inter-societal inequality:

> Between societies, it is of course the case that we live in one of the richest countries in the world, one of the countries, one of the regions, that has contributed most to carbon emissions, but climate-wise is located in a moderate climate where we aren't as strongly affected by the consequences as small island nations affected by storms and floods, regions like central Africa where the human body cannot tolerate it becoming much hotter. (Leonie)

Leonie's description here closely mirrors the use of the analogous term climate justice in resources by organisations such as the International Institute for Environment and Development (Norton 2019) or the International Union for Conservation of Nature (Manzo 2021) as well its use in the scientific literature (Gardiner 2011). The uneven distribution of climate change impacts in particular that Leonie and other interviewees referred to is also again closely aligned with the IPCC's assessment of the issue, the organisation having concluded that risks are "unevenly distributed and are generally greater for disadvantaged people and communities" (Field et al. 2014, p.12). Note that Leonie not only positions health justice as a concern parallel to environmental justice and the unequally distributed effects of climate change but explicitly positions human health as a concern embedded in these inequalities. The socio-structural concern for justice becomes a condition for the concern for human health and vice versa—the comparatively less affected nations that principally contribute to the issue being in a position to disregard what in places such as central Africa produces conditions intolerable to the human body. Note here also

the explicit tether to the biomedical concerns that were similarly discussed in the preceding section. In the interviews, participants used terms such as environmental, climate, and health justice as, at the least, interwoven and, at the most, analogous. This attempt to coalesce medical and socio-structural, including environmental, concerns is once again closely related to the aforementioned concept of health co-benefits. British medical student Anna draws on this idea directly in her description of this coalescence:

> I think once you start caring about global health and public health and health inequalities and global inequalities, it's kind of hard not to then start working on climate change. Not only is it such a big issue that touches on all of those areas, but the solutions to climate change can also be very beneficial for other areas of health inequalities. Things like good secure jobs, access to affordable public transport, retrofitting homes, all that kind of stuff is great for people's health in general and reducing inequality. (Anna)

Anna describes the idea that this close relationship between inequality, health, and climate change produces co-benefits between the three, with actions targeting climate change being beneficial in targeting issues of health and inequalities and vice versa. Note how Anna similar to Jaina's earlier discussed argument concerning anxiety (cf. Chapter 4.2, p.92) positions concerns for global and public health inequalities as a possible pathway through which climate change concerns may be integrated into existing areas of medical engagement, i.e. into the presuppositions of the field of medicine. Recall also the earlier mentioned circumstance (cf. Chapter 4.1, p.81) that contrasting doxa between fields produce, through the contestation of each other's presuppositions and alongside their respective practices, new doxa and with them new fields (Nilan 2017). The field that is being constructed alongside this negotiation of practice is that of medical climate activism and advocacy, the doxa of which neither posit climate change as a socio-structural issue from a public health or environmental perspective nor as a biomedical issue from a medical perspective, but as a negotiated coalescence of the two that draws closely on both perspectives. Note also how Anna points to a range of transformative changes in response, listing the various structural interventions from employment to infrastructure and housing that respond to these coalesced socio-structural climate health concerns—a point I will return to later in this chapter.

More explicit departures from health concerns towards socio-structural concerns for justice generally were expressed during the interviews too, such as by German medical student Maiev:

> Climate justice in my view is a much more fitting word than climate action ['Klimaschutz'], environmentalism, species, biodiversity and so on because climate justice

> includes the global aspect and encompasses the crux that there are very many unjust conditions in the world that partly cause climate change and partly prevent that it is confronted. And it's a range of very different injustices. Social injustices, but also sexist or racist circumstances that simply exist and add into the mix. (Maiev)

Note that Maiev explicitly positions the concerns for inequalities discussed so far, such as that unaffected people or groups drive the issue, as a condition that not only represents a standing injustice but further prevents the issue from being appropriately confronted, extending social justice concerns from their normative level to their ongoing practical consequences for climate governance—and the inadequacy thereof. The racial and gender inequalities that Maiev expresses as being implicated by climate justice are dimensions of notable concern within the literature on the issue (Tuana 2019, MacGregor 2010, Black 2016). In the discussions I had with the interviewees, the aspect of race in particular found significant attention, especially with participants from the United States. I will briefly draw on some of these discussions of race to explore one such social justice dimension, exemplarily, in more detail. Mahnaz presents this racial context while extending the concerns for inequality from the health impacts of climate change to the health impacts of the processes contributing to climate change themselves. As she points out, carbon-emitting practices directly, such as combustion engine-driven transportation, cause health issues that are similar to the impacts of climate change distributed along socio-demographic lines:

> A lot of my patients are people of colour, they live in very densely populated urban areas, they have high exposures to air pollution and other chemical exposures […] Folks start to have higher incidence of respiratory conditions like asthma, they have underlying cardiovascular conditions that can be worsened by their immediate environmental air quality […] So it's not just climate change, I think we're dealing with a lot of other socio-demographic issues. (Mahnaz)

Implied in what Mahnaz describes here is, similarly to the description by Anna above, again the idea of health co-benefits. The concrete case that she is raising from the perspective of detrimental health effects, that of gasoline-based vehicles, is one that the IPCC itself uses as an example of health co-benefits of climate action in terms of increasing active travel and replacing existing vehicles with lower emission ones (Smith et al. 2014, p.738). Mahnaz posits her concerns as explicitly moving beyond the issue of climate change, with socio-structural issues more broadly raising concerns of which climate change is only one dimension. Senior American paediatrician Sarah, relating back to the earlier discussed concerns for the environmental impacts of climate

change and in particular extreme weather and rising temperatures, similarly expresses her understanding of climate change as embedded in legacies of disenfranchisement and racism:

> The communities that are most vulnerable are the communities that are marginalised, have been underinvested, communities suffering from a legacy of underinvestment, […] communities that experienced historical racist housing policies, something called redlining. Those communities are actually physically significantly hotter, temperature-wise, than wealthier communities that were not redlined. The temperature maps closely overlap with the maps of red-lined communities. Similarly, those communities have housing that is more vulnerable to extreme weather, will have less resources to rebuild after they have been damaged from extreme weather. So the climate vulnerabilities are very closely overlapped with other health disparities, our legacy of racist policies. (Sarah)

The issue of redlining that Sarah refers to has been shown to relate closely to urban heat management issues, with formerly redlined areas subjected to systematic disinvestment consistently showing greater exposure to intra-urban heat, higher mean land surface temperatures, and a continuing disproportionate increase in temperature (Hoffman et al. 2020, Wilson 2020). It should also be noted that economically disadvantaged and demographic minority groups continue to be overrepresented in these historically redlined areas. It is these circumstances that are described by Sarah and the others above, informed by the social determinants of health model, and substantiated by the existing literature, that posit socio-structural concerns for disenfranchisement, discrimination, and social justice more generally as tied directly to their human health ramifications—ramifications that are highlighted and exacerbated in light of the impacts of climate change. In this so-posited interrelated system, medical, ecological, and socio-structural concerns become one.

Economic and Political Structures

As the discussions above lay out, structural inequalities in society are expressed as, and by the existing literature on the issue shown to be, deeply embedded in the issue of climate change, from its causes and their direct effects on human health to the distribution of and exposure to its consequences. Closely related to the concerns for social justice expressed in these discussions is the issue of economic and political structures more broadly that Peter has already referred to above (cf. Chapter 4.3, p.98). These structures were prominently discussed along the lines of corporate interest and influence and the related concern for economic growth. Here is Anna describing her perception of climate change as a meta-issue of economic and political structures:

> I'm focusing more and more on climate change. I still enjoy doing health inequalities work and health philosophy work more generally, but I think it's hard not to see climate change as a very big meta-issue, which it is if you're interested in global economics, global politics, and then also at the local level. One of the things I find really great about working on climate change is that it's not an isolated issue. (Anna)

Note how, despite the close connection between the two, she describes her increasing concern for and work on climate change as a transition away from her preceding focus on health inequalities. Recall here also how Anna in the discussions above described health inequality as a pathway to climate change engagement (cf. Chapter 4.3, p.100). While she does not explicitly say so, her referring to climate change as a non-isolated meta issue implies that health inequality may be perceived as a more isolated concern in comparison, one more restricted to the field of medicine. She further draws the scope of this so-constructed meta issue of climate change in its economic and political dimensions from the local to the global level. In this way, her construction of the issue encompasses both the earlier discussed consequences of climate change itself on a global scale as well as the various local processes that contribute to the issue. A central focus with which these issues were expressed was in reference to concerns for power structures, in particular the power exerted by corporate interests. Leonie describes her perception of these concerns as such:

> The opponents that we have are just too big. There are especially corporations, especially industry, that have an interest in it not going in the direction that we want to steer it in. And those are institutions with a great deal of money, a great deal of influence, very good integration into power structures. (Leonie)

Implied in Leonie's concern for the positioning of the corporations and industries she sees medical climate activism and advocacy opposing is the perception of a comparative outsider position and lesser integration of the medical profession into the structures through which influence on processes such as climate governance is exerted. Armaan closely mirrors these concerns for corporate interests, describing the breadth with which he sees corporations driving the discussion surrounding climate change:

> The other issue is the corporate interest. So you know the fossil fuel, the polluting companies are so powerful, have so much money, that they can drive the narrative in the media as well as in politics and unfortunately sometimes even in education. (Armaan)

What Armaan expresses with the notion of corporate interest driving the climate change narrative in media, political, and educational institutions has likewise been a concern in scholarship on climate change, notably in the work of Oreskes and Conway (2011) and Klein (2015). Within

social scientific discussions of climate change, in particular those concerned with assessing a public understanding of or consensus on the issue that were already mentioned in the literature review (cf. Chapter 2.2, p.23), this corporate influence has been posited as playing out in the form of dis- and misinformation efforts by these corporations or affiliated actors (Pearce et al. 2017a). Concerns for the effects of corporate influence expressed during the interviews were however not limited to perceived issues of narrative control but were extended to corporate interest expressing itself in economic and political structures directly, with Anna stressing that climate action is inhibited by "the power structure, the inequality within and between countries, but also between governments and corporations, the public and corporations" (Anna). As Anna problematising power structures broadly already suggests, discussions of economic and political structures went beyond the role of corporations to economic processes more broadly, connecting back to the earlier topic of inequalities. The extent of this perceived interweaving is well demonstrated in this statement by Fred:

> Unless we decouple GDP from material usage, […] increases in GDP, which is what everybody focuses on, lead to further environmental degradation. And if we have further environmental degradation, it's the people who are most disadvantaged in society that suffer. And the endless consumption drives that wedge, drives that inequality wedge through society. So we have to fix consumption and eternal growth. (Fred)

The idea of a decoupling of economic growth that Fred refers to is a central point of discussion in climate target pathways, including the pathway to 1.5°C warming laid out by the IPCC (De Coninck 2018). The idea, in short, is the projected necessity to produce conditions that allow for the growth of gross domestic product without the use of additional biophysical (material) resources, decoupling economic growth from resource use, emissions, and thus environmental drivers (Haberl et al. 2020). Fred in his description links this economic structural issue to the social justice concern that those most affected by further environmental degradation in the absence of such decoupling will be those most disenfranchised. This, in turn, he connects to a culture of endless consumption driving said disenfranchisement further. Note that the central issue expressed by Fred here is no longer climate change in itself, but the continuous economic growth and consumption that underlies it. Along with the other descriptions above, the concerns addressed here focus on the socio-structural causes of climate change and their mitigation, rather than a merely adaptive treatment of its health impacts. Fred's description of the issue as such also contrasts his earlier expression of a growing belief in climate change being "first and foremost a

human health issue" (Fred). Not only is climate change here no longer a mere concern for human health, it is no longer an issue of a particular form of economic activity that surrounds the use of fossil fuels, but a culture of resource extraction, growth, and consumption. Gill expresses this similarly, describing climate change as "a symptom ultimately, that we've used all our natural resources and we've poisoned the earth" (Gill). In this construction of climate change neither taking carbon dioxide out of the equation nor adapting to detrimental impacts would be a sufficient solution if the socio-structural processes that "laid waste to the earth" (Gill) continued unbridled.

COVID-19

The discussions above have highlighted an expansion of concerns for climate change and human health to concerns explicitly moving beyond both of them. One of the ways this departure from human health as the single principal concern of climate change was most strongly expressed was in the interviewees' comparisons between climate change and the COVID-19 pandemic—a pandemic which the director-general of the WHO called "easily the most severe" (WHO 2020) of any of the six declared global health emergencies during the organisation's existence. Interviewees compared the two in their severity by positing climate change as the more substantial crisis, with the pandemic as a more or less justified diversion:

> We should, in a manner of speaking, be sporting about the Corona pandemic. It isn't something that threatens us like the climate crisis. One has to see that practically, even though I find it really terrible, I in no way want to trivialise it. But we should use this chance to say, okay, we need to finally learn how to handle large crises properly. (Moritz)

From this angle expressed by Moritz, some interviewees juxtaposed climate change and COVID-19 in what was expressed to be a false perception of priority in society concerning the two. Here is Peter, in light of the various large scale impacts he sees climate change having and threatening to have, rejecting the idea of COVID-19 presenting a more urgent or dangerous threat:

> How many paradises do we need, how many communities do we need to have burned down, flooded out, how much money, how many hundreds of millions of people do we need to have migrating because of heat and because of food and water insecurity? […] Why is climate change any less urgent than COVID? It isn't. It's more urgent, it's more broadly based, it's going to cause more destruction in more ways than a single infectious virus can. (Peter)

Peter's listing of the various climate change impacts draws on a range of facets from environmental, to residential, to financial, to agricultural destruction, before positing these

consequences as more severe than COVID-19 across the board, from its urgency to its scope and breadth, to its destructiveness. The impacts described by Peter again closely mirror those described by the chapter on human health in the Fifth Assessment Report of the IPCC (Smith et al. 2014). Implicit in his rejection of the notion that climate change, in light of these impacts, is in any way less urgent than COVID-19 is the perception that he sees himself confronting a discourse claiming exactly that. Maiev expresses a very similar view, also explicitly calling climate change a crisis worse than the pandemic, arguing that COVID-19 "is a bad crisis, but there is a far worse crisis and it's silly how that one is forgotten during Corona" (Maiev). Note that Maiev posits a direct conflict between the concern given to climate change on the one hand and COVID-19 on the other, the former having moved out of sight and mind due to the pandemic, rather than the latter merely assuming a temporary position of greater urgency. Urgency was not the only temporal dimension that was raised by the interviewees in their comparisons between climate change and COVID-19—temporal distinctions between climate change as a slow-moving, long-term problem and COVID-19 as a fast-moving, real-time issue that have found similar mention in the academic literature (Grundmann 2021). Moa expresses how she sees climate change as not only more severe and broader in scope but longer-lasting compared to Corona as a momentary crisis:

> The societal crisis these days is… naturally next to Corona, which really is a big, terrible crisis, this pandemic. But ultimately it is the climate crisis. Because it is even more global, more profound, more protracted. (Moa)

Note how climate change has moved from being expressed as a health crisis to being expressed as *the* societal crisis—the earlier discussed crisification lens (cf. Chapter 4.2, p.90) moving explicitly beyond biomedical health concerns. While Moa equally posits climate change as a more central issue, in what she refers to as the central crisis that is being faced by society, she acknowledges COVID-19 as a justified, albeit temporary, parallel crisis, similar to Moritz above explicitly calling COVID terrible. In these perceptions, concerns for the health impacts of the pandemic are not disregarded but rather relegated in light of the scope of the climate crisis moving beyond concerns for human health alone. Gill similarly focuses her description of the magnitude of climate change in contrast to COVID on the scope and comparative temporariness of the latter:

> People realise we would have to fundamentally change our lives and the structure of our society in order to combat it. It's too big, I think. It's upsetting. I mean COVID is upsetting, but it's finite. Climate change isn't finite. (Gill)

Gill's description of climate change here touches on two points of further discussion. Gill's point of fundamental change touches on the issue of transformation that I will turn to shortly. Her construction of the issue as too big and, as opposed to COVID, non-finite meanwhile will be returned to in later discussions on organised engagement and the efficacy of individuals in addressing an issue of such magnitude as climate change (cf. Chapter 6.4). Peter closes his discussion of COVID-19 and climate change in a similar way, touching on the magnitude of the climate issue, the temporary nature of the pandemic, the permanence of climate change, and its demand for large structural changes:

> I think this issue is for mankind, frankly. We just got appropriately diverted by COVID but now we're going to get through this COVID situation one way or another. Climate change… it's here, it's not going away. The damage has been done and is being done, no matter how perfectly we're corralling fossil fuels. (Peter)

As the discussions in this section so far have highlighted, medical professional climate activists and advocates posit and problematise the socio-structural dimensions of climate change, ranging from inequalities and the legacy of racism to corporate interest and economic growth. It is in light of this socio-structural construction of climate change that posits the issue as pervasive and overarching—at once symptomatic of deep-rooted economic and political structures and inequalities and simultaneously exacerbating them—that social transformation found expression as the necessary response to the so-posited issue.

Transformation

With social transformation I here refer to the principal approach that the interviewees described as their envisioned necessary response to climate change as a pervasive socio-structural issue—that of equally pervasive transformations. Lothar describes this perspective as follows:

> We need the great transformation. That's one of our favourite expressions. Now we're back to that… everything needs to change. We can no longer live as we did in the last years, my generation. My generation after the war, it always went upwards, upwards, always more, always a bigger car, and fly to holiday destinations not once a year, but twice, or three times. (Lothar)

The IPCC, in the now already often referenced special report of 2018, does itself employ similar terminology, referring to the responses necessary in confronting climate change as "the fundamental societal and systems transitions and transformations that help limit global warming

to 1.5°C" (Allen et al. 2018, p.22). Lothar also brings up, directly related to the topic of transformation, the intergenerational dimension of the issue. This dimension came up during my interviews in various related variations, relating to climate change and accompanying issues as a legacy left by older generations as in Lothar's example above, as the, for example in the expression of German medical student Sebastian, "central task of my generation" (Sebastian), or as a burden bestowed upon the "children who are alive today" (Sarah). When I asked Sophia if she sees medical students in a unique position to address climate change, she presented this issue as a critique of the inaction of older generations:

> Yeah, I do but for a different reason and I think the reason is that leadership on climate is really coming from the younger generation, and we've seen that recently with Greta Thunberg, a lot of the activists right now are young and it's because I think the older generation, my parents' generation, just like never really took the time to confront this issue. (Sophia)

Note that this so-envisioned change of engagement from one generation to the next not only draws on the generation-spanning scope of climate change but also connects back to previous discussions of justice and inequality and upcoming discussions of a polluter pays principle and responsibilities in the next chapter (cf. Chapter 5.2, p.130). Leonie further expresses the inequality dimensions of this transformation raised above as one between different countries:

> I believe the way we currently live, as a society, especially in the Western industrial states, of course we can't continue just like that and hope that we prevent climate change, but rather it will require transformation. (Leonie)

Leonie's description here recalls the earlier discussions surrounding the differentiation between those contributing to and those suffering from climate change, in this case positing that the necessity for transformation exists in particular in the countries contributing most to climate change. This is equally implied in Lothar's description of the problematised lifestyles in need of transformation; lifestyles resting on economic growth and abundance. Note that this positioning implies a focus on climate change mitigation within these so-envisioned transformative processes rather than mere adaptive responses. A comparably climate change adaptation focused transformation should, one would assume, meanwhile focus on the countries most exposed to the impacts of climate change through climate resilience approaches. Mitigation interventions on the other hand rightly focus on the principal sources that produce or contribute to climate change. Likewise relating to earlier discussions on economic and political structures, senior German

psychiatrist Barbara names the economic and financial sector as well as its lobbying practices specifically as an area that needs to be fundamentally restructured:

> It's the current social system. I mean it's always focused on growth, more and more. That won't work anymore. That has to be fundamentally reconsidered. I mean I don't have a solution either, but it has to be fundamentally reconsidered how to change that. How to make it fundamentally more sustainable. And then of course the economy, the money, the lobby has a great influence over the interests of others even against their knowledge. That also has to be fundamentally changed. (Barbara)

A major topic in the literature on ideas surrounding the various wide-reaching, fundamental system transitions and transformations envisioned in the expressions of the interviewees here is that of technological solutions confronting more fundamental transformative changes to social, economic, and political systems. Nightingale et al. (2020) describe this confrontation as one between a recognition of climate change calling for "new ways of conceptualizing society" (p.343) on the one hand and attempts to address climate change through infrastructural or biophysical changes on the other. As the title of their article foreshadows, drawing on Amitav Ghosh's non-fiction work *The Great Derangement* (2018), the notion of technological solutions to climate change is posited as deeply problematic. The scholarship on the issue over the past two decades has produced several such critiques of technological solutions to climate change (Alfredsson 2004, Hulme 2014, McLaren and Markusson 2020). While materially compatible, what prominently finds problematisation in this literature is the subversive effect that discourses of incremental technological change have on the posited necessity of, subsequently more easily and strongly resisted, systemic transformations. Anna expresses these concerns as such:

> I guess there are two sides to the technical fix approach argument. One is like, geo-engineering, which I think is a load of insert expletive. And I think that is being pushed by people who fundamentally don't want to see any change in the system. They want to carry on doing exactly what we're doing and just put sulphur or whatever into the atmosphere. […] I think there are some scientists who are looking at the current trajectory and are thinking, okay some carbon capture might be part of the future, but none of them are saying we don't need to do absolutely everything we can do to stop that being what we have to do. (Anna)

Anna here both acknowledges the material compatibility of technological approaches with systemic transformations while also positing precisely the type of confrontation between the two when the former is presented as a possible singular solution. Her description mirrors earlier discussions surrounding corporate influence on climate governance as one of a range of issues,

here expressed in the rejection of the sufficiency of geoengineering the atmosphere through sulphur dioxide injections. Anna described one such example of the discursive conflict that emerges between the two positions, referencing how she perceived a particular scholar working on technological approaches as pressed to stress the need for more fundamental changes:

> Sir David King at Cambridge is looking at things like Arctic refreezing, but people always ask him about it and he's like, don't you dare suggest I don't think we should rapidly transition away from fossil fuels! (Anna)

Note that the concern for a discursive tension between delimited technological and comprehensive socio-structurally transformative approaches that finds explicit expression here can be positioned in parallel to an implicit tension between climate change as a delimited biomedical and comprehensive socio-structural issue. It is not the concern for human health that is rejected in the latter construction. It is, rather, the assumed sufficiency of reducing the issue to its human health dimensions that is problematised, here understood as only a partial aspect of the issue. What is expressed here is thus not a rejection of either of these constructions by the other, but a negotiation between them. Health adaptations to climate change are posited, parallel to other technological adaptation responses, as important but partial approaches that should align rather than interfere with mitigation efforts and larger socio-structural transformations. A striking description of what this systemic transformation is envisioned to look like and aim towards came from Jaina:

> I am not very compelled to think about changing climate change without disrupting the whole world order. The effects of climate change are going to impact impoverished countries, developing countries. The people that have the power are not really taking enough action. I think if women of colour ruled every country in this world we wouldn't be where we are. So to me, they're so intertwined. It doesn't mean that the solution is any easier but I feel much more compelled to pursue climate change right up there with human rights, social justice, because I think one global solution would kind of fix all of it. (Jaina)

Jaina here expresses an explicit rejection of the kind of small-scale, incremental, technological approaches highlighted above as conflicting with transformational ways of thinking about or addressing climate change. These concerns have been similarly implied across the discussions of transformation in this chapter as well as the supporting literature on the topic so far. The notion of one global solution that Jaina expresses however stands out in contrast. There does exist some literature that discusses the idea of one global solution to climate change (Beck and Forsyth 2017). This literature however problematises the global solution approach as a construction that posits climate change as a singular, delimitable issue presenting "one problem in need of one global

solution" (Machin 2013, p.2). Jaina in contrast envisions what she calls one global solution to disrupt the world order as one addressing precisely multiple issues, explicitly posited as deeply interwoven with inequality, political disenfranchisement, and diverging impacts. Note that in these expressed constructions of both the issue and its envisioned responses we have moved far beyond concerns for human health and the treatment of detrimental health impacts of climate change. The issue is expressed not as one might encounter it in the existing literature on medical professionals and climate change that I have highlighted in the literature review, but in the literature on deep ecology movements and philosophies (Baard 2015).

To again summarise, the discussions above have described how medical professionals express a construction of climate change as a pervasive socio-structural issue. This construction draws at times explicitly on human health concerns but does so from a public health rather than biomedical perspective, embedding human health into a social determinants framework in which health and issues such as structural inequality become coalesced. Likewise however, participants move well beyond this explicit tethering to health concerns to aspects such as corporate influence on climate policy, expressing calls for transformative changes to socio-structural issues such as consumer culture and economic growth. It is in these tensions between the two simultaneously contrasting and coalescing constructions that they reveal themselves as neither wholly compatible nor irreconcilable but instead negotiated. Conceptualised as contrasting fields and their doxa, this characteristic of perpetual negotiation conditions the two constructions and their fields of climate politics and medicine as constantly challenged and challenging evolving spaces at whose intersection the practice of medical climate activism and advocacy is negotiated. As I will explore further in the next chapter, the medical professionals engaged in this climate change activism and advocacy find themselves, by nature of the multidimensionality of practice, not only perpetually negotiating the presuppositions of two fields, but in a perpetual negotiation between their respectively attuned habitus. It is these negotiations between medical and radical ecological sensibilities and commitments as systems of emotional, intellectual, aesthetic, and moral dispositions that inform and are informed by commitments to particular but intersecting social fields, their fundamental presuppositions, and the practices therein for which particular forms of capital are operationalised that the practice of medical climate activism and advocacy rests on.

4.4 Conclusion

In this chapter, I have explored two contrasting constructions of climate change expressed by medical professionals involved in climate activism and advocacy. These constructions provide the basis for many of the subsequent discussions in this thesis. Theoretically positioned as doxa, i.e. fundamental presuppositions of fields, they mediate how medical professionals relate to the fields of medicine and climate politics and give meaning to addressing the so-understood issue of climate change in the practices pursued therein. The two constructions highlighted were that of climate change as a biomedical issue in the field of medicine and that of climate change as a socio-structural issue in the field of climate politics. The first of these two constructions has been shown to revolve closely around ideas tied to the concerns of the field of medicine, focusing on climate change through the lens of human health and biomedical practice. Interviewees stressed the contemporary presence of climate change as it presents itself in the various pathologies of the human body that medical professionals encounter in their medical practice. Many of these concerns however already stretched beyond strictly biomedical boundaries and to the conditioning of human health by external factors such as heat and other environmental conditions as well as climate-related fears and anxieties as mental health issues—issues whose pathologisation the interviewees themselves problematised. In this construction the interviewees nevertheless maintained the centrality of the individual patient as the object of biomedical intervention. In line with the biomedical model of health presupposed in the field of medicine, the envisioned responses to these concerns focused on adaptations, the curative restoration of human health, and the treatment of the health impacts of climate change.

The discussions of the construction of climate change as a socio-structural issue meanwhile revolved around ideas more closely tied to the field of climate politics, focusing on concerns for public health, the environment, and social inequality. In contrast to the discussions of the first construction in which the impacts of climate change remained grounded in the pathologies of individual human minds and bodies, here concerns moved beyond the individual patient to social structure from the perspective of the social determinants of health model. The discussions highlighted how these socio-structural concerns often remain tethered to medical concerns through precisely this social determinants of health model and related concepts such as health co-benefits. It is through these perspectives in particular that issues of inequality and social justice are themselves posited as and embedded in concerns for human health. The discussions however

equally stressed how concerns expressed in this construction move explicitly beyond maintaining a link to human health, raising issues such as economic and political structures, corporate interests, and economic growth. Across these dimensions, interviewees stressed the necessity of mitigation and transformation efforts toward addressing the root causes of the issues posed by climate change and its related processes.

The central takeaway from this chapter is however not the mere contrast between the two constructions, but their carefully balanced negotiation and tentative co-existence—expressed not by different groups of interviewees but simultaneously across the interviews. The two constructions themselves have, as I laid out, blurred boundaries, moving from medical into socio-structural, and from socio-structural into medical concerns. Understandings of climate change as a principally biomedical crisis of human health are constructed next to parallel accounts of climate change as a socio-structural crisis of social organisation, intersecting with each other alongside the fields that they inform and are informed by. It is through the negotiation of the tensions at these intersections that medical climate activists and advocates negotiate one understanding of climate change and, in the larger picture, one practice—the practice of medical climate activism and advocacy. In these negotiations, interviewees draw on the concepts of health co-benefits and the social determinants of health that suggest a close interrelation between healthy human bodies and, figuratively, healthy human societies. In light of the social determinants of health model and the health co-benefits of socio-structural change efforts, medical climate activism and advocacy aimed at social transformations is posited as at once addressing medical concerns for human health while simultaneously acknowledging the issue of climate change as moving beyond them.

These constructions of climate change have here been conceptualised as doxa of two intersecting fields—those that presuppose climate change as a biomedical health issue in the field of medicine, and those that presuppose climate change as a socio-structural issue in the field of climate politics. As dimensions of two respective sets of sensibilities and commitments that inform the practice of medical climate activism and advocacy, these fields and their doxa exist alongside habitus and capital as interrelated systems. In the next chapter, I will explore how the tensions between these constructions as doxa of two intersecting fields relate to the tensions between their attuned habitus. In other words, I will explore how medical professionals negotiate their positioning within the fields of medicine and climate politics and give meaning to their engagement with the practice of medical climate activism and advocacy at the intersection of the two.

Chapter 5: The Taste for Medical Climate Activism and Advocacy

5.1 Introduction

As discussed in the literature review (cf. Chapter 2.4), in a Bourdieusian framework the participation of medical professionals in climate change activism and advocacy constitutes a practice resting on sensibilities and commitments that are structured by the interplay of fields and their doxa, habitus, and capital. It is in the discussion of habitus in particular that this chapter presents a central exploration of how medical professionals give meaning to engaging in climate activism and advocacy. Habitus, again, refers to disposed "pattern[s] of meaning making" (Ambrasat et al. 2016, p.1)—the internalised principles of thinking, saying, and doing that structure and are structured by the practices, that which is thought, said, and done (Carr 1986, p.178), within their respective social fields. Two of these fields, those of medicine and climate politics, were discussed in light of their presuppositions (doxa) concerning climate change in the previous chapter. This previous chapter also posited that it is at the intersection of the two fields that medical climate activism and advocacy takes place as a negotiated practice, and that the balancing between the two constructions of climate change as presuppositions of their respective fields constitutes a dimension of this negotiation. In the larger picture, these constructions inform and are informed by, or form dimensions of, two sets of sensibilities and commitments that were described above in their biomedical and socio-structural characteristics respectively.

This chapter will explore how these fields and their doxa relate to the practices therein through their respectively attuned medical and radical ecological habitus—i.e. how a radical ecological habitus disposing medical professionals to engage in climate activism and advocacy is negotiated with a medical habitus informing a perception of it as, if at all, meaningful, responsible, and appropriate only when reserved to its most explicit health concerns. Throughout the interviews, the meaning given to medical climate activism and advocacy revolved principally around such ideas of responsibility and appropriateness. In their discussion, I am drawing on existing literature that has theorised these two sets of habitus, although the reader is again advised to appreciate the partiality with which the medical and radical ecological habitus discussed in this way corresponds to the habitus under investigation here. As mentioned both in the discussion of methodology and at the outset of the preceding chapter, social facts do not present themselves as objective entities

but are won, constructed, and confirmed. Just as I built the understanding of doxa and fields in the preceding chapter on the analysis of constructions expressed by the interviewees, so will I build the understanding of habitus through the analysis of how interviewees expressed the perceptions that it is or is not meaningful, responsible, or appropriate for medical professionals to be engaged in climate change activism and advocacy. This includes both discussions of their own professional and personal commitments or hesitations as well as those expressed by others. Due to habitus describing precisely an embodied disposition, neither medical nor radical ecological habitus can be expected to find explicit expression by the interviewees. Rather, it is precisely the opposite—radical ecological habitus finds implicit expression in climate activism and advocacy being presented as precisely not a radical, but appropriate or even expected engagement congruent with medical practice and the medical profession. Likewise, medical habitus will find implicit expression in the taste for biomedical practice and the hesitations and concerns for radical ecological climate activism and advocacy. To better understand how these dispositions of medical and radical ecological habitus may be negotiated we need to first understand them in more detail.

In the literature review, I already made repeated references to Crossley's work on environmental movements and their theorisation within a Bourdieusian framework (cf. Chapter 2.4). A central element of this work that the literature review does not already discuss is that of radical habitus. This theorisation of radical habitus, as outlined by Crossley (2003), is an attempt to provide insight into the non-movement-specific dispositions to activist engagements that express themselves in the "durable impetus to critique in contemporary society" (p.45). Crossley points to research showing durable politicising effects that activist involvement has on participants both in their direct political behaviour as well as personal and work-life practices. "Participation in protest events or movements", he highlights by drawing on existing studies, "often creates a disposition towards further political activism" (Crossley 2003, p.50)—this disposition to political activism, the "taste for contention" (Crossley 2003, p.53), being the radical habitus. The notion of taste, on whose basis I chose the title of this chapter, is in reference to the prominent discussion of the dispositioning thereof as habitus in Bourdieu's social critique of the judgement of taste (Bourdieu 1996). Crossley's observation further relates to a central aspect of habitus discussed in the literature review earlier, namely its self-perpetuation. What medical professionals perceive as meaningful, responsible, and appropriate for them to be doing on climate change and what it is that they are doing on climate change mutually inform each other. This is important to keep in

mind insofar that the sensibilities and commitments expressed by the interviewees in this research have to be understood as structured by their ongoing involvement in precisely the kind of activism and advocacy that they disposed them to commit to. We have already seen this in part in the discussions of the preceding chapter that highlighted the tentative coalescence between the issue constructions explored there—constructions expressed in their already negotiated tentativeness precisely in light of the ongoing involvement in medical climate activism and advocacy by the interviewees. Crossley (2003) also again stresses that dispositions for and involvements in social movements such as environmentalism are themselves structured by social order, with the educated middle class (of which the medical profession is part) and those in public sector and caring professions being overrepresented compared to their nominal population share (p.53)—reminding us that tastes express "social positions embodied in bodily dispositions" (Bourdieu 1998, p.182).

Kirby (2017) draws on Crossley's work on radical habitus, which already is grounded in research on environmental movements, to theorise an ecological habitus as one shaped centrally by two dispositions: reformist environmentalism and ecologism. The former finds expression in a "focus on knowledge and skills related to the human effect upon the organic and global environment" (Kirby 2017, p.98), including concerns for carbon emissions, sustainable technologies, and climate change policy. Ecologism meanwhile revolves around more radical concerns for transformative changes to contemporary human-nature relationships, stressing a scepticism towards technology and positing nature as significant beyond its property as a human resource (for an early account of the two see also Devall 1980). We have seen aspects of both dimensions of this ecological habitus reflected in the constructions discussed in the preceding chapter already, for example in the more technical discussions of health co-benefits on the one hand and the construction of the earth as itself a patient on the other. Kirby further conceptualises what he terms green habitus as a multi fielded, ecologically attuned set of sensibilities and commitments in contemporary society. Kirby's objective in doing so is to explicitly expand the ecological habitus, which conceptually is directly tied to radical environmental social movements, to a more general "society-wide green habitus" (p.108) that transforms practices across a much wider range of social fields. In doing so he describes processes that "alter an existing habitus toward an ecological habitus" (Kirby 2017, p.100). As Ollis and Hamel-Green (2015) in their study on activist dispositions concerning coal seam gas exploration have shown, people engaging with environmental activist practices and roles may alter and align their existing sensibilities and commitments by suspending the contradicting

elements of the contrasting fields they find themselves in, such as between their doxa or habitus. In the analysis of this thesis, the social fields that experience such altering influence are those of medicine and climate politics and, likewise, it is the medical habitus that is being altered to a radical ecological, and the radical ecological habitus that is being altered to a medical one—a dimension of the process that I have called the negotiation of practice throughout this thesis. The respective doxa experiencing partial suspension are principally those discussed in the previous chapter, i.e. those of climate change as a biomedical issue as posited by the biomedical model of health and the socio-structural construction of climate change drawing on a social determinants of health perspective.

The medical habitus too has been subject to research in the social sciences. As Luke (2003) points out, medical habitus is a professional disposition acquired through "the medical life" (p.127) in medical education and workplaces. As fields entered at a comparatively advanced stage of life, medical habitus may confront existing dispositions that can conflict with those attuned to the field of medicine, such as conflicting "idealistic notions of caring and compassion" (Underman 2015, p.181) whose surface-level appearance of congruence between ideals and practice may have people entering into medical school to begin with. It is however not only the initial engagement with the realities of the field of medicine that produces tensions. Witman et al. (2011) present a study looking at the negotiation medical professionals find themselves tasked with when assuming organisational leadership roles. In this negotiation, medical professionals face and account for what they describe as the frictions between the medical world and the managerial world (p.478). They analyse in particular the, what they call, Janus-faced practice of balancing medical and managerial roles, responsibilities, and identities in the two contrasting fields of medicine and management and their respective sensibilities and commitments. It is here that the concern for a negotiated practice extends from contrasting presuppositions and dispositions between fields to a wider concern for contrasting sensibilities and commitments, and practices at large.

Witman et al. (2011) refer to three dimensions of the medical habitus that are of particular interest: the clinical, the scientific, and the professional disposition. The clinical disposition refers to the propensity to see a subject in relation to its "symptoms that point the way to a disease that has to be cured" (Witman et al. 2011, p.483). The scientific disposition meanwhile is the propensity to position medical practice as a science that renders the subject of medical concern visible and treatable through the application of scientific knowledge. In these two dimensions, Witman et al.'s

description closely relates to the discussions of the biomedical model of health and its related presuppositions in the preceding chapter—the subjects of concern being individual, pathological bodies that are understood through an objective, a-political lens. This is insofar confirmative of the framework, as a habitus is to be attuned to a field through its doxa (Bourdieu 1990, p.68). The professional disposition meanwhile refers to the propensity to put the interest of patients first and to assume responsibility for and take decisions towards the delivery of this interest. The disposition described as such relates to the concept of medical paternalism that the social science literature on the medical profession has established as central to conceptions of the doctor-patient relationship (Häyry 2002, Buchanan 2014). Medical paternalism here refers to "the interference with the autonomy of patients for their own clinical benefit" (McCullough 2011, p.66). This disposition to assume responsibility for and act towards the interest of others may, as I will explore in this chapter, inform assumptions of professional responsibility to engage with climate change.

I here want to clarify, again, that my discussion of habitus along such medical and radical ecological lines is not to imply that there are no other dispositions or ways of meaning-making that relate to the sensibilities and commitments by which the interviewees become involved in and give meaning to their efforts. Some of these were alluded to before, such as the various personal commitments to intergenerational justice discussed in the construction of climate change as a socio-structural issue. As discussed above regarding the structuring of radical ecological habitus itself by socio-structural conditions, such sensibilities and commitments may well be informed by various other structural positions that were neither discussed during the interviews nor will be analysed here.

In line with the intersections of habitus described above, I should also state here explicitly that when I align with an actor, field, or practice a medical or radical ecological habitus I am aligning not an ideal type but a negotiation thereof—a negotiation between both dispositions that is partially resolved in a preference towards either one of them at precisely these intersections. When I so interpret a particular expression or practice in line with or in light of a radical ecological habitus I am thus talking about a habitus that is informed by a range of dispositions whose negotiations result in a taste for the radically ecological, i.e. a disposition to engage in climate change activism and advocacy as a radical ecological practice. Likewise, when I describe concerns or hesitations to such radical ecological efforts as relating to a medical habitus, I am talking about a negotiated habitus informing such concerns and hesitations that may dispose a non-engagement or more

reserved engagement with medical climate activism and advocacy. I will speak of a doxic medical practice to distinguish this implicit negotiation from a conceptual practice fully aligned with the doxa of the field of medicine as posited in the discussions so far, i.e. fully aligned with its orthodoxy (Nilan 2017). Both engagement and non-engagement are similarly not to be understood as reducible to solely these dispositions, but involve concerns for particular efficacies and potential losses of reputation, trust, or influence. I will return to these concerns regarding the efficacy and costs of medical climate activism and advocacy in the next chapter on medical professional capital.

The discussion sections in this chapter are named after the perceived congruences between the position of the medical profession and engagements with climate activism and advocacy and, respectively, the perceived incongruences between the two. This perception of congruence between what the interviewees described as the characteristics of their profession and the field of medicine and its practices on the one hand and climate activism and advocacy on the other is what posits the latter as meaningful, responsible, and appropriate. The term congruence in these discussions is used to express precisely this perceived alignment between dimensions of medical and radical ecological sensibilities and commitments, such as the field of medicine and climate politics or the medical and radical ecological practices therein—"the sense of appropriateness" (Bourdieu 1996, p.252) of and responsibility for climate activism and advocacy assigned to the medical profession, with incongruence respectively expressing a perceived absence or subordination of such appropriateness and responsibility. Similarly, when I refer to roles and role perceptions I here employ the Bourdieusian understanding of role as that which structures the "set of discourses and actions appropriate to a particular 'stage-part'" (Bourdieu 1977, p.2), that is, appropriate to a particularly positioned actor. Lastly, I want to note, again, that all participants were by nature of the recruitment for this research and its focus on medical climate activism and advocacy involved in practices of the radical ecological kind so that dispositions to not engage in such efforts were principally described in perceived dilSophias and concerns towards such radical ecological engagements, often expressed as previously held positions or positions held by colleagues or others in the medical sector at large.

5.2 The Congruences of Medical Climate Activism and Advocacy

As posited in the introduction, theoretically positioned the discussions of the perception of climate activism and advocacy as meaningful, responsible, and appropriate by and for medical professionals in this chapter are discussions of habitus. This is to say that the perception of congruences between such engagements and the medical profession are expressions of central dimensions of the habitus of the medical professionals holding such perceptions. These perceived congruences were expressed during the interviews in a range of different ways. For the discussions of this section, I have structured these into four groups. The first centres on expressions that posit a perceived responsibility of medical professionals towards socio-structural inequalities. Here inequality is itself posited as a meaningful, responsible, and appropriate area of intervention for medical professionals, drawing on the socio-structural construction of climate change. The second refers to expressions embedding medical concerns into ecological conditions, tying responsibilities for human health to responsibilities for the environment. Here perceptions similarly draw on the environmental dimensions of a social determinants perspective as well as the planetary health conception mentioned in the literature review (cf. Chapter 2.3, p.27). The third group concerns a negotiation expressed in an alignment between responsibilities within the field of medicine generally and those of public health in particular. Here medical professionals express perceptions of responsibility that explicitly exceed the confines of biomedical practice. The fourth revolves around the polluter pays and no harm principles, especially the relationship between the healthcare sector as a structural element in society and its effect on climate change, in particular in the sector's contributions to the carbon emissions that constitute the central cause of the issue. Concerns for the causes of climate change that draw on a radical ecological habitus are here tied to concerns for its health impacts that draw on a medical habitus. As one interrelated system of sensibilities and commitments, these discussions do in many ways relate to both preceding and subsequent sections of this thesis, informing and being informed by the commitments to the doxa discussed before as well as the perceptions of efficacy and concerns for costs to be discussed thereafter.

Inequality as a Medical Concern

A central way in which the interviewed medical professionals expressed the meaning of their engagement with climate change activism and advocacy was by positioning these efforts as expected medical professional responsibilities or natural extensions thereof. This was expressed

in several ways, including ideas of an assumed duty to care and responsibilities to alert to, avert, and prevent harm. In this positioning, interviewees drew closely on the socio-structural issue construction discussed in the previous chapter. A prominent aspect of this construction that was highlighted in these discussions was that of climate change as an issue embedded in structural inequality. This concern for inequality was directly related by interviewees to perceived responsibilities of the medical profession. Malon describes this perception as such:

> I mean we are, sort of, on the whole, we are seen as a caring group of people and it's appropriate that we shout up about something that is going to impact, or is impacting, people so adversely. And it's sort of a social inequity issue as well, and that's also something that we believe as doctors we have a responsibility to. Or at least I think it is right that we comment about the ways in which life is being unequal for people. (Malon)

Malon here posits two perceptual sides and draws these together—perceptions of the medical profession by others and the self-perceptions of medical professionals themselves. The former, relating to public perceptions, posits the appropriateness of climate action by medical professionals on the premise of established expectations of caring for others. In this, Malon similarly refers to the public as perceiving the medical profession in light of the "idealistic notions of caring and compassion" (Underman 2015, p.181) that were already mentioned in the introduction to this chapter (cf. Chapter 5.1, p.117). The latter, relating to self-perceptions, meanwhile posits the perceived responsibility to engage in such efforts. The perception of medical professionals speaking up about climate change being appropriate and responsible is here positioned as parallel to the rightness of them commenting on inequality more broadly. Note however the personal qualification, "at least I think" (Malon), added to the explicit positioning of this responsibility for social inequality. Recalling the literature discussed in the introduction to this chapter, Malon's description relates closely to the professional disposition of medical habitus to assume responsibility for patient interests, here regarding social inequality and the adverse impacts of climate change in particular. Mahnaz makes this notion of standing in for patient interests explicit in describing how she sees herself as a mediating advocate providing a voice to her patients:

> I think it has reached that critical point where I feel like as a physician I can do my job, but I need to advocate on behalf of my patients on a global scale to ensure that policymakers, regional officials, even the federal government here in the United States and pretty much around the world, are understanding that climate changes are happening in real-time and affecting real people, and providing those patients' stories. (Mahnaz)

The paternalistic medical disposition to act on behalf of patients is here extrapolated to a radical ecological disposition that posits a perceived responsibility to contest the circumstance that patient voices remain unheard in climate policy processes and, in Malon's example above, the inequalities of life in general. Note the implied insufficiency of concerns for adverse health impacts by Malon above and what Mahnaz here describes as her job as a physician. What Malon positions as the rightness of doctors to assume responsibility for social inequality and Mahnaz as the need to convey patient voices into climate policy processes contrasts sharply with the discussions of the biomedical model of health and the doxa of the field of medicine in the literature (cf. Chapter 4.1, p.82). It is rather the contrasting presuppositions of public health and their concerns for the social determinants of health that inform this perceived responsibility for climate advocacy in the roles of medical doctors. I will return to this in the discussion of the insufficiency of biomedical practice later in this section. This circumstance may further relate to how the significance of inequality as a dimension of this sense of responsibility was qualified as markedly personal by several of the interviewees, including to some extent in the already expressed qualifications by Malon and Mahnaz above. Christian describes how concerns for injustice and health inequality first inspired his sense of responsibility that got him involved in climate activism and advocacy:

> The profound environmental injustices, racial injustices, apparent in climate change generation and its effects was really what drove me to action. I figured you know as somebody who cares about health disparity and is trying to alleviate them and wants to serve the underserved population that have been historically marginalised, and wants to have the biggest impact possible through my career, it just felt like my responsibility to be involved. (Christian)

Note how Christian phrases his perceived responsibility to engage with climate change around both his explicitly personal self-perception as someone caring about health disparity on the one hand and the impact he envisions himself having through his medical career in ameliorating these inequalities on the other. It is neither a professionally nor individually attached commitment that is being expressed, but a coalescence of the two. It is also notable how Christian first positions the dimensions of environmental and racial injustices of climate change as central before drawing the connection between health disparities and his professional impact on the latter. Gill quite similarly expresses her sense of responsibility around individual self-perception, professional identity, and medical ethics simultaneously, equally focusing on health inequality:

> I guess since awakening to how much climate change was likely to impact on everyone, I see it as a direct threat to health for everyone really. So in that way, I realised that it has everything to do with me as a doctor, as well as a human. […] I had responsibility to think about health for all. And what that looked like. And that it was to do with equality, and justice, I guess. Justice is quite important to me. And it's actually one of the pillars of medical ethics that you should be able to provide for everyone equally. (Gill)

Across the four accounts above, medical and radical ecological sensibilities and commitments, informing and being informed by biomedical and socio-structural constructions of climate change, are simultaneously positioned and qualified as on the one hand explicitly personal and on the other explicitly professional. Likewise, they are simultaneously expressed as distinct but aligned, both in terms of the dimensions of the issue that they address as well as the sensibilities and commitments that surround them. Take for example Mahnaz's description. It is the responsibilities assumed for individual patients that are expected of Mahnaz in her job as a physician that conditions her expressed need to move beyond precisely these job expectations and act as an advocate for her patients in climate policy processes. This closely relates to what in the preceding chapter I described as the negotiated construction of climate change as at once a medical and socio-structural issue, here however in its relation to the dispositions by which medical professionals relate to the issue. Medical and radical ecological habitus are aligned around the idea of inequality being a central concern for both—i.e. the two sets of sensibilities and commitments are negotiated so that such engagement is perceived and expressed as precisely not radically but medically disposed, with the former being integrated into the latter. This negotiation is however not without tensions. All the accounts above either implicitly or in the case of Mahnaz explicitly qualify the direct connection or congruence between a concern for inequality and medical professional practice as personal: Malon through the personal qualification of the rightness thereof, Mahnaz through her distinction of what is understood as her job as a physician and what she sees as her role as a climate advocate, Christian through the stressing of his personal concerns for health disparities, and Gill's likewise qualification of the importance of justice to her personally. Simultaneously the so-distinguished aspects are explicitly tied back together to concerns of medical professional practice through their dimensions of adverse health impacts, patient interests, medical careers, and medical ethics respectively.

What we see expressed here is principally the tension at the intersection between medical and radical ecological habitus through the multidimensionality of the sensibilities and commitments

they dispose and, simultaneously, the close relationship between precisely these two habitus. Particularly the explicitly expressed personal dimensions within both these tensions and congruences remind us of an important limitation for the analysis of social actors from the perspective of a particular profession. As previously argued in the literature review section on practices, the medical profession is itself the result of historical work of group construction and as such a limited analytical construct that, as useful as it is in this analysis of practice, cannot claim to exhaustively categorise the subject of its analysis (cf. Chapter 2.4, pp.48). The relationship between the two habitus meanwhile highlights the central point of interest in this discussion that I posited at the beginning of this chapter as well as the preceding one, namely that the posited doxa, fields, and habitus are neither mutually exclusive nor collectively exhaustive, but partial dimensions of intersecting presuppositions, social struggles, and embodied dispositions. Medical professional climate activists and advocates draw on a diverse set of dispositions and presuppositions, or habitus and doxa, in constructing their sensibilities and commitments for engaging with climate change activism and advocacy. Of particular interest here is that the perceived medical sensibilities and commitments surrounding what medical professionals ought to be concerned with and engaged in on the one hand, and radical ecological sensibilities and commitments to climate activism and advocacy on the other, are at once distinguished from and aligned with each other. They are, to reiterate, negotiated—distinguished insofar as climate change activism and advocacy is expressed explicitly not as a mere response to the professional expectations of doxic medical practice, and simultaneously aligned by being equally explicitly positioned as appropriate and "right" (Malon) to be engaged in, aligning with the purpose of medical careers (Christian), patient interests (Mahnaz), and medical ethics (Gill).

The Environment as a Medical Concern

Closely related to the above-discussed relations between concerns for climate change, inequality, and medical professional responsibilities was the positioning of the environment as one of the dimensions of the latter. One of the ways in which a commitment to medical practice on the one hand and concerns for the environment on the other were aligned was by positing the latter as a prerequisite for human health. In this proposition, a radical ecological concern or climate activism and advocacy becomes a necessary, natural dimension of the medical concern for human health. Elements of this were already discussed in the preceding chapter, in particular in relation to the

environmental aspects of the social determinants of health (cf. Chapter 4.3). Maiev expresses this alignment of environmental and clinical concerns by extending the perceived medical responsibilities to provide care to patients to a necessary care for ecosystems:

> I think medical doctors have a great responsibility there, to bring in a word here. Firstly towards their patients, but also towards the entire planet. […] I have a certain responsibility, namely to preserve health, by choosing my profession. And preserving health is only possible on a planet that too is healthy, because we're dependent on the ecosystems of the planet. (Maiev)

Maiev tethers ecological sensibilities and commitments to medical ones by positioning the health of planetary ecosystems as a prerequisite for that of the human. In this, Maiev's perceived responsibility for the former derives from the commitment of the medical profession, of which she chose to be part, to the latter. Note that compared to the other examples earlier this responsibility is explicitly positioned as an expected consequence of professional membership, the individual dimension here being reduced to the choice to join the medical profession. In the justification of this responsibility, Maiev draws closely on the idea of planetary health mentioned in the literature review (cf. Chapter 2.3, p.27). The implication of the planetary health concept here expresses itself in a necessary extension of medical practice from the human to the planet. In the same way that planetary health envisions medical practice as expanding from a concern for the internal systems of the human body to the external systems that sustain it, so does the related responsibility for individual patients expand to the ecosystems that condition their health. Note that in positioning the planet as a patient, the dimensions of medical habitus discussed in the introduction—the clinical, scientific, and professional disposition—remain intact, altered insofar as to address a different clinical, now celestial, body. Moa, in a similarly expansive vision of medical practice as Maiev, describes how efforts directed at ecological concerns and by extension the involvement in climate activism and advocacy should accordingly be considered an ordinary task within medical professional responsibilities:

> The medical professions have made it their task to keep humans healthy, and part of that health is one's own bodily integrity that is significantly threatened by global warming, by the catastrophes, the food shortages, the water shortages, the floods that will be coming. And bodily integrity requires the integrity of the environment, of nature, of the sociocultural environment. […] Because the human can only be healthy in a healthy environment, it is naturally a completely ordinary medical task to keep the human environment healthy. (Moa)

What Maiev above has described as the individual assuming responsibility for the ecosystems of the planet by assuming the role of a medical professional, Moa describes as the professional group implicitly having assumed such responsibilities by committing to the safeguarding of human health, and thus by extension of the environment. Equally, it is the joining of the medical profession that presupposes a recognition of this responsibility for humans and their environment, not any particular individual characteristic beyond the decision to join their ranks. Recall here again the professional disposition of medical habitus as one of a paternalistic assumption of responsibility for others. Moa's description further mirrors Maiev's by similarly positing the environment as an intricate dimension of human health. The integrity of the environment becomes the prerequisite for that of the human body, closely relating to the social determinants of health model discussed earlier (cf. Chapter 4.3). More so, similarly to the planetary health idea of a healthy planet, the environment itself is being posited as a subject for medical professionals to keep healthy. In this context, involvement in climate activism and advocacy is no longer posited as an expansion of medical practice but an acknowledgement of a "completely ordinary" (Moa), presupposed responsibility. The ecological habitus is here subsumed into medical dispositions, the sensibilities and commitments to radical ecological activism and advocacy being grounded in the parallel sensibilities and commitments to assuming responsibility for human health. Recall here also the earlier clarification that it is doxa that establish the relationship between a field and its attuned habitus. Here then, the presupposition of human health and ecology being one inseparable whole establishes a congruent relationship between dimensions of medical doxa and habitus on the one hand and the field of climate politics and radical ecological practices on the other. Recalling further the discussion on negotiated practice both in the previous chapter and the introduction above, the incongruences or heterodox tensions between contradicting elements of the two are here suspended (Ollis and Hamel-Green 2015). Tara, similarly to Moa above, states:

> This isn't even asking GPs to do more. This isn't additional for GPs. This is good clinical care that we should all be thinking about. […] I really believe that sustainable primary care is good clinical care that we should all be trying to achieve. (Tara)

Tara even more explicitly tethers climate activism and advocacy to clinical care, here regarding sustainability initiatives in primary care settings, equating sustainability to the quality of the latter and concerns for sustainability and efforts towards the achievement thereof to the practice of clinical care. As stressed repeatedly so far, the doxa of the field of medicine quite to the contrary

are informed by a biomedical model of health that focuses on individual, pathological bodies and their curative treatment, not ecological concerns for the sustainability thereof. These doxa and the relationship between the medical habitus and the field of medicine that they inform are here altered (Kirby 2017), relating the quality of clinical care not to the provision of treatment to the individual patient but instead to the sustainability of the treatment itself, moving medical responsibilities in turn beyond the biomedical body of the patient. This tension is potentially what is being suspended by positing the planet and its ecological systems as body-external health-sustaining systems that themselves call for medically concerned interventions. As mentioned in the introduction, radical ecological habitus will be expressed implicitly through descriptions that posit its ordinariness—it is when climate activism and advocacy is expressed as a wholly congruent, expected dimension of medical practice that the radical ecological disposition is most strongly implied. It should be reiterated however, that Tara in particular is specifically speaking about organisational change efforts aiming to make primary care provision more sustainable and structurally more aligned with climate change concerns, not any range of climate activism and advocacy efforts.

The Insufficiency of Biomedical Practice

As mentioned in the introduction to this chapter already, the degree of expressed congruence between the medical profession and climate activism and advocacy differs depending on what dimensions are so perceived as congruent, this posited congruence being principally the result of the negotiation of practice rather than a universal proposition. We have already seen this implicitly expressed in the discussions of medical professional responsibilities above. Several interviewees however pointed out the various perceived conflict points between doxic medical practice and their concerns, ideals, or efforts regarding climate change more explicitly. It is here important to, again, note that in many instances these were described by the same interviewees who expressed the alignments above, stressing once more the partiality of both. How these dimensions of conflict produce concerns and hesitations regarding climate activism and advocacy among medical professionals will be explored in detail in the upcoming section on incongruences. Interviewees however also expressed these conflicts in terms of the limitations of doxic medical practice, positing them not as areas of concern and hesitation but as the departure point for their involvement with climate activism and advocacy within their medical professional role and beyond the confines of the respectively associated biomedical practice. In this then, radical ecological sensibilities and

commitments draw on an explicit critique of the limitations of biomedical practice. Leonie posits her perception of what makes climate activism and advocacy meaningful, responsible, and appropriate for the medical profession by drawing together the perceived limitations of clinical care on the one hand and the medical role as expanding beyond these on the other. She describes this at once as a break with clinically confined medical work and a responsibility to contribute to health beyond clinical work that she sees implicit in the role of the medical professional in society:

> To only do clinical work in the hospital wouldn't be enough of a contribution, so to say, to the health of society for me. I think it is too little. You block out so many parts. I think societal responsibility is part of it, actually also of the medical role. (Leonie)

What Leonie is expressing here is not a rejection of biomedical practice, but rather its expansive alteration in light of an equally expansive medical role perception of hers that ascribes societal responsibilities to the medical profession. This here is similar to the earlier discussed expressions that tether medical to socio-structural concerns, here however by explicitly pointing to an insufficient limitation of clinical work for the perceived responsibilities taken up in the medical role. Leonie's expression of a perceived insufficiency of clinical work for fulfilling the responsibilities of a medical professional importantly does not express a perceived conflict between the perception of the medical role as it is positioned in society and understood by her, but a perceived insufficient realisation of this role in clinical work. It is thus neither her aspired contribution to societal health that is expressed as exceeding medical professional sensibilities and commitments nor a misguided doxa of the field of medicine as to what the medical role ought to be. Rather, it is the insufficiency of the structure of clinical, biomedical practice to appropriately account for this role and its presuppositions. Anna expresses this concern more explicitly:

> I started getting a bit frustrated with clinical medicine because I felt that we were dealing with the problem at this end of the timeline, at the very end when the person is sick, rather than dealing with any of the social and environmental causes of their sickness. Which of course fall on existing lines of inequality and oppression. So I kind of had a bit of an existential crisis being like why am I training to fix this bit, when it's obvious that, yeah fine diseases are biological processes to some extent, but actually these people are sick because of societal and environmental reasons. (Anna)

Anna's description here draws most explicitly on the discussions of the social determinants of health and their critique of a biomedical model that was already mentioned in the preceding chapter (cf. Chapter 4.1, p.83). She relates this realisation of the socio-structural dimensions of human health to what she describes as "a bit of an existential crisis" (Anna) regarding her medical

professional role being reduced to biomedical curative care. Her description here relates closely to what in the medical discourse and literature is referred to as a tension between sick care and health care, problematising the reduction of medical provision to curative responses rather than prevention and health maintaining efforts (Harkin 2004, Marvasti and Stafford 2012). As discussed in the preceding chapter and mentioned above in the positing of the environment as a medical concern, the idea of health being determined by social and environmental factors is a principal presupposition underlying public health approaches. Christian relates these concerns explicitly back to climate change while expanding on the distinction between traditional medicine and public health on both a scalar level and their points of intervention:

> The traditional narrow view is one patient at a time, versus the public health realm which I actually got involved with because of my interest in climate change. I applied for a public health degree while in medical school […] specifically because of my interest in climate and health. And I would say the traditional view of public health is more of a population-level analysis versus a patient-level analysis. That's just like a scale differentiator. Public health is, you know, focused a lot on prevention rather than diagnosis and treatment. (Christian)

Christian here mirrors many of the points raised in the introduction to this and the preceding chapter concerning the characteristics of the biomedical model informing medical practice and the presuppositions thereof. Note that implicit in both Anna's and Christian's descriptions is that this clinical approach to medicine does not sufficiently account for what both of them see as an adequate confrontation of, in Christian's case, climate change or, in Anna's case, human health and its social and environmental causes more generally. Interestingly Christian's description of him supplementing his medical degree with studies of public health due to his interest in climate change is an inversion of Anna's description explored in the preceding chapter of moving through a concern for public health to the issue of climate change (cf. Chapter 4.3, p.100). Implicit in both cases is also a dissatisfaction with or an acknowledgement of a misalignment between what they in light of climate change and other environmental concerns perceive as what they ought to be doing—informed by their radical ecological habitus—and what it is that they are doing in the field of medicine, expressed explicitly as an existential crisis or implicitly in the enrolment in additional degrees.

It should however be noted that this expansion from medical practice to public health discussed above was not necessarily expressed in light of a critically posited limitation of the former, or as a

conflict between the two. Armaan posits both population-level concerns and preventative approaches, described by Christian as contrasting doxic medical practice, as what medical professionals are explicitly charged with:

> I think it is part of our ethical charge that we're helping the patient trying to make them healthy and keep them healthy. We're supposed to advocate on their behalf and it also includes at the public health level. So population level, not just at the individual level. (Armaan)

What Armaan is expressing here is a breaking up of the distinction between biomedical and public health practice, incorporating the socio-structural doxa that are presupposed in public health through the social determinants of health model into biomedical practice. Armaan in contrast to the discussions above stresses the social normativity of such engagements, with medical professionals collectively being charged and expected to engage in this fashion by others, irrespective of their individual sensibilities and commitments. That such a disposition to engage with socio-structural concerns is not a given has been stressed throughout the discussions, and will be explored further in the later section on the perceived incongruences of such engagements.

The Polluter Pays and No Harm Principle

The last of the four groupings of descriptions that posit climate activism and advocacy as a meaningful, responsible, and appropriate effort for medical professionals to engage in revolves around concerns for the detrimental impacts of medical care provision itself. Here interviewees problematised biomedical practice in its structural dimensions and impacts, stressing concerns for the adverse contributions of the healthcare system and medical care to pollution, carbon emissions, and with them the issue of climate change itself. As in the discussions of the insufficiency of biomedical practice above, this problematisation posits not an incongruence between medical professional roles and responsibilities and engagements with climate activism and advocacy but, on the contrary, a point of departure for such commitments. Interviewees were here implicitly drawing on the polluter pays principle of environmental governance, assigning responsibility for addressing the issue of climate change to themselves due to their contribution to it—not in legal procedural terms but as an environmental ethos (Gaines 1991) positing that those responsible for causing environmental degradation are equally responsible for rectifying it. These concerns around the ecological impact of the healthcare system were expressed as a perceived dilSophia between

providing medical services and the consequences of these services for climate change, principally in their contributions to emissions. Leonie describes the issue as such:

> Between five and seven per cent of national emissions come from the healthcare system, because the healthcare system is simply much bigger than people generally think. People think of a GP's surgery or hospitals, but there is of course an entire supply chain attached to that, patient food supply, transportation, drug manufacturing, and all these sectors are very, very strong emitters. And that is something one can improve. On the other hand of course also the adaptation of the healthcare sector to what is in store for us. And that too can only be successfully planned if, first, the problem is acknowledged. (Leonie)

Leonie's description of the situation is in line with the literature on healthcare carbon footprints, a recent review of the issue finding the share of national carbon emissions originating from health care in the United States, Germany, and the United Kingdom to be estimated at 7.9%, 6.7%, and 5.9% respectively, with the majority of these emissions originating from the provision of medical goods (Pichler et al. 2019). Notably, the review finds that "a systemic shift from curative to preventive" (p.6) care is projected to be one of the ways to reduce this footprint, relating back to earlier discussions of public health orientations that problematise the focus on curative approaches in healthcare provision. Leonie also extends these concerns to the adaptation efforts by the healthcare system toward the consequences of climate change that are inevitable, those changes that in the constructions of climate change were previously described as "baked-in" (Christian) (cf. Chapter 4.2, p.87). That this circumstance is something that medical professionals not only, in Leonie's description, need to acknowledge in order to improve but have a responsibility to address, found expression around the idea of nonmaleficence or no harm principle, i.e. the medical duty to avoid harm or injury. Sarah and Christian express this sentiment in similar ways:

> We took an oath, right? Do no harm. It's hard to continue along a pathway of increasing emissions without understanding that that's doing harm. (Sarah)

Christian elaborates:

> If healthcare as an industry worldwide was considered its own country, it would rank about fifth in the world. […] This relates to the Hippocratic Oath, do no harm. We're taking an oath to not do harm to our patients, yet the industries that we work in are harming our patients. Then it becomes our responsibility to try to minimise that fact. (Christian)

Similar to the discussions above, Sarah and Christian frame this professional responsibility around the agency with which medical professionals have assumed their role themselves (cf. Chapter 5.2, pp.125), here through the act of taking an oath. Sarah posits a further increase of emissions through

the provision of medical care as contradicting this oath, while Christian, similar to Leonie above, describes the present state of the healthcare sector's shared responsibility for emissions as incompatible with the responsibility to do no harm. In both cases, we again see an expressed negotiation between simultaneously distinguished and aligned concerns for climate change and medical practice—distinguished from how it is currently and aligned with how it is ideally practised. Here this is expressed as a tension between a dimension of doxic medical practice, expressed in the oath to do no harm, and the practices of the healthcare system as they take place. This tension is not intrinsic to the doxa of the field of medicine in themselves but arises out of confronting these doxa with the heterodox ecologically concerned presuppositions regarding non-human systems' conditioning of human health. It is the intersection of a medical habitus that disposes medical professionals to the provision of medical care to patients and a radical ecological habitus that disposes them to a structural contention of this care in light of its ecological impacts that produces the perceived tensions. These tensions are here negotiated by what I earlier discussed as the positioning of the environment as a medical concern, the linking of by themselves non-medical concerns for carbon emissions and climate change to the medical concerns for human health, in particular through the lens of public health and the environmental dimensions of the social determinants of health model. Importantly this circumstance is not posited as a reason for hesitation regarding engagement with climate activism and advocacy, but rather as a circumstance informing the sensibilities and commitments to do so.

The central takeaway from the discussions so far has been that the tensions between medical and radical ecological habitus are not due to a simple failure of medical practice to adhere to its own doxa but a challenge in the delicate weighing by medical professionals of their medically disposed commitments to present and individual biomedical care and radically ecologically disposed commitments to more abstract and socio-structurally concerned efforts towards climate change and related ecological issues. We have also seen the, at times explicitly acknowledged, efforts to negotiate these tensions, such as through a suspension of the heterodoxies between them and the mutual tethering of the so-strained dimensions to each other. As stressed throughout, this circumstance of tension is here expressed as a basis from which engaging with medical climate activism and advocacy is posited as a sensible response to these tensions, and as such as a meaningful, responsible, and appropriate practice for medical professionals to engage in. Likewise, the discussions have highlighted that these negotiations of sensibilities and commitments happen

from both directions, with climate activist and advocacy efforts being tethered to medical ones, and medical efforts being tethered to climate activist and advocacy ones. I will now turn to the expressed incongruences between the medical profession and climate activism and advocacy in a more focused exploration of the concerns and hesitations for such engagements.

5.3 The Incongruences of Medical Climate Activism and Advocacy

> "Are physicians really part of the solution here? I think the more people who believe they are part of the solution the better, but I always ask myself that question." (Sophia)

As much as climate activism and advocacy was expressed in the interviews as a meaningful, responsible, and appropriate effort for medical professionals to engage in, so too did the interviewees express ways in which these engagements were perceived as confronted with various inhibiting incongruences—resistance from colleagues or institutions, conflicts and boundaries of medical practice, and competing priorities. Positioned in a Bourdieusian framework, these perceived incongruences are informed by particular sensibilities and commitments that express themselves in perceived non-alignments between actors, fields, doxa, habitus, and the practices they shape. In the discussions above we have seen that even the tensions between a medical habitus attuned to the field of medicine and a radical ecological habitus attuned to the field of climate politics can be negotiated to posit medical climate activism and advocacy as a sensible, congruent practice for the medical profession to engage in. In this section on the other hand I will explore how the tensions between them are expressed in their resulting problematisation of medical professional involvement in climate activism and advocacy, describing how the latter can be understood as a practice that is either inappropriate to the medical profession or subordinated to its other priorities. I will discuss the three incongruent dimensions of resistance, boundaries, and priorities successively.

Resistance and Inertia

As mentioned throughout the thesis, all participants interviewed for this research were themselves involved in the practice of medical climate activism and advocacy. Many of the expressed incongruences between the medical profession and its involvement in such efforts were accordingly expressed reflectively in how colleagues or organisations are perceived to hold

concerns and hesitations towards such involvements. In other words, at many points it was not the interviewees themselves expressing such perceived incongruences, but them describing how they perceived other actors in the field of medicine holding such concerns and hesitations towards involvement in climate activism and advocacy. In the discussion of collegial and organisational resistance, participants pointed to healthcare systems resisting responding to climate change, for example by changing their operational processes towards more sustainable ones, due to their established practices having become ingrained in the medical professionals working within them:

> I think there's something about being ingrained in a system, that's just like the way things work, right? These people trained in hospitals. I think a lot of these people came out of a time when you know, like unfettered capitalism was a good thing, advancing society and advancing medicine to make people just 0.1% safer during a procedure. That was progress. And so they see the way the hospital works and they think this is the way it has to work. And they go in and they do an operation every day and it produces four huge bags full of trash and they think like, that's just the way, that's surgery, that's the way it should go. (Sophia)

Sophia's description of how she perceives the resistance from clinical institutions and the actors therein to not even change but merely acknowledge the ecological dimensions of medical practice relates closely to the biomedical model of health as it was discussed earlier (cf. Chapter 4.1, p.82)—explicitly rejecting such socio-structural dimensions as areas of concern. Note also Sophia's explicit reference to and critique of capitalism and its idea of progress whose interests the biomedical model of health was suggested to align with (Collyer 2018, p.122). Put differently, what Sophia is expressing here is a perception of doxic medical practice as she sees it being practised in the field of medicine, wholly inattentive to socio-structural or ecological concerns. It is in this light that we have to appreciate many of the contrasting dispositions discussed in the preceding section as radically ecological, contesting deeply established processes in the field of medicine. Notably, Sophia expresses this situation in effectively practice-theoretical terms, describing the medical habitus she is alluding to as a disposition of medical professionals conditioned by them being "ingrained in a system" (Sophia) whose institutions they have been trained by. One may also recall Edwards' (2011, p.62) observation that to belong to a field is to adopt its doxa. Together the medical habitus and the doxa of the field of medicine inform the sensibilities and commitments—or non-commitments—that Sophia is describing in her perception of the actors in this field not concerning themselves with ecological issues.

That medical institutions are experienced as resistant to change was mirrored by Mahnaz, stating "at least within the healthcare institution that I work at, there's just organisational inertia. That's the easiest way to describe it." (Mahnaz). That what is being problematised here is not merely a passive non-acknowledgement of the issue but rather an active resistance was stressed by Armaan when talking about his experiences with his state's medical association:

> Particularly in my state which is a very conservative state and state medical association, we hear that every year because there's always a resolution that is being introduced. Either by somebody in our delegation or other delegations around the country. On climate change. And the argument every time is this is not within our purview. This is not in our wheelhouse. (Armaan)

In Armaan's example, it is a medical association actively pushing back against climate change resolutions being introduced by its medical professional members based on a perceived transgression of purview. In a Bourdieusian framework, we can think of what Armaan describes as purview or wheelhouse as the social field to which a particular habitus is attuned and to whose presuppositions one subscribes and whose practices one perceives as meaningful and appropriate to engage in. The field posited by Armaan's state medical association is that of medicine subscribed to doxic medical practice, rejecting the meaningfulness, appropriateness, and responsibility of actors therein to be engaging in organisational climate activism and advocacy. It is against these institutionalised perspectives that what I call radical ecological is, as such, radical.

As was already mentioned in the introduction and as Sophia has raised in her description above, one of the central processes by which the medical habitus that may dispose a rejection of climate activism and advocacy as incongruent with the medical profession is acquired is through medical education. Changing this education to alter the dispositions of medical professionals was described by the interviewees as an aspect of their climate activism and advocacy and challenged by resistance and inertia itself. Here is Sarah describing how she sees medical educational institutions themselves as having been and continuing to be resistant to changes:

> Even now it's very hard to get anything introduced into medical education. You know, things move very, very slowly in medical education. It's already very complex, getting anything new introduced takes years, or decades, and it always has and it always will. (Sarah)

Note that the issue as described by Sarah is not at all specific to climate change in its various dimensions that may create tensions with doxic biomedical practices. The introduction of concerns

for climate change into medical education would not only have to compete with particular conflicting positions by medical educational institutions, but with all other newfound medical concerns and insights and their push for integration into the educational curriculum. This then is a reminder that fields are sites of struggle not only between but within themselves. What is being introduced into medical education is, as already mentioned above, not merely a pedagogical question but relates to concerns that participants themselves expressed regarding the engagement of their colleagues in climate activism and advocacy. Jaina describes this circumstance as such:

> It's so out of scope for what we were taught and then it hasn't even really been brought in the continuing education, so there will be resistance I think. Plus it's political you know, they don't want to offend their patients. (Jaina)

Jaina points to four different aspects here. First, that discussions of climate change as an issue of concern are in her experience absent from medical education and training, including continuing education. Because of this, she expects trained medical professionals to be resistant to the idea of engaging in activism and advocacy concerning the issue. To this she adds the concern that the subject of climate change is political, producing further resistance to an engagement with it. Lastly, the particular concern she stresses explicitly is that of offending patients by becoming involved in the issue of climate change due to this political nature. What Jaina is describing is a medical habitus acquired through medical education that is disinterested in climate change and that remains unopposed by contrasting dispositions, either by an absence of exposure to fields whose doxa posit climate change as an issue of concern or by an aversion to the political character of the field of climate politics and the risk of offending patients. This aversion is at once expressive of the medical habitus and its commitment to patient priority and their construction as facing objective, a-political, biomedical issues of individual pathology, and simultaneously distinctly contrasting with the radical ecological habitus, whose disposition to contention suggests rather a taste for climate activism and advocacy as a politically controversial issue (cf. Chapter 5.1, pp.115-116). I will return to the concern for upsetting doctor-patient relationships in the discussions of the following chapter regarding concerns for a loss of capital. It is however not only a fear of offending but of causing harm to patients that may inhibit a contention of doxic medical practice. Maiev expresses this concern for doing things wrong by questioning processes as such:

> In the medical context, I imagine that many are worried that they may do something wrong when they start questioning the mechanisms. In medicine, there are a lot of structures that are dictated. […] One is worried that it could have negative consequences for the health of

> the patient. Although in my view, when you think big and from a planetary health perspective, it is also damaging to exhaust the resources of the earth to achieve perfect adherence to a guideline. (Maiev)

Maiev here does not express a rejection of the concerns over negative consequences for patient health due to medical guidelines being questioned, but rather that she, in line with the perspectives positing the environment as a medical concern that were discussed in the previous section (cf. Chapter 5.2, p.124), sees it as a possibly worthwhile trade-off given the detrimental impacts of medical care provision itself. She does however implicitly acknowledge the validity of the concerns she perceives being held by other medical professionals who are adverse to climate change activism and advocacy. These concerns are here, again, tied to a medical habitus aligned with an individual patient lens that is being posited by the biomedical model of health. In Maiev's description, these dispositions are not suspended but rather contextualised by and extended to the perceived ecological dimensions of human health drawing on the respective environmental dimensions of the social determinants perspective. That these exist in tension with each other has been discussed throughout this thesis so far. I will now turn to the second group of incongruences, revolving around a problematisation of the perceived conflicts between the medical profession and climate change activism and advocacy as expressed by the interviewees themselves.

Conflicts and Boundaries

As mentioned above, there are several tensions between medical and radical ecological sensibilities and commitments that can inform perceived incongruences between the medical profession and climate activism and advocacy. Many of these incongruences were acknowledged by the interviewees themselves. These include conflicts between individual and collective foci, conceptions of biomedical and ecologically embedded health, presently curative and prospectively preventative medicine, and the boundaries of appropriate medical intervention. Sophia expresses these concerns in terms of the practice of medicine and concerns for climate change at large:

> I've always wondered how compatible exactly these two topics are. Like, I'm really interested in climate change because it feels so urgent and necessary to me, but I think I've always known in the back of my head that it's not completely compatible with, like, an individual physician practising medicine. […] There's some tension. Are physicians really part of the solution here? I think the more people who believe they are part of the solution the better, but I always ask myself that question. (Sophia)

Sophia's description stresses the conflict she sees between her perceived necessity to urgently act on climate change on the one hand and the medical practice of individual physicians on the other. Her concern for this conflict is however described as one that she has suspended to the back of her head due to her simultaneous commitment to being precisely such a physician while also, like all the interviewees, engaging in such conflicting climate activism and advocacy. She accordingly expresses the belief that the question of whether physicians should engage with the issue of climate change is to be answered affirmatively, despite continuing to perpetually raise the question herself. Gill expresses this issue of compatibility raised by Sophia even more starkly as a direct conflict that she perceives between healthcare provision and the environment as itself essential to health:

> When you're practising medicine in the UK, it's easy for it to not be about all of these other issues, which actually are probably more important to health than anything. Like, whether you've got access to water, and food, and clean air, and whether your healthcare that you're providing for the generation in front of you is sustainable, that you can provide that healthcare for the next generation. These are all the things that sort of I realised. I sort of always felt that health was in direct conflict with the environment. (Gill)

Gill draws closely on socio-structural concerns to express, similar to the descriptions explored earlier (cf. Chapter 5.2), the perceived embeddedness of health in the social and environmental structures that people live in. That the implications drawn from this circumstance can be shaped in strikingly different ways by the disposed perspectives by which they are understood finds expression in their contrasting description. Rather than describing this connection as a congruent link that aligns medical practice and concerns for the environment, as the perspectives explored in Chapter 5.2 did, Gill posits that the two stand in direct conflict with each other, the practice of medicine degrading the environment and the degraded environment, in turn, degrading human health. Here the tensions between the medical habitus as it aligns with doxic medical practice in the UK and the radical ecological habitus informing concerns for the environment are not resolved in the same way they were in the preceding discussions of congruence. In these discussions, the tensions were resolved in a negotiation altering the medical habitus to one more aligned with an ecologically concerned social determinants perspective. Here, no such negotiation takes place. Instead, Gill even expands health inequality concerns to an intergenerational tension that problematises contemporary medical practice as unsustainable and inaccessible to future generations. In the discussions of the preceding section, in contrast, health inequality was expressed as a tether between medical and radical ecological responsibilities. These unresolved

tensions raise further questions. Gill describes these as a struggle to align her perceived medical professional responsibilities for present patients with those she feels for future generations:

> I think there's big ethical questions in medicine that we need to start grappling with. […] We're at a point in history where the life expectancy of the next generation may decrease due to climate change. So if we're providing very carbon-intensive health care to people in their 80s and 90s, and I've got a baby that I'm supposed to be looking after and giving a good life to, how do I marry that all together? (Gill)

That the very concern for these socio-structural dimensions whose resolution Gill is positing as an unresolved dilSophia for medical professionals can be subject to perceived incongruences was described by Mahnaz, who describes her initial perception of engaging with the social determinants of health as exceeding medical professional purview:

> As a clinician I didn't feel like that was within my purview to kind of scope into the social determinants of health, and looking at racial and other structural issues. (Mahnaz)

Whereas Gill expresses a struggle to align socio-structural concerns for climate change and medical professional responsibilities, Mahnaz describes how she used to perceive such socio-structural concerns as categorically, beyond their relation to climate change, exceeding the purview of her role as a clinician. Note however that Mahnaz is explicitly speaking in the past tense and, as all interviewees, has been actively involved in such socio-structurally concerned climate advocacy and activism. Mahnaz's description here however reminds us that the concerns for the social determinants of health are not a dimension of medical professional sensibilities and commitments that can be taken for granted but, as Christian pointed out earlier, an element of public health perspectives (cf. Chapter 4.3, p.97). Whether biomedical practice and public health practice are best understood as rivals or partners, as some of the existing literature discusses (Krishnan et al. 2014), they do represent distinct perspectives. The tensions between the sensibilities and commitments they inform are a dimension of what Gill posits as unanswered ethical questions for the medical profession. Neither did the interviewees themselves nor can this thesis provide satisfactory answers to these questions of medical ethics. From the discussions in this chapter so far, potential approaches may include a shift from clinical to public health, a move from curative to preventative medicine and, for the facilitation of such shifts and moves, a range of education and communication efforts aiming to share and explore the sensibilities and commitments to human health and climate change held by climate engaged medical professionals. As I will explore further in the next chapter on capital and organisation, such communication and

education efforts represent a dimension of the climate advocacy and activism that medical professionals engage in, and have as such themselves been problematised. That the very attempt to "marry that all together" (Gill) in the context of such communication efforts can produce further perceived incongruences was expressed by Anna in the case of patient contact:

> That is almost a contradiction to the kind of political philosophy that we're trying to teach people. That it's an issue of power and fossil fuel companies and the government, and then we're telling some poor person with COPD that they shouldn't be driving as much. Like, do more cycling! (Anna)

What Anna is describing is not an incongruence between doxic medical practice and climate activism and advocacy itself, here in its dimensions of patient communication, but rather a contradiction that emerges precisely out of the attempt to bridge a potential disconnect between the two by reframing climate change as a medical health issue. The dimension she is explicitly referring to is that of co-benefits discussed in the literature review and the preceding chapter, here advocating for active transportation instead of motorised transport. In particular, Anna is problematising the behavioural change approach that is being perceived as the objective of this co-benefit framed advocacy, an approach she perceives as incompatible with her sensibilities and commitments revolving around a socio-structural construction of climate change and the radical ecological habitus this construction mediates. Malon expressed similar concerns for behavioural change approaches in patient contact, noting that while "as doctors, we have influence over other people's ideas and thoughts about things", she cautions that doing so "is really tricky because you get into areas of the abuse of power" (Malon). Anna in her problematisation is drawing again on her concerns discussed in the preceding chapter around the potential subversion of discourses by others, here in the case of climate advocacy in its socio-structural and individual patient behaviour changes (cf. Chapter 4.3, p.109). In Anna's description then, the tensions between medical and radical ecological sensibilities and commitments cannot easily be resolved by moving concerns informed by the latter closer to those informed by the former, as the tethering of climate change to health produces itself incongruences with radical ecological commitments.

It should be noted that the question that prompted Anna's problematisation here was on climate advocacy in patient contact in general, not on any particular form this advocacy may take. As such it is implicit in her description that, as much as she expresses the need to engage in explicit efforts to politicise or re-politicise the issue of climate change as one of power, corporations, and the

government, there are boundaries to the contexts in which these political dimensions are conceived of as appropriate to be expressed. In her description, these boundaries are drawn around patient contact, with the approaches that she can envision in patient interaction being implicitly limited to the kind of behavioural change efforts that she rejects. Anna herself describes these boundaries in terms of appropriateness:

> I think it can fall quite quickly into like, you should switch off your light switches, which I'm not sure is appropriate for GPs to be telling their patients. Or you should not vote for these people, which is explicitly not appropriate for a doctor, that's not allowed. […] If a patient asks how is climate change going to affect my health, obviously fine. But I don't know how appropriate it is for us to be telling patients to act on climate change. (Anna)

Note that the one dimension she sees suitable for climate change communication in patient contact are the direct, individual patient health-related impacts of climate change and the responses thereto which, as the preceding discussions of adaptation and mitigation have argued (cf. Chapter 4.2, pp.87-88), are concerns closest to the field of medicine and with it the biomedical issue construction of climate change and its attuned medical habitus. Climate activism and advocacy as she expresses it as necessary on the other hand involves efforts that, in line with her expressed construction that she is attempting to teach people, may well involve overtly political actions that lack congruence with what she perceives as medical professional responsibilities and purview in direct patient contact. The medical habitus is, as such, not absent in the sensibilities and commitments to climate activism and advocacy described here, but expressed precisely in Anna's "sense of appropriateness" (Bourdieu 1996, p.252) that disposes the perceived boundaries of patient communication around direct health concerns of that individual patient. It is rather the radical ecological habitus that is being suspended as inappropriate in this setting, that is to say, unattuned to the field of medicine in which patient communication is understood to take place. What Anna is describing in the two types of communications, the appropriate one regarding health impacts and the inappropriate one regarding climate action, Sophia distinguishes as "a mitigation and adaptation conversation", similarly explaining that a "surgeon probably is not going to be having a mitigation conversation" but likewise that "there's definitely an opportunity to talk about adaptation with your patients" (Sophia). Recalling the discussion of biomedical practice in the introduction to the previous chapter as one concerned with curative interventions (cf. Chapter 4.1, p.82), concerns for adaptation here closely align with a medical practice concerned with the treatment of human health ailments in light of the impacts of climate change. As such these

concerns likewise align with an adaptation and individual health impacts focused patient communication that a medical habitus disposes. Concerns for mitigation, on the other hand, align with the socio-structural concerns for power, corporations, and politics and are accordingly rejected by the medical habitus as inappropriate to communicate in patient communication. It should be noted that similar concerns for such a perceived inappropriateness of involvement in the politics of climate change by some in the medical community have been likewise expressed by some in the climate science community (Edwards 2013, Schmidt 2015).

Medical Priorities

The last group of expressed incongruences between climate activism and advocacy and the medical profession I want to discuss is that concerning medical priorities. Interviewees pointed to a perceived necessary prioritisation of medical responsibilities over ecological ones across various dimensions. Sarah describes this perception as such:

> We have a lot of things to do. We have a lot of priorities, and I probably wouldn't want everybody to be a climate activist because they have to do other things. […] Running hospitals is complex business right. So I don't think I'd ever expect or want all doctors to be very actively engaged in climate advocacy. (Sarah)

Note that Sarah expresses a blending of climate activism and advocacy in the way it has been applied throughout this thesis, the two being principally discussed as either an amalgamation or synonymously. Sarah, who as the founder and chairperson of her state's clinician climate action network is herself "very actively engaged" (Sarah) in climate activism and advocacy, stresses that the kind of non-involvement of colleagues discussed as resistance and inertia earlier is not only expected but to some extent necessary given the medical work required to ensure the provision of medical and in particular clinical care. Given her own extensive involvement in climate activism and advocacy Sarah here effectively suspends tensions between medical and radical ecological commitments regarding her own engagement by allocating the respective responsibilities for the former across different medical professionals that are assuming the latter to lesser extents. From this perspective, the absence of concerns for climate change or the non-engagement with the issue by some and not others in the medical profession is itself a balancing process that ensures an accounting for both medical and ecological responsibilities. It should be stressed that this is not Sarah expressing a perceived or desired clean distinction between individuals within the medical

profession as either interested and involved in climate activism and advocacy or not, but rather that the different degree to which they are is not in itself a central issue of concern.

Peter expresses similar sympathy for medical professionals not engaged in the issue of climate change, stating that "there's a lot of pressure on health professionals to be doctors and deal with the pressing medical issue of the day—which I believe is climate change" (Peter). Peter here again acknowledges both sensibilities and commitments, those informed by a medical habitus prioritising concerns for medical issues and those by a radical ecological habitus prioritising climate change. The incongruence between the two in Peter's particular perception is dissolved in his explicit positioning of the latter as what he believes to be the central concern of the former, similar to the earlier discussions on congruence. As discussed before, positing climate change as a medical concern carries with it a dispositionally perceived responsibility to respond to the so-posited health issue in precisely this light of medical practice. Peter stressing a construction that links medical professional responsibilities to climate change by positing the latter as the "pressing medical issue of the day" (Peter) is him also acknowledging the implicit incongruence of medical professional priorities with concerns for the climate in the absence of such construction. It is not climate change by itself, in its socio-structural and ecological dimensions, but its positioning as a medical issue that justifies a shift of priority and attention by the medical profession towards it. Peter acknowledges this explicitly while discussing the political dimensions of these concerns, stressing that he has and is continuing to struggle with more political activism and advocacy efforts himself, both in light of his medical professional role as well as outside of it:

> I had avoided politics and advocacy and all of that for my entire professional career. In my profession and outside my profession. Just because I had no confidence in the system, and I could contribute more where I had expertise, and it wasn't as a politician. It was as a clinician, and as an educator, and as a responder. And I still believe that to be true, but once we set up systems that we think are good then we will have to go political. (Peter)

Peter stresses that he perceived his ability to contribute to clinical work, education, and medical emergency response in the field of medicine to supersede that of his potential contributions to advocacy efforts in the field of climate politics. He likewise however posits that while such more political engagements may not be the most suitable route for medical professionals at the moment, once systems have been established that facilitate such involvement in the future it will be a necessary next step. The radical ecological habitus is here temporarily suspended in light of the incongruence of priorities between applying medical expertise in the field of medicine and

engaging, less efficaciously, in political climate advocacy, with such political climate action being directed into the future. Note however that this suspension is here again partial, directed at precisely such more radically political activist efforts, not any form of climate activism and advocacy in general.

The significance of temporality was expressed also in ways relating back to the discussions in the preceding chapters on the contemporary presence of climate change. Here is Sophia on the concern and responsibility for individual patient treatment presenting itself more directly and acutely than that for climate action:

> All the lives that are affected by our continued emissions and waste production are a lot less tangible, they're not sitting right in front of you in an office. They're like, you know, a heat wave that might happen in twenty years or something and you just don't feel the same level of responsibility. […] The person sitting in front of you and their pain and suffering, it's just a lot more real than this ambiguous or vague suffering that might happen to a large group of people in the future. (Sophia)

Sophia describes what she perceives as an imbalance between the salience of climate change concerns and the realities of clinical care for the perceived medical professional priorities and responsibilities to be involved. There is a notable contrast between what Sophia expresses here and what was described by other interviewees in the discussions of the biomedical construction of climate change in the preceding chapter. Here it is precisely not the impacts of climate change that are described as presenting themselves in the present, but the various unrelated biomedical pathologies of individual patients sitting in front of the medical professional that call for medical intervention and treatment. As climate change presents more ambiguous, intangible and future suffering, the pain and suffering of patients in the present is posited as producing more of a sense of medical responsibility and concern than the indirect impacts that the emissions of their treatment may have in the future. What Sophia describes here is an incongruence between a medical habitus that disposes a sense of responsibility for the health of an individual present patient and an ecological habitus that disposes concerns for the environmental conditioning of future human lives. In other words, she posits a temporal incongruence between the contemporary concerns of medical practice and the prospective concerns for climate change, the former taking precedence. It is in this light that we have to understand the importance of the earlier discussed biomedical construction of climate change for bridging precisely this salience gap, positing climate change not as such a prospective future but present contemporary health issue evoking sensibilities and

commitments that align with the here posited medical disposition to prioritise pain and suffering as it presents and is attested to (Ezrahi 1990, p.74) in the present and in person.

Note that Sophia relates the tension pronounced here again to the health sector's contributions to climate change discussed in the preceding chapter on the polluter pays and no harm principle—i.e. a tension of compatibility between medical practice within existing healthcare systems and concerns for the emissions of these systems. In this, the conflicting sense of responsibility towards concrete present and abstract future patients mirrors how the provision of present care conflicts with the future harm caused by this provision. What finds expression here also relates to what the social science literature on climate change discusses under the concept of psychological distance. This literature is particularly concerned with climate change risk perception and highlights that higher levels of perceived temporal, social, and geographical distance of climate change relate to lower threat perception, concern, and corresponding behavioural intentions (Spence et al. 2012). Sophia continues:

> I think the first question I ever asked myself is like, do we need healthcare to be sustainable in order to have a sustainable world? Like maybe the impact we have as a hospital is offset by the fact that we're doing so much good. (Sophia)

What Sophia problematises is a contribution ethic that justifies the detrimental impacts of the practices in the healthcare sector on the basis of its contributions to the good—the prioritisation of the latter absolving from ecological responsibilities. The concept of contribution ethic, also referred to as the idea of resting on one's laurels, has itself been the subject of discussion in the social science literature on climate change and environmental behaviours and refers to "the perception of the extent to which an individual feels they have made an appropriate contribution to a moral good such as the environment" (Nash et al. 2017, p.9) by having taken other related actions. Here explicitly it may find expression in the understanding that individual patient care constitutes an appropriately sufficient contribution of medical practice to human health, in turn underlying Sophia's questioning whether or not additional concerns for the sustainability of these contributions are within the responsibilities of the medical profession. A central dimension of the contribution ethic is that of single-action bias, referring to the perception of substitutability between two actions when both are perceived as contributing towards a shared goal (ibid., Shome and Marx 2009, pp.21-23). Recalling the discussions in this chapter so far and the previous exploration of constructions of climate change, it has become clear that concerns for the issue of

climate change are frequently positioned as explicitly pursuing and contributing to the goal of maintaining and securing human health precisely in line with medical professional sensibilities and commitments. When taking the perspective of the environment and human health constituting one system to its conclusion, environmental action can ultimately come to be perceived as substitutable by medical action. The production of a perceived good in medical practice can be, subsequently, potentially posited as sufficient to account for one's responsibility towards environmental concerns (and vice versa). In the social science literature on environmental efforts, this idea of substitutability has also been problematised under the term behavioural spillover (Maki et al. 2019). As scholars have pointed out, this issue of assumed spillover or single-action bias plays out not only on the level of individual climate action but, for example, on institutional levels such as climate policy and legislation (Thøgersen and Crompton 2009). Notably however, Sophia herself presents a self-aware critique of these processes, discussing the idea of substitutability not as a conclusion but as a train of thought that she ultimately rejected, concluding instead that "I settled on no, we need to reduce our impact too" (Sophia). That said, this relationship between human health and the environment that is itself the product of attempts to negotiate a congruence between the medical profession and climate activism and advocacy could here, counterintuitively, result in a non-engagement with the latter similar to the earlier mentioned tensions between health framing and socio-structural concerns (cf. Chapter 5.3, p.140).

5.4 Conclusion

This chapter explored the intersection between medical and radical ecological habitus as dimensions of two respective sets of sensibilities and commitments that inform medical climate activism and advocacy. This practice of medical climate activism and advocacy that sits at the intersection of the two is faced with simultaneous perceptions of congruence and incongruence; perceptions of the engagement in such efforts as both meaningful, responsible, and appropriate and not, i.e. perceptions that dispose medical professionals to engage or not to engage in them. The first section of this chapter discussed the various ways in which interviewees described climate activism and advocacy as a meaningful practice for medical professionals, expressed through a sense of appropriateness of and responsibility for engaging with such efforts. Interviewees simultaneously distinguished and aligned medical and radical ecological sensibilities and

commitments, at times positing the engagement with climate activism and advocacy as a natural extension or integral part of medical practice, at others as necessarily moving beyond the biomedical boundaries of the latter. In both these dimensions, interviewees were shown to draw on perceived responsibilities of medical professional roles, in particular that of acting towards the interests of patients. It is in this so-negotiated practice and the role perceptions therein that interviewees expressed their understanding of the relationships between medical and radical ecological sensibilities and commitments as congruent, constructing congruence between the two by either incorporating the latter into the former or by expanding the former to the latter.

The second section meanwhile highlighted that these perceptions of congruence are not universal. The incongruences between what is perceived to constitute appropriate medical professional practice on the one hand and climate activism and advocacy on the other include a disposed disregard for socio-structural concerns in biomedical practice, a perceived potential transgression of professional purview, and conflicts between priorities for the provision of clinical care and concerns for climate change. Some of these tensions, in particular the conflict between care provision and sustainability, were notably acknowledged in the first section already, there however insofar as providing a point from which perceived responsibilities for the involvement in such activism and advocacy depart. Here on the other hand they inform a non-involvement, principally reflectively expressed in previously held perceptions by the interviewees or on part of their colleagues, but also involving ongoing perceived limitations to the extent of the appropriateness of these efforts and hesitations around more radical political involvements.

These discussions highlight once more how medical climate activism and advocacy expresses itself as a negotiated practice, with medical climate activists and advocates finding themselves balancing between the two fields of medicine and climate politics, their presuppositions, and their respectively attuned habitus. The doxa and habitus that relate to and align with the two fields are simultaneously drawn on and suspended to different degrees, constructing negotiated sensibilities and commitments for and against engaging with climate change activism and advocacy as a medical professional. In the next and final findings chapter I will discuss in more detail a last but equally central dimension of this negotiated practice of medical climate activism and advocacy, namely the capital that medical professionals operationalise in this practice and the costs they incur for engaging in it.

Chapter 6: The Operationalisation of Medical Professional Capital

6.1 Introduction

Up to this point, this thesis has principally explored two questions. The first concerned the constructions of climate change expressed by medical professionals engaged in climate change activism and advocacy. That is to say, it explored how climate change is understood and positioned as an issue of concern by and for the medical profession in particular and society at large. The second question concerned how medical climate activists and advocates give meaning to their efforts, in particular as they relate to their profession. That is to say, it explored how medical climate activism and advocacy is understood as a meaningful, responsible, and appropriate practice for the medical profession to engage in. Across these two closely related questions this thesis has employed a Bourdieusian framework to analyse the sensibilities and commitments that inform these efforts, positioning them in a system of doxa, habitus, and their relations to practices unfolding in social fields, all central dimensions of said framework. Through this analysis I have shown that medical climate activists and advocates are engaged in carefully balanced, reflective, and perpetually tentative negotiations between two sets of sensibilities and commitments, theoretically positioned as biomedical and socio-structural doxa and medical and radical ecological habitus in tension with each other at the intersection of the fields of medicine and climate politics.

In this final findings chapter, these preceding discussions will be brought together and embedded in the last central dimension of the theoretical framework, namely that of capital. It is in this dimension of capital that the negotiations discussed up to this point are put into operation. This chapter begins by exploring how the medical professionals involved in climate activism and advocacy operationalise their medical professional capital in the field of climate politics and perceive their resulting efficacy to affect the issue of climate change. The discussion of capital and efficacy is thereby split into three aspects: trust, talking health, and networks. All three of these aspects will be discussed in consecutive sections and are to be understood in a Bourdieusian framework as medical professionals employing different expressions of capital in their climate activism and advocacy to affect the perceptions of and actions taken towards climate change by others. Following these discussions of efficacy, I will highlight the expressed concerns about the risks of such efforts. These concerns for the potential risks of these efforts are concerns for the loss

of capital, i.e. the costs involved in operationalising medical professional capital in the field of climate politics. Much of the practice-theoretical underpinning of this chapter has already been discussed in the literature review and the two preceding chapters. It is nonetheless worthwhile to briefly posit more specifically how these preceding discussions relate to the issue of capital.

Some of the aforementioned literature employing a practice-theoretical lens has presented similar analyses of capital and efficacy. I already mentioned in Chapter 4 on the characteristics of fields and their doxa, that it is capital that represents the operative force behind the struggles by which positions in social fields are assumed, challenged, and sustained (Bourdieu 1996, p.113). As Storey et al. (2017) note, the positions of agents in these fields are sustained or challenged through their deployment of different types of capital that align and become operative within said fields (p.93). Which capital provides or in any case is prioritised in the provision of the efficacy to do so depends on the fields and their doxa themselves. We have for example seen that in the field of medicine the ability to objectively render medical concerns visible and treat them through the application of scientific knowledge may present one such operative capital (cf. Chapter 5.1, p.117). Likewise the access to consult or educate people on the relationship between the environment and human health so as to affect perceptions of and interactions with the environment may present operative capital in the field of climate politics or environmentalism more broadly (cf. Chapter 5.1, p.116).

In their analysis of ecological habitus in pro-environmental discourses, Nilan (2017) argues, in line with Storey et al. (2017) above, that activists exercise their capital upon entering the field of environmental activism "in attempts to persuade others to act sustainably" (p.371). Put into the context of this analysis, this posits a process by which medical professionals deploy what they perceive to be their capital when entering the field of climate politics in order to affect the climate action taken by others, be it within medical practices and organisations, political decision making, or patient behaviour. It is important to reiterate here something that I already pointed out in the literature review, namely that in the Bourdieusian framework this is not to be understood as a linear, rational choice process (cf. Chapter 2.4, p.43). Rather, the exercising of capital is itself disposed and likewise affects the dispositions, i.e. habitus, it relates to—this habitus functioning as a "structuring structure, which organizes practices and the perceptions of practices" (Bourdieu 1996, p.170). As Nilan (2017) notes, when entering a social field the habitus with which one enters it can be modified in accordance with the "forms of capital which have currency and value in that field" (p.370). We have seen dimensions of this expressed in the negotiations between the

sensibilities and commitments explored throughout this thesis so far. Just as much as the doxa and habitus discussed before were explicitly positioned as both structuring and being structured by the various perceptions and engagements expressed in the interviews, so too are the descriptions of perceived capital and concerns for costs thereof as much a precondition as a consequence of these perceptions and engagements. The purpose of the analysis as such cannot be to infer causal relationships between either of the two but to understand the ongoing meaning-making of the so-involved medical professionals regarding their efforts—capital being the dimension of this meaning-making to be discussed in this chapter. It is in this structured perspective that positions capital alongside doxa, habitus, and fields as closely related aspects of practices that we have to understand what capital is and does.

As Hughes (2015) points out, within a Bourdieusian framework "not all actors have the same capacity, or symbolic power, to determine the meaning of climate change" (p.88). This shaping of the meaning of climate change here finds expression in activism and advocacy efforts that attempt to change how the issue is understood and acted towards by others. This symbolic power to affect a field and the practices therein will in this analysis, in light of Bourdieu's own use of the terminology, be referred to as efficacy, i.e. that which is obtained through the operationalisation of capital. As noted by Storey et al. (2017) above, capital demands alignment with a field. To employ capital as efficacious capacities thus requires its operationalisation—efforts "depending on the field in which it functions, and at the cost of the more or less expensive transformations which are the precondition for its efficacy in the field in question" (Bourdieu 1985, p.243). This chapter will highlight three such expressions of capital and their operationalisations in the pursuit of medical climate activism and advocacy: trust, the ability to speak to issues of health, and professional networks. It should be noted here, that these three are not exhaustive of all the capital operative in the field of climate politics nor of that operationalised in medical climate activism and advocacy, but three central expressions thereof that were prominent in the interviews.

Much could be said about the distinct types of capital that are being operationalised in this way here, the three fundamental guises of which Bourdieu posits as economic, cultural, and social capital, each expressing itself in different forms. I have briefly summarised their respective characteristics in the literature review already (cf. Chapter 2.4, p.40). As laid out there, the self-explanatory economic capital refers to financial assets and property rights. Cultural capital in its embodied form has implicitly been analysed at length, namely in the much-discussed habitus of

the preceding chapter. In its institutionalised form however, it most closely relates here to the educational qualifications and professional standings of members of the medical profession, i.e. precisely their profession (cf. also Chapter 2.4, pp.48-49). Social capital meanwhile represents the group and social network memberships and participations of medical professionals. As we will see in the section on networks this relates closely to organising efforts aiming to strengthen the efficacy of the other aforementioned expressions of capital.

This differentiation is helpful insofar as it informs the structuring of the analysis by the expressions of these guises of capital and their forms in the perceived efficacy by medical professionals that much of this chapter is concerned with. Cultural capital will be discussed in the first two sections on trust and talking health as characteristics of the standing of the medical profession, or put differently, the perceived implications thereof for what individual members of the medical profession can do and are perceived as when doing. Social capital on the other hand will be discussed in the third section on networks as precisely the "actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships" (Bourdieu 1985, p.248). Again put differently, it is this social capital or the strengthening thereof that medical professionals perceive themselves as principally deriving from organising with other like-minded medical climate activists and advocates. Research on the so-perceived capital by medical professionals employing a Bourdieusian perspective has similarly encountered trust, collegial appreciation, and having private and professional networks with other doctors described as of central importance to their perceived position in the medical field (Olsson et al. 2019, p.11).

Despite the usefulness of this demarcation for the structuring of this chapter, it suffices to say that all capital is symbolic capital insofar as it is understood as such (cf. Chapter 2.4, p.44)—or as Bourdieu writes, symbolic capital is "not a particular kind of capital but what every kind of capital becomes when it is misrecognized as capital" (2000, p.242). It is this capital that provides medical professionals with efficacy in their pursuit of climate activism and advocacy. To summarise, capital here refers to the various characteristics of medical professionals—their positions in the social order—that are being operationalised in the pursuit of medical climate activism and advocacy. Three expressions thereof will be explored in more detail in this chapter: trust, the ability to talk about health, and networks. Trust, and closely related aspects such as perceived impartiality, are the first central aspect of capital expressed by interviewees. The ability to talk about health, in particular the ability to frame the issue of climate change in terms of health, is the second of these

aspects. The third aspect of networks meanwhile refers to the benefits derived from collective organising efforts that strengthen the previous two aspects of capital either directly or by sustaining the efforts of its operationalisation. Across all three, efficacy refers to the capacity to affect the desired modifications of understandings of and actions taken towards climate change by others resulting from this operationalisation of capital. The potential costs of operationalising and deploying this capital, either through potential loss, decline, or opportunity cost, are thus of direct concern for the efficacy that can be derived from it and will be discussed last.

6.2 Operationalising Trust

The first basis of perceived efficacy that the participants expressed during the interviews that I want to discuss is that of trust. This expression was in line with the significance given to public trust held by medical professionals in the various publications calling on their involvement in climate activism and advocacy that I mentioned in the literature review (cf. Chapter 2.3). It should also be again noted that various survey research, such as the Ipsos MRBI Veracity Index in the United Kingdom or the IfD Berufsprestige-Skala in Germany, has supported this perception, having consistently found medical doctors among the most trusted professional groups (IfD Allensbach 2013, Ipsos 2018, cf. also Chapter 2.4, p.47). Trust as a moderator of the perception of climate change communication efforts has a substantial basis in the research literature, with higher levels of interpersonal and epistemic trust being associated with greater reception of climate-related information, shifts in environmental attitudes, and willingness to change behaviours (Almassi 2012, Smith and Mayer 2018, Fairbrother et al. 2019). As Siisiäinen (2003) notes, while the concept of trust is itself little developed in Bourdieusian practice theory it can be usefully subsumed as a component of the symbolic capital that individuals draw on in their struggles within fields (p.1). Some of the aforementioned literature on trust and climate change perceptions and attitudes does indeed use quasi-Bourdieusian language referring to trust as a persuasive commodity or capacity, synonymous with capital and efficacy in this analysis (e.g. Saunders 2017). The centrality of trust to how medical professionals expressed their capacity to affect the understanding of and actions towards the issue of climate change was apparent throughout the interviews. In the discussions thereof, participants commonly connected this concern for trust to dimensions of perceived altruism, respect, status, and objectivity. In what follows I will discuss these various

dimensions in more detail. Tara describes her experience with generating attention to what she had to say on climate change as relating to trust and altruism as such:

> You know we are trusted. I think the thing I learned from Extinction Rebellion was that you could get in the newspapers, you know. We did a protest and we all dressed up in scrubs and it made the Daily Mail […]. So I think there's a trust point of view. There's a sort of interest point of view, because doctors often do make it into stuff where people are interested in their lives. And then I think there was a kind of a hope that it's a self-selecting group of people who are altruistic, and people who uphold a code that we all signed up to. (Tara)

As mentioned above, trust is here diffused with aspects of interest, altruism, and a codified self-restraint of the medical profession. It was, in Tara's description, the ostentatious appearance as medical professionals during the protest—the wearing of medical uniforms—that in her experience produced the attention to what she and her fellow activists were doing, backed by what she perceives as a general interest in doctors. Tara's referencing of the medical profession upholding a code closely relates back to discussions of a no harm principle and the Hippocratic Oath in the preceding chapter (cf. Chapter 5.2, p.131). In the earlier discussions the implications of this oath, or code, were discussed in light of a responsibility to avoid causing and averting harm to patients. Here on the other hand it is the recognition of medical professionals upholding this code by others that grants them the trust on whose basis the concerns for climate change that they express, such as in the protest by Extinction Rebellion that Tara describes, are given attention. Note also the reference to altruism here, again relating to the earlier discussed medical disposition of paternalism and acting in the interest of others (cf. Chapter 5.1, p.118). Armaan raises a similar point as to the ability of the medical profession to command attention, cautioning however that interest and willingness to listen does not itself produce agreement with what is being said:

> Physicians […] are one of the most respected professions in the country, and probably in the world. But definitely in the country. So people will listen to them, if their doctor tells them about it they're more likely to listen and learn more about it. Whether or not they agree with it is a different story. (Armaan)

The trust given to medical professionals and the medical paternalism that finds expression in the doctor-patient relationship is, while clearly present in the description above, perceived as limited to a greater degree than one would imagine in contexts more directly tied to medical practice, such as the prescription of medication. The efficacy of medical professionals to affect understandings of and actions toward climate change is here at once acknowledged as unique and posited as

nevertheless limited. Gill expresses similar reservation in what she at once describes as her unique efficacy as a medical professional but simultaneously the potentially limited success of her efforts:

> I have no choice. Because even if it doesn't work, like, what are you going to do? […] I'm a doctor, and I feel like I have agency. And I could maybe make some people listen. So I'm just gonna try. (Gill)

The simultaneous explicit positioning of medical professional agency as extraordinary on the one hand but consciously restrained in its expectations of efficacy on the other highlights the multiplicity of capital that is implicitly perceived to compete over understandings and actions in the field of climate politics at large. One could here think of the various oppositions discussed in the preceding chapters, in particular those of corporate interest (cf. Chapter 4.3, p.102) or opposing expectations towards medical practice in the healthcare sector (cf. Chapter 5.3). In Armaan's description above, these limits of expected efficacy are expressed even in the context of direct doctor-patient contact, a dimension potentially closest to established medical practice and thus the capital of the medical profession that is already operative in the field of medicine itself. The various forms of medical climate activism and advocacy moving further outside of the field of medicine, such as those of the protest efforts described by Tara above, presumably present even greater challenges to the operationalisation of this medical professional capital of trust.

It is however not only the effects of their climate activism and advocacy that the interviewees expressed themselves as being conscious of their limitations of but also the sensitivity to the approaches taken towards it. Sarah explains:

> We have no skin in the game here. We're not making any money right, we don't do this because we're selling something. We're truly… our mission is to keep people healthy, that's what we do. And I think people understand that. As a paediatrician I'm motivated just to keep children healthy, I'm also motivated to protect their future, to preserve a liveable planet for our children's future. And I think people just understand that, they understand that's what motivates us. And also that we are careful in that we rely on evidence-based information. And that's critical, as clinicians, that we do remain grounded in evidence-based data and that we adhere to those standards. (Sarah)

Sarah, similar to Tara and Armaan above, highlights her belief that people trust their doctors because they perceive them to hold no conflict of interest, instead being, in Tara's words, perceived as altruistically motivated. Sarah however also highlights that the trust that provides medical professionals with the efficacy to affect people's understanding of and actions towards climate change is conditioned by the profession's grounding in evidence based data and information. It is

thus not a blank cheque to express and affect beliefs and opinions regarding anything, but rather the ability to relay evidential information in such a fashion that adheres to the standards set for the medical profession. Note however how Sarah explicitly related the protection of the future and the preservation of a liveable planet as an expected and understood dimension of medical professional motivation and interest. In this we see, again, the explicit attempts at bridging medical professional and radical ecological practices as relating closely to each other, similarly to what we have already explored in the preceding chapters. Rather than producing a tension between the two respective fields in which these practices unfold, it is this perceived altruistic medical-ecological impetus that Sarah describes that is posited as granting medical professionals the trust by others in their pursued climate activism and advocacy. The perception of medical professionals being motivated by the interest of others that Sarah posits can also be contrasted with what senior American physiologist James describes as a general distrust into the motivations of other groups and institutions in contemporary society:

> Medical professionals have some status in our country still as being objective. And there is a general distrust at the present time in politicians and business and banks and some of our institutions. (James)

Similar to Sarah's concern for grounding the actions of medical professionals in evidence-based information and data, James highlights the importance of perceived objectivity in the decision making of the medical profession and the perceived lack of such objectivity based trust in other institutions. Relating to the discussions in the literature review earlier, scholars in science and technology studies have argued that one of the ways in which the professions construct and self-affirm their professional categorisations (cf. Chapter 2.4, p.49) is through positing and expressing particular modes of reason, modes that are posited as the basis of credible participation in particular public debates (Cohn 1990, p.24)—in a Bourdieusian framework one may think of particular capital in particular fields. As these scholars stress, one mode of reason of particular centrality to the construction of professional categorisations is that of disinterestedness and objectivity—"the kind of respect for facts which supposedly binds technical experts in the various professions" (Ezrahi 1990, p.89). As Jasanoff (2011a) points out, this perceived respect for facts by the professions is as little a natural given as the professional categorisation itself, but instead requires a sustained "work of representation and persuasion that actors must do to project credibility, objectivity, and truth to nonscientific audiences" (p.312). This representational work in front of

nonprofessional, public audiences that maintains the structuring of professional groups is on the one hand drawing on the capital available to their respective professionals, and on the other hand itself structured by their "forms of life or, in Bourdieu's term, their habitus" (ibid.).

It is in light of this trust and credibility that some of the interviewees positioned medical professionals and their institutions as role models within societies. Fred describes this as the British National Health Service being an institution "that the public do look to […] as an exemplar" (Fred), in turn giving the institution and its members the efficacy to be "leading by example, setting the tone, setting the pace, setting the direction" (Fred) of climate policy and action. Jaina similarly positions medical professionals both on an individual and institutional level as role models:

> You're a role model. You're a role model for all of your patients and the whole community. There's so much trust in doctors, that you have such a privilege, well you have a megaphone because what you say is really listened to. […] If the American Academy of Pediatrics and other groups took stance or publicly supported things that would help with climate change, whether it's legislation or advocacy, that could be big. You have that credibility that could be a big voice in climate change. (Jaina)

Note that in Jaina's description this potential efficacy of medical professionals and their institutions remains unrealised, relating back to some of the frustrations with ongoing inaction by colleagues or the healthcare sector mentioned in the preceding chapter's discussions of resistance and inertia (cf. Chapter 5.3). It is also notable that Jaina describes this potential efficacy as a privilege, implying a respective expectation to appreciate this privilege by exhausting it. Here this privilege is expressed principally in being listened to, in having a megaphone, relating closely to Tara's and Armaan's earlier descriptions of capital as voice. Note that the notion of privilege also relates closely to the earlier discussions in the preceding chapter regarding the responsibility of medical professionals to speak out and lend their voice to the concerns of their patients whose stories may otherwise remain unheard (cf. Chapter 5.2, pp.121-122). Peter similarly states:

> Whether they are ill or injured because of climate change or any other reason we're there to help them and protect them. And that puts us in close contact with them and theoretically that's why they trust us. So right now the medical profession is an in enviable position of trust. (Peter)

Here again, the notion of a privileged position of the medical profession is related directly to the profession's responsibility to help and protect. Note that this position of trust is both a basis of responsibility as much as a consequence of the upholding of said responsibilities, highlighting

again the perception of the medical professional efficacy to affect people's ideas and actions as a tentative, non-guaranteed circumstance derived from the adherence to standards. This is essential insofar as it expresses both the awareness of and care taken to avoid the potential costs of breaking with these standards, such as by engaging in a possibly incongruent practice of climate change activism and advocacy. It is this awareness that has in part informed both the hesitations discussed in the preceding chapter and the concerns for said costs to be discussed later in this chapter. This enviable position of trust that Peter and others above have highlighted is positioned by Sophia as one relating closely to the communication of science:

> Being sort of a trusted figure, a trusted science communicator as a physician, we are constantly communicating science to patients. You know, mostly about their own body, but being a communicator about climate change as well. Because it will impact health, and so being able to speak to larger audiences in the form of, you know, social media or advocating as a lobbyist, advocating to politicians and sort of using that inherent power we have as physicians to sort of change the conversation, focus it on the health impacts. (Sophia)

The connection Sophia draws between the communication of health and climate change builds on a biomedical focus on the patient body similar to the construction of climate change as a biomedical issue discussed earlier (cf. Chapter 4.2). Here, the capital to communicate science that medical professionals hold within the field of medicine regarding the body of the patient is extrapolated to a perceived capital to communicate science concerning climate change, not only to said patient but in a wider range of contexts. The various contexts Sophia lists in which this communicative capacity is envisioned to be employed exceed direct patient contact, going as far as explicitly political efforts such as lobbying and political advocacy. The power to change the climate change conversation that Sophia stresses is itself partially resting in the need to focus this conversation on health impacts, tying the science communication she is describing as a common practice of medical professionals directly to the issue of a health framing of climate change. In her expression, this health framing itself is a task requiring capital, the efficacy to do so being inherent in the positions of trusted communicators of science that medical professionals find themselves in. Sophia here bridges the discussion of trust at hand with the second aspect to be discussed, that of the ability to speak to and from within health. I will now look at this perceived efficacy of talking about the issue in terms of health in more detail.

6.3 Talking Health

I have already briefly discussed the idea of framing in the literature review chapter on climate change and its contestation (cf. Chapter 2.2, p.22) as well as in the context of potential tensions between health framing approaches and socio-structural sensibilities and commitments (cf. Chapter 5.3, p.140). As mentioned in the literature review, framing is a major topic of discussion in the research literature on climate change communication. In this literature, principally concerned with the ways in which communication approaches affect opinions and behaviours towards climate change of different audiences, framing refers to the modification of how climate change is discussed without a significant alteration to the informational content that is being provided, i.e. the modification of the wording, organising, or packaging of said information (Borah 2011). As highlighted in the review, a substantial body of literature on health framing of climate change exists that shows that communication approaches focusing on human health and the health impacts of climate change have greater salience, receive more attention, and produce stronger intentions of behavioural change than alternative frames. During the interviews, participants drew on similarly informed perceptions, at many points positing explicitly a perceived efficacy of discussing climate change in terms of human health. Central to these expressions was the medical expertise that positions medical professionals as authoritative voices on such issues of human health. At times interviewees highlighted the salience of health framing more generally, at others they pointed explicitly to medical professionals as being precisely the actors positioned and endowed with the capacity to present such frames. Gill describes her perceptions as such:

> I think as soon as you start linking climate change and ecological degradation to health, in a very obvious way, then I think people would become much more interested. It's less abstract, and people care about their health more than they care about anything else probably. (Gill)

Climate change being posited as a health issue to get people "much more interested" (Gill) in the subject relates closely to what I previously discussed as the salience of the health crisis construction of climate change (cf. Chapter 4.2, p.90). In that preceding discussion, the aspect of salience concerned climate change as an issue that enters medical professional concern and awareness through its crisification, i.e. its urgency and experienced presence. Here this salience expands and gets reflected onto the perceived audiences of the so-concerned and thus engaged medical professionals, drawing on the concerns for health held by patients in the same way it draws

on the respective concerns of doctors for their patients. Moritz similarly points out that the health dimensions of climate change are at once a salient issue that people are receptive to and that, at the same time, have been poorly conveyed so far:

> There is little awareness on the topic of health, most people don't have it on their radar when it comes to the climate. But when you address it, people understand. Most understand already that heat will be a problem. You run down open doors there. When you break it down concretely and don't ideologise it, then it's easy to convey. (Moritz)

Moritz cautions, similar to the concerns for objectivity and remaining grounded in evidence-based data that I highlighted earlier (cf. Chapter 6.2 p.154), to not ideologise these so-framed communication efforts. In discussing such expressed concerns by the interviewees it is important to recall the point already highlighted by Sophia above, namely that the framing of climate change in this way is itself a communication effort that rests on particular capital that enables it. Recalling Hughes' (2015) argument raised earlier that "not all actors have the same capacity, or symbolic power, to determine the meaning of climate change" (p.88), so too do not all actors have the same capacity to frame climate change as a health issue—the intended effect of which being precisely such a determination of the meaning of climate change. The issue at hand here is accordingly not only the level of salience of the health framing of climate change as such but also the ways in which medical professionals perceive themselves as being in a position to operationalise this framing. The two are as a matter of efficacy closely related and were expressed as such, as Sophia does here:

> Health is how we make climate change tangible to people, you know […] focus on like your health will be impacted, the health of your children and your grandchildren will be threatened by unmitigated climate change. I think that is the path that physicians can take. To make it more relatable and feel more urgent, actionable, for individual people. (Sophia)

Note that despite her earlier mentioned focus on science communication above, Sophia describes the efficacy of the health framing not in terms of transmitting any particular knowledge about climate change and its related science, but rather in its capacity to make the issue tangible or relatable, to produce a feeling of urgency and agency to address it. In this, she positions physicians as the group able to employ this framing so as to relay such a sense of concern and actionability. As previously mentioned in the literature review, this blending of risk, health, and science communication under the umbrella of raising concern for climate change is similarly present in the research literature on climate change communication (Nerlich et al. 2010, p.3). While this

amalgamation of what talking about climate change is meant to convey is here reproduced, it is also complicated by the circumstance that the ability to communicate any one of these particular aspects of climate change depends on who it is that is doing the talking—here in particular concerning the aspect of health and the distribution of the capital to efficaciously present the respective health framing. As Malon points out, this framing approach of climate change in terms of health is not necessarily by itself uniquely positioned in its salience to audiences, but rather uniquely salient to the medical profession as the approach to choose:

> People tend to see climate, the climate crisis, as an environmental crisis. To frame it as a health crisis can be really eye-opening, I have observed it is eye-opening for people. I mean I think you can also frame it as an economic crisis, you can frame it in all these different ways quite appropriately. But it's relevant for doctors to talk about stuff that is likely to impact health. (Malon)

Note that in their communication to others, the understandings of climate change as either an environmental or health crisis are posited here not as negotiated and aligned constructions but as distinct ones, relating back to the various distinctions between the biomedical and socio-structural constructions discussed in Chapter 4. Malon here explicitly positions the health framing as one among a range of other appropriate framings beyond that of the environment that could be similarly effective or salient. In this positioning, the health framing of climate change stands out not principally in its own merit—although Malon expresses personal experience with the salience of this framing—but as the one that medical professionals have the capital to construct and communicate the issue through. As this section has already highlighted, this is not to say that participants did not express specific characteristics of the health framing that give it a unique capacity to affect the perceived meaning and significance of climate change by itself. One of these was expressed as drawing again on the concept of health co-benefits:

> People would support climate solutions if they had health co-benefits, and many of them do. So that's a really important driving factor that we need to take account of […] What's going to move people is being able to see it through the lens of an individual patient that suffers because of this. I think clinicians are in a unique position to be able to do that. (Christian)

Similar to the expressions above, Christian positions medical professionals as uniquely capable to convey climate change as an issue of health concern to audiences, here in particular as clinicians in contact with the individual patient. The particular pathway he highlights is that of the health co-benefits of climate solutions. As mentioned both in the literature review (cf. Chapter 2.3, p.28) and

at various points in the chapter on constructions of climate change, the idea of health co-benefits effectively allows for any issue that is not itself closely related to human health or medicine to be positioned within the field of medicine on the basis of interventions into dimensions of the issue producing desirable effects on areas of medical professional concern. A common example used by the IPCC itself that I have already mentioned in these earlier discussions (cf. Chapter 4.3, p.101) is that of active travel replacing combustion engine vehicles. In the context discussed here, the idea of co-benefits is expressed not principally in a concern for bridging medical and radical ecological sensibilities and commitments, but in a concern for the deployment of medical professional capital to frame climate change in the light of these co-benefits; to communicate the issue through the lens of patient health and wellbeing. Note again in Christian's description the simultaneously expressed alignment of the salience of the health frame as such and the ability of medical professionals to operationalise it. Recall here however also the earlier mentioned problematisation of such approaches in terms of the appropriateness of employing health co-benefit framing in patient communication (cf. Chapter 5.3, p.140). In contrast, here the ability of the medical profession to employ such health co-benefit framing in patient contact is expressed as drawing on precisely the posited proximity or relatedness of such frames to the position of the medical professional that employs them in the field of medicine. Armaan similarly highlights health co-benefit as a dimension of climate action that doctors can leverage from precisely such a medical standpoint:

> If I'm able to change somebody's diet, it helps them from a medical standpoint. So I'm changing their lifestyle, but it also helps them help with the climate change issue because they're using less water, there is less pollutants, less fossil fuel use for transporting things, to growing it, to raise the animals and to slaughter them, and all that sort of stuff. So it is a win-win, which is fantastic. That's one of the things I love and that's actually my main focus on climate change, you know changing people's lifestyle. (Armaan)

In Armaan's example, health co-benefits are not a characteristic by which climate change can be communicated to a patient to have them support climate solutions, as in Christian's account. Rather it is Armaan's ability, in his position as a physician working in lifestyle medicine, to get the patient directly to enact individual climate action by affecting aspects of their behaviour on the basis of medical interventions into their lifestyle. What is highlighted here is that the intersection of the fields of medicine and climate politics does not need to be explicitly acknowledged in medical climate activism and advocacy—Armaan's efforts are expressed as situated well within the field

of medicine while at the same time being informed by his commitments to climate change as to their impetus and objective. It can be noted how distinctly different Armaan's account here is from some of the others I have discussed earlier, in particular Anna's efforts to explicitly detach climate change activism and advocacy from an individual patient discussion to a politicised or re-politicised issue of socio-structural concerns (cf. Chapter 5.3, p.140). Both dimensions found expression in this chapter so far, with efficacy to affect direct patient communication relating more to the individual level, and efficacy to affect institutions such as the media relating more to the socio-structural level. However, as prominent as a socio-structural construction of the issue has been shown to be in the preceding chapters, the discussions above do highlight that the particular efficacy medical professionals perceive themselves as having is expressed as unfolding most prominently in patient contact.

The last aspect I want to briefly highlight here is that the capital to speak to health, i.e. to frame issues in terms of their health dimensions, also relates to the capital to speak within health, i.e. from within the healthcare system. As some participants pointed out, this is particularly due to the understanding of the healthcare system acquired by those within it while, simultaneously, being critical of said system from the standpoint of a commitment to climate activism and advocacy. This uniqueness of being positioned in both the field of medicine and the field of climate politics—and thus precisely at their intersection—was related by Sophia to her ability to contribute to such health-related climate activism and advocacy efforts as such:

> There are a lot of people who know things about surgery and a lot of people know things about environmental sustainability, but there are very few people who understand both worlds. And it was a realisation that I could fill this niche to improve this tiny sliver of the problem. (Sophia)

Fred very similarly, talking about his experience in environmental and social sustainability leadership, expresses how he sees himself as having "two hats" (Fred), at once being deep within the healthcare system as a practising physician and simultaneously having a deep understanding of the sustainability issues both facing and being perpetuated by this system. What is being expressed here is an awareness on part of the interviewees that they are engaging in the type of negotiated practice that sits in-between two fields—i.e. the negotiation of their respective sensibilities and commitments—that has been discussed throughout this thesis. The capital leveraged in the efforts to engage in this negotiated practice of medical climate activism and

advocacy is here, principally, expressed as knowledge and understanding of both fields—notably in precisely a disposed way. Recall here, in particular relating to Fred's expression of wearing two hats, the discussion of a Janus-faced practice of balancing medical and non-medical roles, responsibilities, and identities in two contrasting fields by Witman et al. (2011) that was mentioned in the preceding chapter (cf. Chapter 5.1, p.117). Here this Janus-faced practice is expressed in its dimensions of capital, allowing medical professionals to bridge the fields of medicine and climate politics. Sophia meanwhile, equally similar to Witman et al., speaks of the two as distinct worlds that she finds herself in-between. Note also how Sophia is, again, explicitly expressing the perceived limitations to the efficacy of such efforts that attempt to tackle an issue of the size of climate change, describing her contributions as addressing a "tiny sliver of the problem" (Sophia). It is this perception of the limits of individual efficacy in tackling climate change that brings us to the last dimension of efficacy to be discussed in this chapter, namely that of working together with other like-minded activists and advocates which I will turn to now.

6.4 Networks

This section may require some additional explicit demarcation from the first two sections discussing trust and health framing. The focus of the discussions above was on the, principally cultural, capital held by individual medical professionals and the efficacy to affect how others think of and act towards climate change through medical climate activism and advocacy efforts that draw on this capital. This section, on the other hand, discusses how the so-involved professionals pursue these efforts in groups or networks of and with like-minded colleagues, expressed principally in reasons for engaging in these efforts alongside others. This is to say that what is discussed here is not first and foremost the transformation of existing capital of medical professionals into a form operative in the field of climate politics and its intersection with that of medicine, but rather the additional labour-time invested into organising to increase the efficacy of the so-organised activists and advocates. As mentioned in the introduction, this can here be understood as social capital. In their review on the concept, Bhandari and Yasunobu (2009) note that "social capital can be defined as a collective asset in the form of shared norms, trust, networks, social relations, and institutions that facilitate cooperation and collective action for mutual benefits" (p.506). It is this network of social relations with like-minded colleagues that constitutes

the dimension of capital to be discussed here. Bhandari and Yasunobu however caution that the social capital constituted in this way is not to be misunderstood as expressing itself outside of the networking individual. As highlighted in the literature review chapter and reiterated in the introduction above, it is in the membership in these networks that individual actors hold that social capital finds its expression. As such, "while it is true that social capital exists because of the connections between actors and not within the actors themselves, it is in fact the actor who accrues benefits from networking" (Bhandari and Yasunobu 2009, p.489). For the discussions in this section, we can thus assess the issue of social capital and its efficacy in medical climate activism and advocacy through the perceptions of these so-accrued benefits of networking that individual interviewees described.

During the interviews, these benefits were centrally expressed around ideas of community and collaboration with like-minded people by which activist and advocacy efforts are facilitated, amplified and sustained. Christian described the significance of networking in terms of support, integration, and resilience:

> I think it's important as well to have a community of support and feel like you're not alone in this work. […] This can feel like a little bit of an isolating work, where you're just like plugging away at a huge problem that no one individual really can tackle by themselves. So if you're alone and you're tackling an issue like that, it's easy to feel defeated. But when you have a community that says we're all in this together, then I think that helps to build some resilience. (Christian)

Christian here refers back to the scale and scope of the issue of climate change that was mentioned throughout the earlier discussions on constructions of climate change (cf. Chapter 4). Climate activism and advocacy efforts are here expressed as not only in themselves strengthened by a sense of community support, but this community is posited as sustaining the morale behind such efforts, providing medical professionals who engage in them with a sense of integration and resilience in light of a general sense of isolation. It is in this context that the support of the network builds resilience against the, what Christian describes as, defeating and potentially isolating work of climate action—a central dimension of which he points to being that of its individual efficacy exceeding scope and the potential defeatism this limitation may produce. Malon describes her personal experience with moving from individual action to organisational engagement in a similar fashion. Juxtaposing organisationally facilitated involvement with the futility she has experienced in engaging in such efforts alone and without organisational support she explains:

> The one thing that the climate movement has is people joining together to work together. I guess also I would say that in the preceding year I had written to MPs and, I don't know, maybe medical institutions, Royal Colleges and things like that, about this and that, and really the response was ineffective in as much as the response was just to brush you off. And I then realised that that sort of approach can only be effective when doing it as part of a coordinated campaign. (Malon)

What Malon highlights is her personal experience with the stark limitation of an individual activist's or advocate's efficacy in tackling the issue of climate change, stressing instead the need for coordinated collaborative engagement. Put differently, the expressed need to strengthen the efficacy of climate activist and advocacy efforts through networking exists alongside the need for morale and resilience that collaborative efforts inspire, a lack of perceived efficacy undermining the latter and vice versa. Morale and resilience can as a matter of their theorisation also be posited as dispositions themselves, as aspects of the ways of giving meaning to and committing to a practice, and have as such varyingly been discussed as forms or dimensions of habitus, particularly in light of concerns for the loss thereof (Balest et al. 2018, Brown and Walker 2008), such as here in the context of the above-mentioned defeatism. What is highlighted here again is the close relationship between the central subjects of interest—doxa and fields, habitus, and capital—of the three chapters presented in this thesis. Doxa are the understandings of an issue that are presupposed and posited in a field as the space in which the issue is engaged, habitus are the dispositions to engage with it, and capital is the operative force by which these engagements become efficacious—the resulting practice resting on morale and resilience to maintain such engagements against potential opposition. One may again recall that habitus is, ultimately, itself a form of capital. A similar sentiment as the one described by Malon above but within a more organisationally bound structure was expressed by Tara regarding her local activist group:

> I think we get a lot of energy from people sharing. So I think the thing that I liked about all those groups it that you suddenly have people who've got it, you're suddenly in a room of people or in a conversation with people who are like, yeah I'm feeling the exact thing that you are, and I'm pushing back the same way that you are, and keep going. And I've got a lot of people. Also just there's a lot of positivity of saying, you're doing the right thing, we can help you, what can I do? I think there's a lot of energy behind a group mentality of people who want to do stuff. (Tara)

Recalling the above-discussed significance of morale and resilience, the benefits of networks are similarly expressed by Tara in a sense of positivity and energy. Barbara relatedly describes the enjoyment she derives from participating in activist efforts and their achievements as important to

her motivation. Talking about her history of first getting involved in activism she explains "that was for me, or also still is, an important motivator, because I noticed how good it feels to do something together, and also what you can achieve with that" (Barbara). What the interviewees expressed in the discussions above has been posited in the related literature on climate change adaptation as a particular dimension of social capital, that of bonding and networking, stressing the "horizontal linkages" (Adger 2003, p.395) between actors based on such characteristics as kinship, locality, and shared resources. This horizontality is here not only expressed in the belonging to a mutually shared professional group but, within this group, the further sharing of sensibilities and commitments concerning the issue of climate change. It is these "similarities and unity of interests" (Ansari 2013, p.126) that shape these dimensions of social capital that I have referred to as like-mindedness throughout this chapter. The literature on climate adaptation is, by nature of its subject, concerned with the efficacy of collective action and the resilience provided by this social capital towards risks as they relate to the impacts of climate change (Aldrich and Meyer 2014). Here on the other hand we may consider as being similarly strengthened by this social capital the efficacy of medical climate activism and advocacy and the resilience towards the costs of these efforts (which I will discuss in more detail in the following section). Interviewees themselves stressed such more efficacy focused benefits of networks as these discussions suggest and as Malon has already hinted at above. Christian, continuing on his earlier point, describes the relationship between efficacy and the benefits of networking to one's ability to affect perceptions of and actions towards climate change as one expressed in terms of the voice of and impact carried by the individual activist or advocate when acting in a representational role:

> I would say that it's really important because, one, it helps to amplify your voice. If you speak out as an individual clinician or trainee, that has some weight to it. But when you speak out as part of a broader organisation, that's representing hundreds if not thousands of the same people, that creates that much more weight. (Christian)

As explained at the beginning of this section, the capital discussed here is at once formed in the connections of networks collectively but accrued and wielded by those within them individually. In this context, what Christian describes here is a perceived strengthening of the efficacy of the individual's voice as a benefit of being involved with and acting as a representation of a larger network of similarly positioned and similarly engaged medical professionals. One has to consider the various efforts directed at changing perceptions of and actions towards climate change among medical professional colleagues in this light—the so-converted colleagues further leveraging the

efficacy of the individuals involved. Put differently, "social capital is a catalyst that allows people to achieve more together than alone" (Read 2016, p.17)—a lever to the efficacy of the other expressions of capital of medical professionals discussed above. It is however not only the efficacy of existing efforts that is potentially being strengthened by networks but also the emergence of such efforts in light of these networks, an example of which was described by Leonie:

> It was actually a no-brainer, I have to say. There was already a small group in the city that we knew was interested, and in a very short time, more people just joined and formed a core group. Because the interest was already there, and when suddenly there are structures for it, then they also gather very quickly. (Leonie)

Note that what Leonie is describing is not a recruitment or conversion of colleagues through a successful modification of their existing sensibilities and commitments by activist and advocacy efforts, but rather the realisation and facilitation of efforts by medical professionals whose "interest was already there" (Leonie) through the establishment of a network from within which such efforts can be pursued. The interest of medical professionals to become climate activists was subliminally already there, requiring the spark of organisational structure to empower the so-interested professionals to become overtly active. Maiev further indicates that the facilitation of medical climate activist participation emerging out of organised collaboration does not necessarily require an established organisational structure within which others are active. Sharing how she first became involved in climate activism and advocacy, she points to the awareness that other like-minded medical professionals exist at all as having facilitated such engagement:

> I was at a workshop weekend on the subject climate change and health in Berlin where there were first and foremost medical professionals, and for example also sociologists, and that set the spark a little bit, that I noticed I'm not the only one who sees this connection. There are others, and maybe there are people who I can collaborate with in this field. (Maiev)

What Maiev is expressing here is not merely the recognition of an ability to collaborate nor the benefits derived from such collaboration, but an affirmation of her own sensibilities and commitments concerning the connection between climate change and health—sensibilities and commitments expressed as seen and thus attested to by others (Ezrahi 1990, p.74). One should however also note that there being a workshop on climate change and health with participants from the medical profession is itself, albeit loosely, a level of organisation and structure. That the medical climate activists and advocates discussed here have themselves been affected in their

perceptions and actions towards climate change by others is already implied in the importance of networks for the emergence of such efforts above. In many ways, this is the effect of the efficacy of such efforts, or in any case dimensions thereof, in their outcomes, namely that they produce and inspire climate action by others; here in the form of further climate activism and advocacy. Interviewees were however also explicit about this connection, describing how the climate activism and advocacy of others has inspired them to become involved. Barbara, talking about what first made her engage in climate change activism as a medical professional, explains:

> For me, actually through the Fridays for Future movement, it became much more present. Especially the big demonstration on the 20th of December last year where so many people went to the streets, and then they passed such a banal climate package… that made me think woah, that's not okay, somehow one needs to become more active. (Barbara)

When we think of this expressed inspiration beyond the terms of it raising issue salience, the activist efforts by groups such as Fridays for Future and affiliated groups like Scientists for Future do principally two things. First, they establish a precedent and with it may posit a normative presupposition for such activist engagement by the medical profession. Second, both their successes and failures may implicate the efficacy of such engagements on the side of medical professionals. In their successes, they signal a general efficacy of climate activism and advocacy in its existing forms. In their failures, such as the one implied in Barbara's account, they suggest a need for medical professionals to either become activists or to "become more active" (Barbara) beyond their current involvement—activists that are differently positioned and in possession of different capital than, in the example, the pupil-lead Fridays for Future movement or similarly involved scientists. In this lies an acknowledgement that practices of climate activism and advocacy expand beyond the already blurred lines of the two fields and the one professional group discussed here, affecting and being affected by other practices and groups that exist beyond those discussed. I want to however stress that I am not implying that participants expressed the belief that the sensibilities and commitments of the activist engagement of groups such as school children (Fridays for Future) or scientists (Scientists for Future) neatly map onto those of the medical profession. While the increase of medical professional engagement with the issue of climate change coincided with the rise of movements such as Extinction Rebellion (XR) for a wide range of possible reasons, medical climate activism and advocacy is here first and foremost to be understood as occurring at the intersection of particular fields as informed by particular sensibilities and commitments that are particular to the medical profession. This is however

equally not to dismiss the above-suggested idea of inspiration between groups, organisations, fields, or practices. Tara, who as I will discuss in the next section on costs has grown critical of XR, acknowledges that "realistically, probably, if I'm really honest with myself, XR was part of the reason I started doing this" (Tara). One will want to keep in mind the importance of becoming involved in or inspired and supported by networks of like-minded activists and advocates expressed in this section as we turn to a discussion of the potential personal and professional costs faced by medical climate activists and advocates due to their efforts.

6.5 The Costs of Medical Climate Activism and Advocacy

The capital discussed in the sections above is neither freely available to nor freely disposable by the medical professionals that deploy it. In particular, the capital that they have accrued in their position in the field of medicine does not seamlessly translate into its availability in practices of other fields, such as that of climate politics. Rather, capital expresses itself "depending on the field in which it functions, and at the cost of the more or less expensive transformations which are the precondition for its efficacy in the field in question" (Bourdieu 1985, p.243). This is to say that the efficacy to transform perceptions of and actions towards climate change that the capital discussed above is deployed to provide and achieve is itself the result of transformation processes. In its operationalisation in the field of climate politics, the efficacy of capital accumulated in the field of medicine through and for medical practice is preconditioned on a transformation of said capital into expressions that are operative (Bourdieu 1996, p.113) in radical ecological practices. In this section, I will explore how interviewees themselves described a range of concerns for these more or less expensive transformations, expressed in the perceived potential personal and professional consequences of their engagement with climate activism and advocacy.

Bourdieu points out that this transformation of capital from one to another form, think here for example the trust of a medical professional in doctor-patient relationships to a capacity to advocate for climate action, is a conversion insofar as the gain of any capital through such transformation efforts reduces that which existed at their outset, constituting efforts in which "profits in one area are necessarily paid for by costs in another" (Bourdieu 1985, p.253). This does not necessarily imply a permanent loss of the former, but rather that the capital to advocate on climate change has to come from somewhere, even if this includes additional "labor-time" (ibid.) to (re)accumulate

whatever capital is being spent. How costly this conversion is depends on what kind of capital is being transformed into what other, some conversions experiencing higher levels of resistance and hindrance than others. The analysis so far suggests that this level of resistance may be high in some of the dimensions in which the fields of medicine and climate politics conflict with or contradict each other and low in others where such conflicts and contradictions are not found or found to a lesser degree. This distinction was in part captured by what I discussed as congruences and incongruences in the previous chapter. One such example that I have explored in this preceding chapter is the distinction between adaptation and mitigation approaches. Deploying, i.e. converting, medical professional trust to discuss climate change adaptation with a patient may, from this perspective, experience little resistance and as such little costs, whereas doing so to discuss climate change mitigation may be significantly more costly. We have also seen in the health co-benefit example by Armaan above (cf. Chapter 6.3, p.161) that the need for this conversion can be minimised by remaining closely within the field of medicine in one's climate activism and advocacy efforts, such as by affecting consumption behaviour through medical lifestyle interventions rather than overt climate advocacy. That the opportunities to affect climate change without stepping farther outside of the field of medicine are however also limited was acknowledged by Armaan himself, with him equally engaging in more explicit, more conversion demanding efforts closer to the field of climate politics. The potential costs of these efforts were described by him as such:

> You have to understand where you're practising or where you're advocating for your patients. There may be some patients that are more receptive to listen to this. Some will be like, I don't want to hear anything about climate change. […] And you have to do it slowly because the risk is you can alienate your patient and then they won't trust you for anything. (Armaan)

Armaan describes three dimensions of concern for what he perceives as the risk of alienating a patient when engaging in climate advocacy in patient contact—the area of intervention, i.e. where such advocacy takes place, its audience, i.e. the characteristics of the patient that is being talked to, and the intensity with which the topic of climate change is being pursued in this intervention. All three concerns have to be understood in light of the more or less expensive transformation processes by which medical professionals operationalise their capital to talk about climate change. The issue of costs does not merely concern the capital within the field of climate politics, but in equal measure the capital within the field of medicine such as here regarding trust in patient

consultation. The principal expense or cost that Armaan highlights is exactly this trust discussed in detail earlier (cf. Chapter 6.2), with the careful balancing of the practice aiming to minimise a potential loss of this trust as it concerns the operationalisation thereof in the doctor-patient relationship. Put differently, Armaan describes how the practice of climate advocacy has to be carefully balanced with that of medical practice so as to not squander medical professional capital. This loss of capital in turn could not only undermine the efficacy of a medical professional in terms of affecting perceptions of and actions taken towards climate change by others, but presents a potentially costly loss of their capital and thus efficacy within the field of medicine. It is noteworthy that even in this potentially conflict producing context of direct patient communication, Armaan expresses the climate change advocacy he is describing as an advocacy of the medical professional *for* their patient, rather than one directed towards them—highlighting once more the medical paternalism ingrained in the medical habitus that in part structures how the here discussed practice is given meaning. Armaan's description here also relates closely to the earlier mentioned concerns by Jaina (cf. Chapter 5.3, p.136) as to colleagues being hesitant to engage in climate change activism and advocacy over concerns of offending their patients by becoming political. It is however not only in patient contact that interviewees expressed concern for the costs of their climate activism and advocacy. Gill describes her concerns in the context of direct action involvement as such:

> I'm worried about losing my job. I have to decide at the moment... I really feel like I'm on the cusp of deciding whether or not I want to be arrested, and what that would mean for my job. You know, something I've thought about for the last couple of years, but there are a group of doctors who are planning things that might get them arrested. (Gill)

The things that might lead to arrests that Gill is referring to here are the various direct action efforts by groups such as Doctors for Extinction Rebellion mentioned in the literature review earlier (cf. Chapter 2.3). The capital costs that Gill is describing are not merely concerned with aspects of medical professional standing such as patient trust, but the potential loss of this standing itself due to termination of her employment as a general practitioner. Similar to the hesitation of colleagues expressed by interviewees in the earlier discussions on resistance and inertia (cf. Chapter 5.3), this concern had Gill not only worried about the costs of her ongoing efforts but made her not engage in certain forms of activism and advocacy due to the risk of losing her job. Note here, in particular in relation to the preceding discussions on reasons to organise and network, that Gill, despite having considered efforts that could lead to her arrest for the last couple of years, is only now on

the cusp of deciding whether or not to do so in light of a group of other doctors planning to engage in such efforts. Maiev expresses similar concerns, having already decided that being arrested is not worth the loss of professional occupation:

> I want to be a doctor, and it wouldn't be worth it for me to not be able to do so because I sat in prison for climbing on a coal digger. I think I'd rather support the structures that allow other people to do so for whom that isn't a risk. But it's also on the smaller scale, for example when I'm in the hospital, I have to adjust my behaviour so people don't directly put me in a box like I'm just some tree-hugger, producing stereotypes that make people not trust me as much. (Maiev)

What Maiev's description highlights is, in line with the discussion at the outset of this section, that particular capital incurs particular costs in its transformation for particular fields (Bourdieu 1985, p.243). This finds expression here in Maiev's concern for what she perceives as unreasonably high costs in deploying her capital in direct action efforts such as illegally occupying excavation equipment, efforts that she similarly to Gill sees as potentially ending her medical professional career. Instead, she explains to rather support differently positioned actors who can deploy their capital for such radical ecological efforts in the field of climate politics without incurring potentially career-ending costs. When considering these positions beyond the context of this thesis, in particular in light of the earlier mentioned circumstance that "profits in one area are necessarily paid for by costs in another" (Bourdieu 1985, p.253), one needs to acknowledge that the capital of medical professionals within the field of medicine itself has incurred costs in its accruement, here for example in a loss of capacity to engage in radical ecological activism or in any case the addition of hindrances to doing so, such as a heightened sensitivity of trust in the workplace. In expressing this, Maiev also extrapolates the earlier discussed concerns for trust in patient contact to the clinical setting at large, describing her concern for a loss of trust in the field of medicine due to being perceived through her radical ecological positions and efforts rather than her medical professionalism. She goes on to describe the collegial dimension of this concern explicitly:

> I had to already often restrain myself when that topic came up in seminars, because I didn't want to directly… I wanted to make sure that I'm still being heard, and that I'm perceived as a reputable person. (Maiev)

One may recall here that the earlier mentioned Bourdieusian research on the field of medicine similarly found that appreciation by private and professional networks with colleagues was among the most important dimensions of capital expressed by medical professionals (Olsson et al. 2019).

We have also seen in the discussion on social capital and networks that a sense of integration and collegiality with other medical professionals is central to how interviewees understand their own efficacy in their medical climate activism and advocacy. That a loss of reputation, deterioration of collegial relationships, or a sense of workplace isolation were all common concerns that interviewees expressed as perceived costs of their climate activism and advocacy equally highlights this centrality of their relationships with co-workers and their collegial perceptions of them. Tara, who was briefly involved with Extinction Rebellion, describes her experience with the costs of not only engaging with the type of direct action efforts referenced by both Gill and Maiev above but that of merely being perceived as affiliated with them:

> I think when the tube stuff happened, so I was a trainee at the time, and we got told the tube stuff was going to happen before it happened, and I really disagreed with it. And I went into work and the feeling… you know I've been telling people that I'd be going [to XR meetings], and I had two or three receptionists come up to me and be like, no, it's really out of order what your group… suddenly it was my group! I was saying I was just dabbling, dipping my toes in, and suddenly I was part of this group that people felt really angry about. (Tara)

The tube stuff Tara is referencing here concerns a direct action protest undertaken by a number of members of Extinction Rebellion in October of 2019 where access to the public transport network across London was blocked during rush hour, in particular the London Underground. The protest was met with widespread condemnation by the public and other activists, including from within Extinction Rebellion, with senior figures within the group later describing the protest as a mistake (Townsend 2019). What Tara is describing is similar to what in some anthropological research on group belonging has been referred to as double alienation (Wong and Tien 2014), the simultaneous alienation from minority and majority culture, in this case, her alienation from fellow Extinction Rebellion activists in the field of climate politics due to their tactics with whom she strongly disagreed, and the simultaneous alienation from her colleagues in the field of medicine due to her affiliation with the former. In the interview, Tara went on to briefly recall a more explicit episode of in-group alienation where she, after attending a radio interview on the issue, was attacked by other climate activists for not discussing a particular dimension of the issue enough. This was the only instance of an interviewee discussing what amounts to in-fighting between climate activists during my interviews, but it highlights the more general risk of capital loss—here simultaneously in both fields of medicine and climate politics. In the contexts of workplace alienation more specifically, Fred described a similarly agonistic experience:

> It's been really difficult to manage my relationship with my colleagues in my hospital over the years. It's a really small hospital, there's only about twenty, twenty five of us, anaesthetists in my hospital. And from the very beginning I was really clear that I didn't... that I wanted to push them to change their behaviour, but I didn't want to completely alienate them. I didn't want to end up in a position where my relationship with them, any individual or them as a group, is totally broken down and disastrous, because I have to work with these people, right? So there's been a lot of frustration on both sides. (Fred)

What Fred describes as his efforts and difficulties to manage his relationships with colleagues is precisely what we can consider in light of the additional "labor-time" (Bourdieu 1985, p.253) necessary to maintain or re-accumulate capital—collegial relationship management becoming in itself a task. It is in this context of potential alienation from other medical professionals that are uninterested in climate change that one has to see the benefits of a sense of integration and community among like-minded colleagues that was highlighted in the preceding section on networks and reasons to organise. Potential alienation is here putting it mildly—as Fred goes on to explain, collegial responses may well be openly hostile: "A long time ago one of them told me, hey Fred, you know every time you talk about Desflurane[5] I deliberately use more just to spite you". Fred highlights that a good relationship with his colleagues is of great importance to his clinical work, but that he sees this relationship as having been strained by his commitment to and involvement with climate change advocacy at his workplace. What is expressed here is an experience with precisely the type of conversion costs Fred incurred by attempting to affect understandings of and actions towards climate change within the field of medicine itself, here in the clinical setting of his workplace. Fred's pre-emptive concern for animosity among his colleagues due to his involvement in climate activism and advocacy "from the very beginning" (Fred) highlights that the potential costs for such engagements are explicitly anticipated from the start. That he, along with the other interviewees, decided to nevertheless engage in such activism and advocacy rests, in any case partially, on precisely the sensibilities and commitments discussed throughout this thesis and in particular the preceding chapter on medical and radical ecological habitus and perceptions of responsibility. After returning from a sabbatical year, Fred reduced his clinical work to a part-time basis and took a position as climate change lead at an organisation that aims to strengthen the healthcare sector's response to climate change, thereby moving his climate

[5] A greenhouse gas equivalent in its twenty-year global warming potential to 3714 times the amount of carbon dioxide.

activism and advocacy efforts to a site at which they are met with less resistance and as such fewer costs.

It needs to be noted that despite the focus of the analysis here being on medical professional capital and the loss thereof in professional practice, interviewees expressed perceived costs for their climate activism and advocacy in their private lives too. Gill expresses her experiences with resistance and alienation among both colleagues and family in such troubled ways:

> It's very difficult to communicate with people about it without guilt and grief, and fear and anger, and upset. So I think naturally you will meet lots of resistance along the way […] It's difficult sometimes to relate to people who I love because I feel like they're not getting it. And that's really hard. And it's hard at work. It's really hard at work. (Gill)

Barbara similarly mentions her climate activism and advocacy being met with rejection beyond her professional environment and extending into her private life stating that "in my family, I have had big arguments. I mean that was rather met with incomprehension and a high level of resistance" (Barbara). It is in light of these perceived social costs expressed by the interviewees, their felt isolation, resistance, and alienation from peers due to their climate activism and advocacy, that the perceived importance of the earlier discussed networking with other like-minded people acquires its full significance.

6.6 Conclusion

There are three central takeaways from this chapter. The first is that medical professionals in their climate activism and advocacy consciously leverage what they perceive to be their capital, expressed in such dimensions as trust, professional standing, institutional access, and the ability to speak to climate as a salient health issue in order to affect how others understand and act towards climate change. The second is that despite this, they are conscious of the limitations of their efficacy to do so, in particular their ability to tackle an issue with the scope of climate change themselves individually and the respective importance of collegial networks for such pursuits. Beyond the importance of these networks as a morale and resilience providing support structure, I have discussed that the participants see themselves deriving a range of benefits to their own efficacy through such networked efforts, such as an amplification of their voice. The third is that medical professionals experience and express concern for the various potential costs of their climate activism and advocacy, expressed principally in terms of its impacts on their relationships

with colleagues and patients in their professional practice, as well as their personal relationships outside of it. The three are interrelated insofar as the efforts to organise with like-minded colleagues not only strengthen their individual efficacy to affect change, but may also function to mitigate some of the potential costs of their activism and advocacy. What we see in the efforts and the expressed importance of networking with other equally engaged medical professionals in Chapter 6.4 may be a potential relocation of collegial networks from the variously conflict-laden relationships at the workplace with colleagues adverse to their activism and advocacy to appreciative and supportive spaces closer to the field—i.e. site—of climate politics, in particular climate activism and advocacy. Through this negotiation of space and community, these potential conflicts and costs are partially compensated with the reassurance and appreciation by other like-minded medical professionals.

What we see expressed in the discussions above is that the efficacy that medical climate activists and advocates perceive themselves to have in such engagements is co-produced alongside, or constitutes a dimension of, the sensibilities and commitments that dispose them to such engagements—in particular the meaning-making discussed in the preceding chapter that positions such efforts as meaningful, responsible, and appropriate for the medical profession. It is precisely the disposed sense of responsibility discussed at length in the preceding chapter on habitus that makes them engage in these efforts despite their various explicitly acknowledged and anticipated professional and personal costs. When considering efficacy as resting on capital, one may likewise recall that these dispositions understood as habitus are capital themselves, i.e. the embodied form of cultural capital, highlighting once more the interplay of these various dimensions in the constitution of the negotiated practice that is medical climate activism and advocacy.

Hughes (2015) has, as discussed earlier, observed that "not all actors have the same capacity, or symbolic power, to determine the meaning of climate change" (p.88). One may add that this capacity concerns the determination of meaning both of and through particular dimensions of climate change. *Of* insofar as constructions of climate change are compartmentalised into different aspects, such as ecology and health, with different actors holding the capital to determine the meaning of different aspects to different degrees. *Through* insofar as the meaning of these parts affect the meaning of the whole, with actors strategically attempting, as in the discussion of health framing, to leverage their efficacy to determine the meanings of aspects of climate change in order to determine the meaning of climate change at large. It is this claiming of parts to claim the whole

that may inform some of the—variously problematised as reductionist (Hulme 2011)—efforts by other actors in the field of climate politics to reduce climate change to particular dimensions, such as its climatological construction. The discussions above have highlighted how actors within the field of medicine—the medical profession—employ and transform their capital to affect this field of climate politics, and by extension how the positioning of actors within the field of medicine is affected by such efforts. The question of how, in return, the field of climate politics and the actors therein—actors that move well beyond an affiliation with the medical profession—are likewise affected by these efforts posits the importance of future research analysing the here explored negotiation of practice from this opposing perspective.

Chapter 7: Conclusion

7.1 Introduction

Throughout the three preceding findings chapters, I have explored how medical professionals construct and give meaning to the issue of climate change and their engagement therewith through activism and advocacy. These discussions were guided by a theoretical framework built upon the thinking tools (Leander 2008) of Pierre Bourdieu, structuring the analysis presented in this thesis as an analysis of practice—the practice of medical climate activism and advocacy. At the heart of this practice-theoretical analysis lie a range of central concepts that have been applied and discussed across the three chapters: the concept of fields as the sites in which practices unfold, doxa as the fundamental presuppositions of these fields, habitus as the dispositions that structure the meaning of and interest in participating in any one such particular field and the practices therein, and capital as the resources that are operationalised in the pursuit thereof. As one coherent framework applied to one coherent practice, the distinct concepts of field, doxa, habitus, and capital produce in their combined application and discussion one conceptually interrelated and theoretically generalised interpretation of the phenomenon under analysis: that medical professional climate change activism and advocacy constitutes a practice that negotiates two sets of sensibilities and commitments—medical and radical ecological—at the intersection of the fields of medicine and climate politics.

In positing this interpretation, this thesis makes the claim that the phenomenon that I discussed across the preceding chapters is a practice that medical professional climate activists and advocates engage in. This is so say, that this interpretation of a negotiated practice I explored and presented in this thesis is argued to stand for the practice of medical climate activism and advocacy—not as a universal or exhaustive account, but as a paradigmatic case serving as an exemplar of the general characteristics of the practice (Flyvbjerg 2006). To repeat what I laid out in the discussions on constructivist-interpretive methodologies at the outset of this thesis (cf. Chapter 3.3), this claim rests on three considerations. Firstly, it is posited on the basis of the multidimensional thick descriptions of the efforts pursued in and meaning-making of this practice that were explored through the expressions of those involved in it—the actors enacting said practice. Secondly, it rests on the circumstance that these descriptions were found to be coherent across this

multidimensionality of the data in which they found expression—not as fragmented perspectives towards various practices but the negotiation of one coherent practice, that of medical climate activism and advocacy. Lastly, this coherence extends to existing descriptions of and by medical climate activists and advocates that are expressed in the discussions of the phenomenon in existing publications that inspired this research in the first place (see also Chapter 2.3). This "continuity across sites" (Akkerman and Bakker 2011, p.133) may both be informed by the circumstance that climate change as the issue addressed by this practice presents a globally pervasive problem whose descriptions have been ingrained in such global narratives (Jasanoff 2011b, Pearce et al. 2018), and the parallel coherence of the here analysed medical profession as one constituted in light of the perspectives of Western biomedical practice (Kleinman 2013) and ethics (Veatch 2000) that pervade the contexts in which the phenomenon was assessed as taking place and, recalling the significance of the biomedical model of medicine in the here explored meaning-making, finds expression.

Across all three findings chapters these negotiations between medical and radical ecological sensibilities and commitments find, guided by the conceptual foci applied to their discussion, distinct expressions. In the first findings chapter, these negotiations were explored at the intersection of two fields and their respective doxa, discussed through two sets of constructions of climate change as, one, a biomedical issue in the field of medicine and, two, a socio-structural issue in the field of climate politics. In the second findings chapter they were explored through the relationship between medical and radical ecological habitus, discussed in the dispositions to engage or to not engage in climate activism and advocacy. In the third findings chapter the negotiations between the two sets of sensibilities and commitments were lastly explored through the perceptions of medical professional capital, discussed in the perceived efficacy produced by this capital, at a cost, for medical climate activism and advocacy.

At the outset of these discussions I laid out three research questions that have been pursued in this thesis:

- How do medical professionals involved in climate activism and advocacy understand climate change and construct it as an issue?
- How do medical professionals give meaning to engaging in climate activism and advocacy in light of this so-constructed understanding?

- How do the so-involved medical professionals understand their particular efficacy in these pursuits?

Each of the three findings chapters addressed principally, and in order, one of these questions as its central area of inquiry. Having presented each of their individual discussions, the insights established by these chapters can be recaptured and summarised in their response to the three research questions as embedded in the Bourdieusian framework in which they were posited. In the section that follows I will address each of the three research questions respectively, summarising the findings presented in this thesis to each of them under the respective headers of constructions, meaning, and efficacy. Following this I will synthesise these findings and position medical climate activism and advocacy as the negotiated practice that this thesis has argued the phenomenon under analysis to constitute, highlighting its relevance to the greater question of social order. Following a short summary of contributions, limitations, and an outlook on future research, I conclude the thesis with my reflections.

7.2 Summary of Findings

Constructions

If the discussions throughout the findings chapters of this thesis have highlighted one thing, it is that the climate change activism and advocacy of medical professionals constitutes a complex, multifaceted phenomenon. At the heart of this phenomenon lies an equally multifaceted construction of climate change as the issue that is being addressed by these activist and advocacy efforts. In this construction, this research has highlighted two sets of intersecting understandings that posit climate change as at once an issue of biomedical health on the one hand and an issue of social structure on the other. While both, as a matter of the medical professional context under analysis, draw on concerns for the health and wellbeing of humans, the former relates its concerns closely to a biomedical model of health, whereas the latter does so from a social determinants perspective. I will briefly summarise the insights into both these understandings that have been explored in this thesis.

The first of the two, the understanding of climate change as a biomedical issue, posits the human body—the biomedical patient—at the heart of climate change concerns. In this understanding,

interviewees stressed the severity and urgency of climate change as a harm to human health in the present; as a process already and increasingly affecting the health of patients. This process was expressed as presenting itself to the medical profession through the detrimental health impacts experienced in medical practice. These harms were posited as both to the patients' bodies through such impacts as extreme heat, air pollution, and diseases, as well as to their mental wellbeing in light of the awareness of these impacts and their future aggravation, causing mental health issues grouped under the concept of climate anxiety. As the related discussion on the taste for medical climate activism and advocacy has highlighted (cf. Chapter 5), it is this understanding that most closely aligns with—informs and is informed by—a medical habitus. In this positioning of climate change as a biomedical issue, the concerns for the issue were principally aligned with concrete medical complications experienced by individual patients and the provision of responsive treatments thereof. Throughout these discussions however, I have highlighted an undercurrent of more socio-structural concerns, departing not from the pathologies of and impacts on the individual patient but the ways in which climate change is embedded in the structures of the societies whose citizens produce and suffer from it.

These socio-structural concerns constitute the second understanding of climate change. Here, interviewees stressed issues of privilege, inequality, and the economic and political structures that condition them. In the discussions thereof interviewees at once grounded these socio-structural dimensions in a concern for human health, through a health co-benefits and social determinants perspective thereof, and simultaneously moved not only beyond the human health dimensions of climate change but climate change impacts in general. In this, they raised such issues as economic growth, corporate power, and consumer culture as both themselves of concern and as the underlying conditions of climate change and related ecological issues. Here the related discussion on dispositions in Chapter 5 has shown the close relationship with a radical ecological habitus as informing and being informed by this understanding. An exemplary phenomenon in whose context this move beyond health concerns alone was most clearly expressed was COVID-19, a viral pandemic that as of the writing of this thesis has killed more than five million people globally (WHO 2022). In the discussions of COVID-19, interviewees explicitly positioned climate change as a more significant crisis that, despite its greater significance and urgency, has not received the level of attention that the pandemic has—a pandemic that the WHO has declared "easily the most severe" (WHO 2020) of any of its previously declared global health emergencies. This was not, as

interviewees themselves stressed, to relativise the human health impacts of COVID-19 in comparison to climate change, but rather to position the health impacts of the latter as a mere dimension of a greater set of issues that climate change is both produced by and itself producing. It is in the light of these greater issues that the response to climate change that is being expressed as necessary in this understanding is a mitigative and transformative one, aiming not at an adaptation to or treatment of climate change impacts but a proactive transformation of society.

As I have highlighted throughout, the two understandings intersect with each other in several of their dimensions. In the discussions I have referred to these intersections as the negotiations between the two as well as a tethering of one to the other. One of the ways in which this was shown to play out was in the simultaneous pathologisation of climate change impacts on mental health as climate anxiety and the questioning of the pathological character of precisely this anxiety, stressing that climate change constitutes a crisis that justifies such fear and apprehension. I have also shown how interviewees problematised the biomedical reduction of health to the individual patient body, while simultaneously stressing the health co-benefits of socio-structural changes as improving the health of precisely this individual patient. Likewise the discussions have highlighted the ways in which such concerns as for social justice and inequality are embedded into those for human health within a framework of the social determinants of health model.

The negotiation of practice, i.e. the careful balancing of medical and radical ecological sensibilities and commitments which constitute the central characteristics of the climate activism and advocacy of medical professionals, was stressed throughout this research. In the constructions of climate change this balancing was shown to be expressed, in its partiality, by the negotiations between two different presuppositions of what climate change is understood to be. As I have stressed at the outset of the findings chapters, these two understandings of climate change are conceptualised as important dimensions of the doxa of their two respective fields of medicine and climate politics—that is to say, they are dimensions of the fundamental presuppositions of the sites in which practices of medicine and climate politics are pursued. It is in the negotiation between both presuppositions at the intersection of their respective fields that the construction of climate change that informs the practice of medical climate activism and advocacy is itself negotiated. This construction of climate change as, in turn, a fundamental presupposition informing medical climate activism and advocacy constitutes however only one part of the negotiation of this practice at large, leaving open the

question of how engaging with this practice is positioned as meaningful, responsible, and appropriate, and how the efficacy of medical professionals within it is understood.

Meaning

As stressed at multiple points during the discussions, presuppositions, or doxa, establish the relationship between the field and its attuned "pattern of meaning making" (Ambrasat et al. 2016, p.1), or habitus—together constituting sensibilities and commitments as emotional, intellectual, aesthetic, and moral dispositions that make a particular practice meaningful and attractive for particular people to engage in. In the discussions above I have referred to this circumstance as understandings and habitus informing each other. In the same way that medical climate activists and advocates face and negotiate two presuppositions and fields, they accordingly face and negotiate two patterns of meaning-making in the habitus that are attuned to these fields and mediated by their doxa. Throughout the findings chapters, and in particular Chapter 5, I have explored two such respective patterns of meaning-making: that of medical and radical ecological habitus. In the discussions of these two I have highlighted the tensions that exist between them, with radical ecological dispositions suggesting an involvement with climate activism and advocacy that medical dispositions suggest is not, in any case not to the same extent, meaningful, responsible, and appropriate for medical professionals. During the discussions I have structured these dimensions of the explored sensibilities and commitments along the lines of congruences and incongruences between the position of the medical profession and medical practice in the field of medicine on the one hand and climate activism and advocacy in the field of climate politics on the other. It is in the attempt to align these practices and the dispositions that inform and are informed by them, those structured by medical and those by radical ecological habitus, that the meaning of medical climate activism and advocacy is being negotiated.

Throughout Chapter 5 I have explored several approaches by which the interviewed medical professionals negotiate the meaning of their climate activism and advocacy efforts along these lines. In the discussions of congruence, I highlighted four central ways in which the negotiation of medical and radical ecological sensibilities and commitments results in a posited appropriateness of and responsibility for climate activism and advocacy. First, interviewees positioned concerns for inequality and social justice as themselves appropriate areas of medical intervention, negotiating radical ecological sensibilities and commitments as aligned with the contributions

pursued through medical careers, the interests of patients, and the ethical principles that inform medical practice. Second, and similarly to the first, interviewees positioned the environment—itself the object of radical ecological concerns—as the appropriate context within which medical practice pursues interventions to human health. Medical responsibilities for the health of the patient body are here tethered to ecological responsibilities for the environment as the foundation of the former. Third, the responsibility of the medical profession was posited as exceeding that for the biomedical patient, the biomedical model of health being expressed as too limited and narrow to capture the breadth of human health whose protection and care interviewees described themselves as charged with. Fourth and last, interviewees posited a responsibility of the medical sector at large to account for the environment in light of its own contribution to the degradation thereof—and accordingly a degradation of human health that depends on it. The responsibility to ensure a sustainable provision of medical care is here derived from, one, the contribution to the issue of climate change by this care in the context of a polluter pays principle and, two, a duty to avoid causing such harm through medical practice in light of the principle of nonmaleficence.

On the other hand, in the discussions on perceived incongruences I have highlighted three ways in which the negotiations of medical and radical ecological sensibilities and commitments can, in contrast to the above, produce a sense of nonresponsibility for and inappropriateness of climate activism and advocacy by the medical profession. As stressed in the discussions thereof, by nature of the recruitment for this research and its focus on climate activists and advocates the interviewees were themselves engaged in and committed to the practices that the perceptions expressed here posit an aversion to. As such these notions of incongruence were at times described as limitations, hesitations, or concerns expressed by colleagues and the medical sector in general. The first of the three types of incongruence was described in precisely this context of collegial and organisational aversion to climate activism and advocacy, pointing to a rejection of responsibilities for ecological concerns in both medical practice and education, a perceived inappropriateness of engaging in political topics, and a general inertia in the field of medicine to changing such established positions—positions strongly embedded in the biomedical doxa of the field and the medical habitus attuned to it.

The second way in which interviewees expressed notions of nonresponsibility and inappropriateness closely relate to the first. Instead of being expressed as in the perceptions of colleagues however, here interviewees highlighted their own concerns for the transgression of

professional boundaries and the conflicts between responsibilities for sustainability and the provision of medical care. Interviewees stressed the inappropriateness of engaging in climate change advocacy in patient contact, a general perception of socio-structural issues lying outside of the purview of the medical profession, and a conflict between the responsibility for providing medical care and the impacts thereof. The latter in particular highlights the involved negotiation in this process of giving meaning to medical climate activism and advocacy—what above was raised as an argument for assuming responsibility for the environment in light of the ecological impacts of medical care is here turned around in light of a potential primacy of responsibility for precisely this care provision.

In this we already see expressed the central dimension of the last set of perceived incongruences, that of medical priorities. Here interviewees stressed the various competing responsibilities and commitments of medical professionals that in terms of time, salience, and efficacy may supersede those for socio-structural and ecological concerns. Notably it was shown that these tensions between medical and radical ecological priorities can be negotiated by distributing the perceived responsibilities for them between those most actively involved in climate activism and advocacy and those who, in light of the abovementioned hesitations and concerns, are less or not at all involved in such efforts.

This research has highlighted throughout that what is being negotiated here are not merely perceptions of climate change or the responsibilities for and appropriateness of engaging with the issue constructed in this way. Rather, it is the negotiation between a variety of emotional, intellectual, aesthetic, and moral dispositions (i.e. habitus) that structure the participation in fields and their practices—practices that themselves structure and are structured by these dispositions. As patterns of meaning-making, it is through the negotiation of these dispositions that the practice of medical climate activism and advocacy itself is given meaning. What is being operationalised in the participation in this practice is capital, the effect of which—efficacy—being the third and last dimension to be summarised.

Efficacy

In the theoretical discussions at the outset of the first findings chapter (cf. Chapter 4.1) I have stressed that the capacities through which medical professionals engage in climate activism and advocacy—i.e. the resources that are being deployed so as to assume positions in the competition

over determining the meaning of climate change—are here understood to be capital. As discussed in the introduction to the last findings chapter (cf. Chapter 6.1), this medical professional capital is operationalised, at a cost, so as to efficaciously function in the field of climate politics—this operationalisation being "the precondition for its efficacy in the field in question" (Bourdieu 1985, p.243). The process of operationalising medical professional capital has been shown to be itself a negotiation of how much of this capital is to be subjected to the "more or less expensive transformations" (ibid.) that aim at efficacy in the discussions of climate politics. As Chapter 6 has stressed, the issues of capital, costs, and efficacy constitute dimensions of the larger effort of negotiation that the practice of medical climate activism and advocacy is subject to. Three such negotiated operationalisations were highlighted in the discussions—the operationalisation of a general trust in medical professionals to command attention and be listened to on the issue of climate change, the operationalisation of their medical expertise and position in the field of medicine to speak to issues of human health as a salient framing of climate change, and the operationalisation of their professional networks and the support structures of medical climate activist and advocacy organisations to sustain such efforts against their oppositions.

In the discussion of trust, interviewees posited medical professionals as being perceived as respected and impartial actors whose objectives pursued in climate activism and advocacy are understood to be altruistic—perceived by others to be in their own interest. Interviewees posited this perception of medical professionals as in service of others as endowing them with a level of trust that positions them as role models and respected advisors whose expositions are given heed to by said others. Interviewees here also expressed trust as a privilege, relating this received trust from others once more, similar to the discussions above, to a professional responsibility towards them.

In the discussion of their capacity to talk health, participants notably drew on the health co-benefits concept that was already highlighted in the discussion of constructions, here however to stress the efficacy that medical professionals have to frame the benefits of climate action as benefits to human health, and the health of their patients in particular—determining both the meaning of particular dimensions of climate change and the meaning of climate change through these dimensions. In this, the interviewees expressed the perception of themselves as uniquely well positioned to talk about health and the health benefits of transformation efforts such as that of patient behaviours, i.e. as having the ability to talk about climate change in a particular way.

Likewise they expressed the perception that health framing is itself a salient topic that resonates with people in general, i.e. that this particular way of talking about climate change is effective. Interviewees however also highlighted their unique ability to talk about climate within health, drawing not on their medical expertise outside of but their position within the field of medicine—their positions in medical institutions and the healthcare system at large—so as to affect organisational change towards more sustainable practices therein.

Much of the discussion on the operationalisation of networks meanwhile was reflective in nature, stressing not only how networks are being and can be employed to strengthen the efficacy of medical professionals in climate change activism and advocacy, but also how the interviewees' own engagements with and commitments to such efforts were facilitated by such networks and their existing efforts, including by groups outside of the medical profession or the field of medicine such as the Fridays for Future movement. Interviewees here stressed the mutual support, resource sharing, and amplification of voice as the central efficacy generating and sustaining processes within networking. Partially this support was expressed through dimensions of inspiration and motivation by others, implying the efficacy of their own efforts to inspire climate action through the experience of having been inspired by such efforts themselves.

As the discussions however highlighted, operationalising medical professional capital so as to supply efficacy within climate activism and advocacy is not free—as a process of transformation, "profits in one area are necessarily paid for by costs in another" (Bourdieu 1985, p.253). As particularly efficacious as the available capital of medical professionals was expressed to be, so too was it posited as being particularly sensitive. Trust, expertise, and collegial solidarity constituting marked qualities of medical professional practice have been shown to simultaneously imply their indispensability for precisely this practice. A potential corrosion of trust, perceived expertise, and workplace relationships presents medical professionals with substantial costs that can be incurred over engaging in climate activism and advocacy. It is in this context that the potential consequences of climate activism and advocacy, from questioning medical procedures to involvement in direct action, were expressed by interviewees as either significant concerns or already experienced costs thereof. These ranged from critique and hostility at the workplace over participation in climate activism or organisational change efforts to worries about one's perception by patients or even the potential termination of one's medical career. As much as I have discussed the dimensions of negotiation between the sensibilities and commitments that inform medical

climate activism and advocacy, so too does the climate activism and advocacy of medical professionals involve a negotiation of relationships and the perceptions by others. The above-mentioned perceptions of responsibility acquire their full significance in light of these costs, disposing the participation in potentially costly radical ecological efforts despite and against these concerns for the possible ramifications for their professional standing.

The close relationship between these discussions of capital and efficacy with those of the preceding section on habitus and meaning are not coincidental. Conceptually, the habitus that were so posited as patterns of meaning-making are themselves a guise and form of precisely the capital of the medical profession, i.e. that of embodied cultural capital. In the same way that medical and radical ecological habitus inform the interest and participation in medical climate activism and advocacy, so too do the perceptions of capacities to be successful in these endeavours—to affect how others understand climate change and engage with climate action—and the perceived costs thereof. As cautioned in my discussion of the alignment between the Bourdieusian framework and perspectives such as the general incentives model (cf. Chapter 2.4, p.46), this acknowledgement does not require the presupposition of the so-involved medical professionals as rational choice actors. Rather, the negotiation of efficacy and costs is one of the many dimensions—alongside fields, doxa, and habitus—that constitute the negotiations of sensibilities and commitments that inform the practice of medical climate activism and advocacy.

7.3 Synthesis

This research was pursued with the purpose of interpretatively grasping the meanings ascribed to medical climate activism and advocacy by the medical professionals involved in it. To speak of involvement is rather somewhat of a misnomer. As much as this research had to first win and construct (Bourdieu et al. 1991, p.57) the social phenomenon that is—or rather was as such won and constructed as—medical climate activism and advocacy, so too was the phenomenon in the first instance not a phenomenon for medical professionals to be involved in, but itself the product of variously organised or unorganised efforts to commit oneself—that is, themselves—to the issue of climate change. Central to this interpretation of the phenomenon is accordingly how the issue of climate change and the particular positions that medical professionals do, can, and ought to take towards it are being understood.

The interpretation produced by this analysis—that is, the interpretation that I arrived at through my analysis—is that of medical climate activism and advocacy as a practice that negotiates between medical and radical ecological sensibilities and commitments. The meaning given to this practice is negotiated through, one, a conceptually informed construction of climate change, two, a dispositionally informed relationship of the medical profession to this construction, and three, the pursuit thereof in light of particular capacities and against particular costs. As much as the interviewees who participated in this research were, and expressed themselves as, medical professionals committed to medical concerns, they were and expressed themselves as climate activists and advocates committed to concerns of radical ecological nature. In certain aspects these two sides align and complement each other, in others they contrast and conflict with each other. It is in the careful negotiation between them that medical climate activism and advocacy as a practice takes shape. See Figure 7 for an illustration of this negotiated relationship between the two sets of sensibilities and commitments.

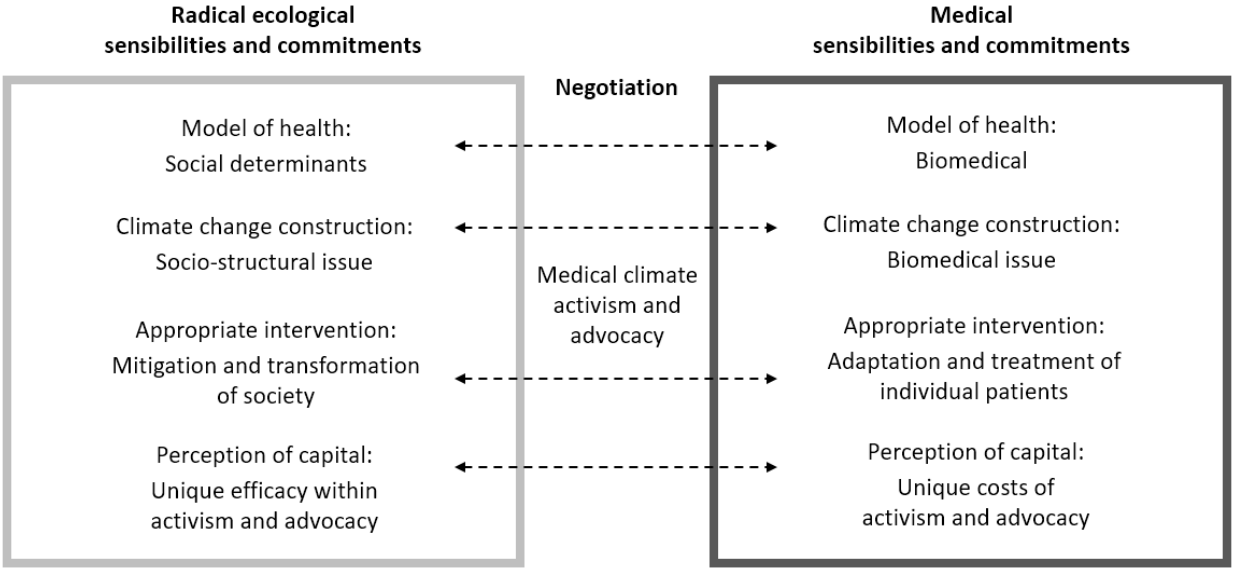


Figure 7: *Negotiated Practice*

As the reader will notice, the first dimension I have chosen to highlight for both sets of sensibilities and commitments is that of their respective model of health. This is in acknowledgement of the amount of "conceptual work" (Jasanoff 2013, p.442) being done by, first and foremost, the concept of the social determinants of health and relatedly that of health co-benefits in constructing a knowledge claim as to what health and climate change is that informs a perception of climate activism and advocacy as meaningful, responsible, and appropriate for the medical profession to

engage in. In the negotiation of the practice of medical climate activism and advocacy it is this conceptual construction that provides the basis from which climate change is posited as at once a biomedical issue within the field of medicine—and as such calling for the attention and concern of medical professionals—and a socio-structural issue within the field of climate politics—and as such calling for radical ecological efforts towards a transformation of society. It is through the adoption and application of the social determinants of health model that the health concerns for climate change are embedded into the socio-structural concerns for climate change and vice versa, producing precisely the interrelated construction that calls for medical and radical ecological attention simultaneously. As Shapin and Schaffer (2011) remind us, what is negotiated through these conceptual knowledge constructions is not only the practice of medical climate activism and advocacy but social order itself (p.332).

A related approach to illuminate how constructions of knowledge relate to social order is through what Hughes and Vadrot (2019) explored in the context of intergovernmental settings as weighted concepts, capturing the ways in which contestations over conceptualisations are transposed upon concepts themselves. Drawing on a Bourdieusian framework, the idea of weighted concepts highlights the structural work that is being done by concepts in fixing social orders to conceptual meanings—meanings that these social orders and the struggles thereover themselves designate. Put differently, in similar ways in which the "historical work of construction of a group" (Bourdieu and Wacquant 1992, pp.242-243) fixes a particular social order to the meaning of the medical profession (cf. also Chapter 2.4, pp.48-49), so too does the conceptual work that goes into the construction of climate change fix a particular social order to the meaning of the issue. This construction is here that of climate change as at once a medical and socio-structural issue drawing on such concepts as health co-benefits and the social determinants of health, positing a social order in which medical professionals engaged in the pursuit of radical, ecological, and medical climate activism and advocacy are within their appropriate if not expected responsibilities to do so.

Similarly to what I have stressed in the earlier discussion of doxa and fields (cf. Chapter 4.1), I am here not referring to universal social orders of entire societies but the social orders of particular fields—fields whose orders nevertheless intersect with those of others as much as their doxa and the habitus attuned to them do. Such a distinction between order on the one hand and doxa and habitus on the other is in this analysis indeed superfluous, as in a Bourdieusian framework this social order expresses itself precisely in the classificatory judgements—divisions such as what is

normal or abnormal, right or wrong—that endow actors "with the dispositions, and consequently the practices and properties, that the principles of division assign to them" (Bourdieu 1990, p.146). In this research I have highlighted two dimensions of these classificatory judgements that notably structure the meaning of medical climate activism and advocacy: medical and radical ecological sensibilities and commitments that structure what is and is not judged as appropriate for medical professionals to engage in, and what is and is not judged to be part of their professional responsibilities. These judgements draw centrally on a division of what is and is not subject to medical concern and intervention—the models of health discussed above and throughout the thesis.

The conceptually informed social order that disposes medical professionals to an engagement with climate activism and advocacy is not maintained by objective mechanisms, but by the assumptions of presuppositions and expressions of embodied dispositions as patterns of meaning-making. It is in this light that we have to once more recall the earlier proposition that habitus are "social positions embodied in bodily dispositions" (Bourdieu 1998, p.182). Put differently, the patterns of meaning making that inform and are informed by conceptual constructions are patterns of social order[6]—"social order [that] rests mainly on the order that reigns in people's minds" (Bourdieu 1990, p.291). The fields and practices shaped by and themselves shaping such orders of the mind do not exist in a vacuum. They themselves structure and are structured by more than the dispositions that presume them salient, congruent, or appropriate—more than the perceptions of what the responsibilities of medical professionals are, how they should be prioritised, and what is or is not appropriate for them to do. By positioning the group that constitutes the medical profession as one to speak on health and climate change, they position others as ones to listen. Likewise I have shown the medical professionals so speaking to draw on what is and has been said by others, drawing closely on existing knowledge claims posited in the fields of medicine and climate politics. As much as the constructions of climate change and the meanings given to climate activism and advocacy are informed by medical professional sensibilities and commitments in particular, so too are these sensibilities and commitments informed by what climate change is posited to be and mean in fields beyond medical practice. As medical professionals assume

[6] And, likewise, patterns of perpetual social ordering—"structured structures predisposed to function as structuring structures" (Bourdieu 1977, p.72).

positions within the field of climate politics, so too do they and others in the layering of fields within and around it—the fields of climate and medicine, the fields of activism and politics and, ultimately, the field of power. Medical climate activism and advocacy concerns in the last analysis neither the medical profession nor the issue of climate change or health but the ordering of society. To make sense of how the former comes to be is to make sense of how the latter does. In this thesis I have presented one attempt to do so that, itself subject to the orders it seeks to grasp, can only hope to have contributed to the effort.

7.4 Contributions

The fruits of the effort to make sense of medical climate activism and advocacy presented in this thesis are threefold and can be categorised by their empirical, theoretical, and practical contributions. These contributions were already sketched out in the introduction to this thesis (cf. Chapter 1.2), but will here be recaptured in light of the preceding discussions. The empirical contributions of this thesis lie in the narrative data produced, analysed, and presented that paint a picture of the perceptions and meaning-making that underlie medical climate activism and advocacy. As highlighted in the literature review, the phenomenon of medical professionals being involved in climate change activism and advocacy efforts has to date found little if any attention in social scientific research. This research presents, to my knowledge, the first constructivist-interpretive inquiry into the climate activism and advocacy of medical professionals and the first account of the phenomenon to draw on in-depth interviewing for the production of its data. The so-developed and presented thick description (Geertz 1973) of medical climate activism and advocacy provides insights into a set of activist and advocacy efforts that sprawled into existence and garnered popularity over the past several years, with many of the prominent organisations that were found to structure such efforts having emerged no further back than 2016. This empirical account not only itself illuminates a contemporary practice unfolding across different societies concerning a central challenge of the 21st century, but provides a first stepping stone for further constructivist-interpretive research into the phenomenon of medical professional involvement in the field of climate politics. This thesis has shown that medical climate activism and advocacy expresses itself not in a process of discursive capture (Hugé et al. 2013) of climate change by the medical profession but in a carefully balanced practice of civic engagement that rests on

negotiations between medical and radical ecological sensibilities and commitments. In light of these sensibilities and commitments, as well as the severity of the issue that they concern, this engagement is pursued against, at times substantial, professional and personal costs. This account positions future research on and discussion of the phenomenon of medical climate activism and advocacy in two ways: One, by providing an exemplary overview of the general characteristics of medical climate activism and advocacy that can both inform and be challenged or confirmed, and thus elaborated and advanced, by these future inquiries, and, two, by presenting a pre-emptive challenge to potential critiques of discursive capture that may be levied against it by critical social science scholarship or structural opposition from within the involved fields and their institutions.

Theoretically this thesis presented an application of a Bourdieusian framework that theorises the perceptions and meaning-making thus analysed as dimensions of a multifaceted practice, resting on fields, doxa, habitus, and capital. Grounded in a practice-theoretical perspective, this framework provided a focus on the meaning-making that underlies what the medical professionals involved in climate activism and advocacy think, say, and do as simultaneously structured and structuring—structured by acquired sensibilities and commitments and the fields in whose practices they find assumption and expression, and structuring by themselves shaping said fields and the practices therein. By demonstrating the fruitfulness of applying Bourdieu's thinking tools (Leander 2008) to the sociological analysis of climate change, climate activism and advocacy efforts, medical practice, and the meaning-making of those involved therein, this thesis strengthens the conceptual efforts of (and hopes to inspire further) research illuminating practices in, between, and beyond the fields of climate politics and medicine. More broadly, it advances the idea of negotiated practices as practices emerging at the intersections of distinct fields that call for the negotiation of partially congruent and partially incongruent dimensions of the sensibilities and commitments that inform them. In doing so, this thesis presents an example of sociological research accounting for the multiplicity of structural forces interacting with the practices and their actors found in-between social sites. It exemplifies these interactions between the fields of medicine and climate politics, highlighting the processes of alteration and suspension of distinct sets of doxa, habitus, and capital as the co-constitutive dimensions of a practice. This extension of the structural causality of practice (Bourdieu and Passeron 1990) from within a particular field to the structuring between multiple fields can inform future relational sociological research, especially inquiries into emerging practices that unfold and are negotiated between established fields.

Lastly, the insights produced and presented in this thesis can be used to facilitate the engagement of medical professionals, and civic engagement more generally, with climate change and other ecological or public health concerns. To understand how such practices are given meaning is to understand how they become meaningful to engage with—how the concerns they address and themselves raise facilitate and inhibit such involvements. To a certain extent the research process itself has already manifested some of these practical contributions, with participant interviewees expressing their experience of the interview process as a deeply reflective one, having been prompted to (re)consider the assumptions behind and implications of their efforts, and raising new questions and clarifying or providing answers to existing ones. In many respects it is this contribution or application of the research that most closely accounts for the impetus out of which my interest in the subject was first born: discussions with actors within the fields of medicine and climate politics engaged in precisely such facilitation of medical climate activism and advocacy efforts, some of which were highlighted earlier in the literature review (cf. Chapter 2.3).

Three considerations in particular stood out for efforts to facilitate medical professional engagement with climate change. Firstly, I have stressed the significance of perspectives on health informed by the concepts of the social determinants of health and health co-benefits. These conceptually informed positions embed socio-structural and environmental concerns for climate change into those of medical practice. As perspectives moving beyond the biomedical paradigm dominating medical education and practice, much may be achieved by communicating these perspectives commonly grounded in the discipline of public health to medical professionals. Secondly, I have highlighted the importance of perceived congruence between medical practice and concerns for climate change beyond the impacts of the latter on the former, including the various ways that both practical and normative concerns towards the two are aligned. Rather than simply focusing on the significance of climate change to human health and its medically relevant impacts, facilitation of engagements therewith need to stress the congruence between such concerns for the climate and those for medical practice—be it on the basis of medical ethics, the importance of moving beyond biomedical practices in ensuring human health and wellbeing, or the responsibility of the medical sector to account for its own environmental impacts. Third and lastly, the discussions have shown that it may not be a disinterest in climate change that inhibits engagement with medical climate activism and advocacy but a concern for the potential costs and consequences of such involvements. Facilitation here needs to, first, acknowledge such concerns

as valid and, second, stress the availability and strength of networks, organisation, and community with and among like-minded, so-involved activists and advocates. It is these supportive networks that enable and sustain medical professional engagement with climate change activism and advocacy as an organised effort.

7.5 Limitations and Future Research

Just as a thing is defined as much by what it is as by what it is not, so too is what this research does shaped in equal measure by what it does not. Many of these limitations are expressions of the intentional methodological decisions described and explained in Chapter 3 on methodology. Others imposed themselves onto this research by happenstance. As highlighted in the discussions on methodology, the principal circumstance dictating the conditions under which this research was conducted was that of the COVID-19 pandemic (cf. Chapter 3.7). The difficulties encountered in recruiting medical professionals to participate in this research during global pandemic conditions limited the number of interviews I was able to conduct to almost the minimum required within the parameters of data saturation suggested by the literature. Most notably I was only able to recruit three practising medical doctors with fewer than ten years of professional work experience as well as three retired professionals. While neither of these six interviews produced unique or particular themes not found across the other fourteen interviews, the insights I was able to generate into more granular particularities regarding concerns for potential costs and consequences for professional standing—an area I suspect the differences in seniority to find notable expression in—were significantly limited. While this thesis hopes, as mentioned in the introduction to this conclusion, to have presented an exemplar of the general characteristics of the practice of medical climate activism and advocacy, future research with access to a larger cohort of participants may delve deeper into these finer differences between the multiple dimensions across which the practice analysed here was found to unfold.

The insights of this research were however also involuntarily limited on a more methodological level. COVID-19 saw the abrupt end to virtually all of the most overtly radical political climate activism and advocacy by medical professionals, in particular direct-action efforts and other similar forms of protest. This thesis has adopted an understanding of radicality in line with the notion of radical habitus as the disposition for critique and contention (Crossley 2003, p.45). From

this perspective, the sensibilities and commitments at the basis of medical climate activism and advocacy were explored as inherently radical on the premise of them challenging established (doxic) biomedical practices. Both in their ecological and medical dimensions, efforts that critique, question, and contest such notions as appropriateness, responsibility, organisational practices, or socio-structural dimensions of social order do here express such a broad radical meaning. As highlighted at various points throughout the thesis however, medical climate activism and advocacy can take forms more starkly radical in direct action efforts and other practices that may stretch or break dimensions of legality, such as the highlighted engagements that risk leading to potential arrests. Whereas this research in light of their absence at the time it was conducted only tangentially touches on such efforts, future research—in particular such employing participatory, observational methods—can illuminate the processes involved in organising, conducting, and giving meaning to such radical activist efforts in greater detail.

As mentioned above, many of the limitations of this thesis were however inherent to the research design. Whereas I in this thesis presented a constructivist-interpretive exploration of the meaning-making involved in medical climate activism and advocacy, I have little to say about the statistical prevalence and distribution of such efforts among the medical profession. The insights of this research rest on an interpretation of "social particulars" (Rustin 2000, p.168); the meaning-making of particular actors involved in and producing a particular practice on the basis of particular sensibilities and commitments. As such, this research does not allow for a generalisation regarding the statistical distribution and prevalence of these so-explored particular perspectives. Future quantitative research could explore such distributions to contextualise the meaning-making explored in this research in other structural dimensions that inhibit or facilitate such engagements, such as by the various characteristics that have here been posited in light of capturing the practice under analysis in its multidimensionality. Likewise, by adopting in-depth interviewing as the data production method for this research, I have chosen to explore the phenomenon through the frame of reference of those involved. This is to say that this research presented mediated accounts about action, rather than observational accounts in action. This is not to posit a fundamental epistemological distinction between the two or to say that observational methods are not themselves nested in "several layers of interpretation" (Halkier 2017, p.198). Rather, this is to acknowledge that medical climate activism and advocacy will involve tacit, nonverbal dimensions of practice that will be hard if not impossible for interviewees to articulate in an interview setting.

Future observational research could present such an exploration, for example by observing more closely the various interpersonal practices and relationships of medical professional climate activists and advocates between each other, as well as in contact with patients or colleagues. Here future research can again build upon, and thus elaborate, confirm, and challenge, the here presented insights as their points of departure.

As I have mentioned in the introduction, what the discussions in this thesis constructed as a phenomenon of a negotiation of practice between the fields of medicine and climate politics was explored through and from the perspective of the former—as a practice of *medical* climate activism and advocacy. This implicit focus on the field of medicine in research drawing on interviews with medical professionals highlights an important limitation of the here presented research and, in parallel, impetus for future research, namely the need to assess the phenomenon through a focus on the inverse. A potential entry point to such research was already highlighted in the preceding discussions on the costs of medical climate activism and advocacy and in particular the reduction of medical professional work, namely in the practices of climate activists and advocates that have formerly been active and employed as medical professionals. Rather than focusing on the ramifications that the negotiations between the fields of medicine and climate politics have on the field of medicine, the focus could thus shift to the ramifications that these negotiations have on the field of climate politics and the (established) practices, actors, and institutions therein.

There are a range of other aspects of medical climate activism and advocacy that the discussions presented in this thesis similarly tangentially touch on that call for further exploration in future research. As I have highlighted particularly in the discussion on the constructions of climate change (cf. Chapter 4), medical professional climate activists and advocates draw on and explicitly reference knowledge claims by other actors, organisations, and institutions, first and foremost the IPCC, to express and position their own perceptions and understandings of climate change. This aspect, closely related to the discussion of different capital and capacities to determine the meaning of climate change, calls for further inquiry into how the claims and credibility of other actors within the field of climate politics are evaluated, adopted, and contested in their intersection with the field of medicine. Future research may also adopt different disciplinary lenses to assess the phenomenon from different perspectives, relating medical climate activism and advocacy more closely to questions of the historical establishing of the medical professional group and its position in fields of ecological concern, or the modes by which medical practice constructs the objects of its

interventions, the clinical gaze, the biomedical patient, and the contention of these by public health and social determinants perspectives. More generally, the theoretical insights into negotiated practices as practices unfolding at the intersection of fields and demanding negotiation between sets of sensibilities and commitments positions future research into this and related emerging practices and calls for such future research to advance these insights. Given how little has been done in the social scientific analysis of medical climate activism and advocacy, much remains that can and needs to be done going forward.

7.6 Reflections

When perusing the social science literature on climate change one will not seldom encounter the -isation of various aspects of the issue and the discourses surrounding it. The securitisation of climate change, the politicisation of climate change, the economisation of climate change—the list of so posited processes claiming climate change as a matter of a particular area of concern and the subsequent problematisation of precisely this claiming is long and growing. It is in this context that I was most struck to find virtually no literature presenting an analysis of what could be posited as a potential *medicalisation* of climate change. I encountered precisely one publication that assesses such a potential medicalisation in light of the uptake of climate change into medical discourse (Fleming 2014). In the short historical analysis, Fleming problematises what he sees as a potential climate reductionism (Hulme 2011) resulting from such a myopic reduction of climate change to medical concerns. Beyond this exception, the absence of literature on the topic is ever the more noteworthy given the prominence of discussions of the concept of medicalisation—"the process by which non-medical problems become defined and treated as medical problems" (Conrad et al. 2010, p.1943)—in the social science literature more broadly. The concept has indeed been so popular that scholars have criticised the too liberal use of it, suggesting its more targeted application to analyses of the expansion of medical professional jurisdiction (i.e. claims to control, cf. Abbott 1988) beyond the domain of medicine, in particular through the redefinition of an issue as a medical concern requiring medical intervention (Davis 2006).

Inspired by critical sociological analyses of the concept of medicalisation (Williams et al. 2011, Busfield 2017) and the striking absence of such discussions in the context of climate change, I originally set out to develop and present such an account in this thesis. When I began the work on

this research project, it was this conceptual lens of medicalisation that I envisioned to guide the analysis as one exploring the processes by which medical professionals expand their claims to control into the field of climate politics. During the research process it however quickly became clear that the concept of medicalisation, grounded in a directed expansion from the medical profession into the issue of climate change, poorly captured the phenomenon of medical climate activism and advocacy. Medical climate activism and advocacy was found to express itself not in attempts to claim medical professional jurisdiction over climate change, but in the recognition of climate change as an issue of central concern for human societies in the 21st century that calls for civic engagement therewith, often against great personal and professional costs incurred over such engagements. What I encountered was not an -isation of climate towards or within the field of medicine, but the negotiated practice between climate and medicine; between the medical and radical ecological concerns I have explored throughout this thesis. To the extent to which one may speak of a medicalisation of climate change one may equally posit a *climatologisation* of medical practice—both, I argue, are equally misleading. As this thesis has highlighted, the medical climate activism and advocacy that this research has explored constitutes a process that plays out within and across social fields, not in a unilateral capture of the field of climate politics by the field of medicine or vice versa.

At the intersection of the presuppositions of these fields and the dispositions that are attuned to them takes place a negotiation of sensibilities and commitments that mutually, which is not to say equally, affect each other to varying degrees. Practices that emerge from the field of climate politics affect the field of medicine, for example by the knowledge claims they produce and posit that affect the constructions of climate change and with them the meanings ascribed to the issue by medical professionals. Likewise practices that emerge from the field of medicine affect the field of climate politics, for example by medical professionals assuming the roles of climate activists, organisational change advocates, and science communicators within patient consultation and thus changing how others understand and engage with climate change. This medical climate activism and advocacy does not reduce the discussions of climate change to natural scientific positions and biomedical claims. Rather, it expands and integrates them into such processes as health services planning, clinical workplace discussions, physician-patient consultations, educational curricula of medical schools, and, ultimately, the consciousness and self-perception of the medical profession as one of many voices in the discussions surrounding climate politics. It is in equal measure a

process, product, and producer of multifaceted civic engagements with climate change as an issue of fundamental concern to the health and wellbeing of life on earth—human and otherwise.

References

Abbott, A., 1988. *The System of Professions: An Essay on the Division of Expert Labor*. University of Chicago Press.

Abrahams, K., Kathard, H., Harty, M. and Pillay, M., 2019. Inequity and the professionalisation of speech-language pathology. *Professions and Professionalism*, *9*(3).

Adams, K., Hean, S., Sturgis, P. and Clark, J.M., 2006. Investigating the factors influencing professional identity of first-year health and social care students. *Learning in Health and Social Care*, *5*(2), pp.55-68.

Adger, W.N., 2003. Social capital, collective action, and adaptation to climate change. *Economic Geography*, *79*(4), pp.387-404.

Agrawala, S., 1998. Context and early origins of the Intergovernmental Panel on Climate Change. *Climatic Change*, *39*(4), pp.605-620.

Aitken, G., Jones, D., Fawns, T., Sutherland, D. and Henderson, S., 2019. Using Bourdieu to explore graduate attributes in two online Master's programmes. *Advances in Health Sciences Education*, pp.1-18.

Akerlof, K., DeBono, R., Berry, P., Leiserowitz, A., Roser-Renouf, C., Clarke, K.L., Rogaeva, A., Nisbet, M.C., Weathers, M.R. and Maibach, E.W., 2010. Public perceptions of climate change as a human health risk: surveys of the United States, Canada and Malta. *International Journal of Environmental Research and Public Health*, *7*(6), pp.2559-2606.

Akl, E.A., Oxman, A.D., Herrin, J., Vist, G.E., Terrenato, I., Sperati, F., Costiniuk, C., Blank, D. and Schünemann, H., 2011. Framing of health information messages. *Cochrane Database of Systematic Reviews*, 12.

Alam, M., 2020. Reconstructing anti-capitalism as heterodoxa in Indonesia's youth-led urban environmentalism Twitter account. *Geoforum*, *114*, pp.151-158.

Aldrich, D.P. and Meyer, M.A., 2015. Social capital and community resilience. *American Behavioral Scientist*, *59*(2), pp.254-269.

Alfredsson, E.C., 2004. “Green” consumption—no solution for climate change. *Energy*, *29*(4), pp.513-524.

Allen, M.R., Babiker, M., Chen, Y., De Coninck, H., Connors, S., van Diemen, R., Dube, O.P., Ebi, K.L., Engelbrecht, F., Ferrat, M. and Ford, J., 2018. Summary for policymakers. In *Global Warming of 1.5: An IPCC Special Report on the impacts of global warming of 1.5C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. IPCC.

Almassi, B., 2012. Climate change, epistemic trust, and expert trustworthiness. *Ethics & the Environment*, *17*(2), pp.29-49.

Ambrasat, J., Von Scheve, C., Schauenburg, G., Conrad, M. and Schröder, T., 2016, December. Unpacking the habitus: Meaning making across lifestyles. In *Sociological Forum*, *31*(4), pp.994-1017.

Andrade, A.D., 2009. Interpretive research aiming at theory building: Adopting and adapting the case study design. *The Qualitative Report*, 14(1), p.42.

Ansari, S., 2013. Social capital and collective efficacy: Resource and operating tools of community social control. *Journal of Theoretical & Philosophical Criminology*, *5*(2).

Baard, P., 2015. Managing climate change: A view from deep ecology. *Ethics & the Environment*, *20*(1), pp.23-44.

Balest, J., Pisani, E., Vettorato, D. and Secco, L., 2018. Local reflections on low-carbon energy systems: a systematic review of actors, processes, and networks of local societies. *Energy Research & Social Science*, *42*, pp.170-181.

Ballew, M., Marlon, J., Leiserowitz, A and Maibach, E., 2018. Gender Differences in Public Understanding of Climate Change. *Yale Program on Climate Change Communication*. Online. Accessed 25.10.2019, https://climatecommunication.yale.edu/publications/gender-differences-in-public-understanding-of-climate-change.

Barker, C., Pistrang, N. and Elliott, R., 2002. *Research Methods in Clinical Psychology: An Introduction for Students and Practitioners*. John Wiley & Sons.

Bebinger, M., 2019. Has Your Doctor Talked To You About Climate Change? *NPR*. Online. Accessed 30.10.2019, https://www.npr.org/sections/health-shots/2019/07/13/734430818/has-your-doctor-talked-to-you-about-climate-change?

Beck, S. and Forsyth, T., 2017. Environmental science and international relations. In *Traditions and Trends in Global Environmental Politics*, pp.81-99.

Benestad, R.E., Nuccitelli, D., Lewandowsky, S., Hayhoe, K., Hygen, H.O., Van Dorland, R. and Cook, J., 2016. Learning from mistakes in climate research. *Theoretical and Applied Climatology*, *126*(3-4), pp.699-703.

Berger, R., 2015. Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*, *15*(2), pp.219-234.

Betz, G., 2009. Underdetermination, model-ensembles and surprises: on the epistemology of scenario-analysis in climatology. *Journal for General Philosophy of Science*, *40*(1), pp.3-21.

Bhandari, H. and Yasunobu, K., 2009. What is social capital? A comprehensive review of the concept. *Asian Journal of Social Science*, *37*(3), pp.480-510.

Black, T., 2016. Race, gender, and climate injustice: dimensions of social and environmental inequality. In *Systemic Crises of Global Climate Change*, pp.172-184.

Blashki, G., Abelsohn, A., Woollard, R., Arya, N., Parkes, M.W., Kendal, P., Bell, E. and Bell, R.W., 2012. General Practitioners' responses to global climate change-lessons from clinical experience and the clinical method. *Asia Pacific Family Medicine*, *11*(1), p.6.

Bloor, D., 1991. *Knowledge and Social Imagery*. University of Chicago Press.

Bodansky, D., 1996. May we engineer the climate? *Climatic Change*, *33*(3), pp.309-321.

Bolsen, T. and Shapiro, M.A., 2018. The US news media, polarization on climate change, and pathways to effective communication. *Environmental Communication*, *12*(2), pp.149-163.

Borah, P., 2011. Conceptual issues in framing theory: A systematic examination of a decade's literature. *Journal of Communication*, *61*(2), pp.246-263.

Bourdieu, P. and Passeron, J.C., 1979. *The Inheritors: French Students and Their Relation to Culture*. University of Chicago Press.

Bourdieu, P. and Passeron, J.C., 1990. *Reproduction in Education, Society and Culture*. Sage.

Bourdieu, P. and Wacquant, L.J., 1992. *An Invitation to Reflexive Sociology*. University of Chicago Press.

Bourdieu, P., 1977. *Outline of a Theory of Practice*. Cambridge University Press (28th printing).

Bourdieu, P., 1985. The Forms of Capital. In *Handbook of Theory of Research for the Sociology of Education*, pp.241-258.

Bourdieu, P., 1988. *Homo Academicus*. Stanford University Press.

Bourdieu, P., 1990. *The Logic of Practice*. Stanford University Press.

Bourdieu, P., 1996. *Distinction: A Social Critique of the Judgement of Taste*. Harvard University Press.

Bourdieu, P., 1998. *The State Nobility: Elite Schools in the Field of Power*. Stanford University Press.

Bourdieu, P., 2000. *Pascalian Meditations*. Stanford University Press.

Bourdieu, P., 2008. *Sketch for a Self-Analysis*. University of Chicago Press.

Bourdieu, P., Chamboredon, J.C. and Passeron, J.C., 1991. *The Craft of Sociology*. Walter de Gruyter.

Boykoff, M.T., 2007. Flogging a dead norm? Newspaper coverage of anthropogenic climate change in the United States and United Kingdom from 2003 to 2006. *Area*, *39*(4), pp.470-481.

Braun, V. and Clarke, V., 2012. Thematic Analysis. In *APA Handbook of Research Methods in Psychology*, pp.57-71.

Brenton, A., 2013. 'Great Powers' in climate politics. *Climate Policy*, *13*(5), pp.541-546.

Broom, A., Broom, J. and Kirby, E., 2014. Cultures of resistance? A Bourdieusian analysis of doctors' antibiotic prescribing. *Social Science & Medicine*, *110*, pp.81-88.

Brown, S. and Walker, G., 2008. Understanding heat wave vulnerability in nursing and residential homes. *Building Research & Information*, *36*(4), pp.363-372.

Buchanan, A., 2014. Medical Paternalism. In *Medicine and Moral Philosophy*, pp.214-235.

Buechler, S.M., 1993. Beyond resource mobilization? Emerging trends in social movement theory. *The Sociological Quarterly*, *34*(2), pp.217-235.

Burke, M., Craxton, M., Kolstad, C.D., Onda, C., Allcott, H., Baker, E., Barrage, L., Carson, R., Gillingham, K., Graff-Zivin, J. and Greenstone, M., 2016. Opportunities for advances in climate change economics. *Science*, *352*(6283), pp.292-293.

Buse, C.G., Poland, B., Wong, J. and Haluza-Delay, R., 2021. 'We're all brave pioneers on this road': a Bourdieusian analysis of field creation for public health adaptation to climate change in Ontario, Canada. *Critical Public Health*, *31*(1), pp.90-100.

Busfield, J., 2017. The concept of medicalisation reassessed. *Sociology of Health & Illness*, *39*(5), pp.759-774.

Buxton, N. and Hayes, B. eds., 2016. *The Secure and the Dispossessed: How the military and corporations are shaping a climate-changed world*. London: Pluto Press.

Calnan, M.W. and Sanford, E., 2004. Public trust in health care: the system or the doctor? *BMJ Quality & Safety*, *13*(2), pp.92-97.

Capela Lourenço, T., Rovisco, A., Dessai, S., Moss, R. and Petersen, A., 2015. Editorial introduction to the special issue on uncertainty and climate change adaptation. *Climatic Change*, *132*(3), pp.369-372.

Capstick, S.B. and Pidgeon, N.F., 2014. Public perception of cold weather events as evidence for and against climate change. *Climatic Change*, *122*(4), pp.695-708.

Cardwell, F.S. and Elliott, S.J., 2013. Making the links: do we connect climate change with health? A qualitative case study from Canada. *BMC Public Health*, *13*(1), pp.1-12.

Carr, W., 1986. Theories of theory and practice. *Journal of Philosophy of Education*, *20*(2), pp.177-186.

Carter, N., 2014. The politics of climate change in the UK. *Wiley Interdisciplinary Reviews: Climate Change*, *5*(3), pp.423-433.

Chant, S.R., 2011. The Limits of Rationality in Collective Action Explanations. In *New Waves in Philosophy of Action*, pp.257-273.

Chivian, E., 2014. Why doctors and their organisations must help tackle climate change: an essay by Eric Chivian. *BMJ*, *348*.

Clark, A., 2006. Real life methods working papers: Anonymising research data. *Leeds: NCRM Real Life Methods Node*. University of Leeds.

Clark, T., 2010. On 'being researched': Why do people engage with qualitative research? *Qualitative Research*, *10*(4), pp.399-419.

Clayton, S., 2020. Climate anxiety: Psychological responses to climate change. *Journal of Anxiety Disorders*, *74*, p.102263.

Cockerham, W.C., 2005. Health lifestyle theory and the convergence of agency and structure. *Journal of Health and Social Behavior*, *46*(1), pp.51-67.

Cockerham, W.C., Hamby, B.W. and Oates, G.R., 2017. The social determinants of chronic disease. *American Journal of Preventive Medicine*, *52*(1), pp.5-12.

Cohn, C., 1990. Nuclear language and how we learned to pat the bomb. In *Making War/Making Peace: The Social Foundations of Violent Conflict*, pp.111-121.

Collyer, F., 2018. Envisaging the healthcare sector as a field: Moving from Talcott Parsons to Pierre Bourdieu. *Social Theory & Health*, *16*(2), pp.111-126.

Colyer, H.M., 2004. The construction and development of health professions: where will it end? *Journal of Advanced Nursing*, *48*(4), pp.406-412.

Comtesse, H., Ertl, V., Hengst, S., Rosner, R. and Smid, G.E., 2021. Ecological grief as a response to environmental change: a mental health risk or functional response? *International Journal of Environmental Research and Public Health*, *18*(2), p.734.

Conrad, P., Mackie, T. and Mehrotra, A., 2010. Estimating the costs of medicalization. *Social Science & Medicine*, *70*(12), pp.1943-1947.

Cook, J. and Jacobs, P., 2014. Scientists are from Mars, laypeople are from Venus: an evidence-based rationale for communicating the consensus on climate. *Reports of the National Center for Science Education*, *34*(6).

Cook, J., 2017. Response by Cook to "Beyond counting climate consensus". *Environmental Communication*, *11*(6), pp.733-735.

Cook, J., Nuccitelli, D., Green, S.A., Richardson, M., Winkler, B., Painting, R., Way, R., Jacobs, P. and Skuce, A., 2013. Quantifying the consensus on anthropogenic global warming in the scientific literature. *Environmental Research Letters*, *8*(2), p.024024.

Corbett, J.B. and Durfee, J.L., 2004. Testing public (un) certainty of science: Media representations of global warming. *Science Communication*, *26*(2), pp.129-151.

Corner, A. and Groves, C., 2014. Breaking the climate change communication deadlock. *Nature Climate Change*, *4*(9), p.743.

Costello, A., Montgomery, H. and Watts, N., 2013. Climate change: the challenge for healthcare professionals. *BMJ*, *347*.

Covey, J., 2014. The role of dispositional factors in moderating message framing effects. *Health Psychology*, *33*(1), p.52.

Creutzig, F., Jochem, P., Edelenbosch, O.Y., Mattauch, L., van Vuuren, D.P., McCollum, D. and Minx, J., 2015. Transport: A roadblock to climate change mitigation? *Science*, *350*(6263), pp.911-912.

Creutzig, F., Mühlhoff, R. and Römer, J., 2012. Decarbonizing urban transport in European cities: four cases show possibly high co-benefits. *Environmental Research Letters*, *7*(4), p.044042.

Crossley, N., 2001. Embodiment and social structure: a response to Howson and Inglis. *The Sociological Review*, *49*(3), pp.318-326.

Crossley, N., 2003. From reproduction to transformation: Social movement fields and the radical habitus. *Theory, Culture & Society*, *20*(6), pp.43-68.

Cucinotta, D. and Vanelli, M., 2020. WHO declares COVID-19 a pandemic. *Acta Bio Medica: Atenei Parmensis*, *91*(1), p.157.

Cunsolo, A. and Ellis, N.R., 2018. Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, *8*(4), pp.275-281.

Daston, L. and Galison, P., 2021. *Objectivity*. Princeton University Press.

Davis, J.E., 2006. How medicalization lost its way. *Society*, *43*(6), pp.51-56.

De Coninck, H., Revi, A., Babiker, M., Bertoldi, P., Buckeridge, M., Cartwright, A., Dong, W., Ford, J., Fuss, S., Hourcade, J.C. and Ley, D., 2018. Strengthening and implementing the global response. In *Global warming of 1.5° C: Summary for policy makers*, pp.313-443.

Denzin, N.K. and Lincoln, Y.S., 2011. Part III: Strategies of Inquiry. In *The Sage Handbook of Qualitative Research*, pp.243-251.

De Sario, M., Katsouyanni, K. and Michelozzi, P., 2013. Climate change, extreme weather events, air pollution and respiratory health in Europe. *European Respiratory Journal*, *42*(3), pp.826-843.

Depoux, A., Hémono, M., Puig-Malet, S., Pédron, R. and Flahault, A., 2017. Communicating climate change and health in the media. *Public Health Reviews*, *38*(1), p.7.

Desrosières, A., 1990. How to make things which hold together: Social science, statistics and the state. In *Discourses on Society*, pp.195-218.

Devall, B., 1980. The deep ecology movement. *Natural Resources Journal*, *20*, p.299.

DiCicco-Bloom, B. and Crabtree, B.F., 2006. The qualitative research interview. *Medical Education*, *40*(4), pp.314-321.

Dolata, U. and Schrape, J.F., 2016. Masses, crowds, communities, movements: Collective action in the internet age. *Social Movement Studies*, *15*(1), pp.1-18.

Dunlap, R.E., McCright, A.M. and Yarosh, J.H., 2016. The political divide on climate change: Partisan polarization widens in the US. *Environment: Science and Policy for Sustainable Development*, *58*(5), pp.4-23.

Edwards, L., 2011. Public relations and society: A Bourdieuvian perspective. In *Public Relations, Society & Culture: Theoretical and Empirical Explorations*, pp.61-75.

Edwards, B. and Gillham, P.F., 2013. Resource mobilization theory. *The Wiley-Blackwell Encyclopedia of Social and Political Movement*. Wiley-Blackwell.

Edwards, T., 2013. Climate scientists must not advocate particular policies. *The Guardian*. Online. Accessed 10.04.2022, https://www.theguardian.com/science/political-science/2013/jul/31/climate-scientists-policies.

Elliott, R. and Timulak, L., 2005. Descriptive and interpretive approaches to qualitative research. *A Handbook of Research Methods for Clinical and Health Psychology*, *1*(7), pp.147-159.

Esin, C., Fathi, M. and Squire, C., 2014. Narrative analysis: The constructionist approach. *The SAGE Handbook of Qualitative Data Analysis*, pp.203-216.

Evetts, J., 2003. The sociological analysis of professionalism: Occupational change in the modern world. *International Sociology*, *18*(2), pp.395-415.

Ezrahi, Y., 1990. *The Descent of Icarus: Science and the Transformation of Contemporary Democracy*. Harvard University Press.

Fairbrother, M., Sevä, I.J. and Kulin, J., 2019. Political trust and the relationship between climate change beliefs and support for fossil fuel taxes: Evidence from a survey of 23 European countries. *Global Environmental Change*, *59*, p.102003.

Field, C.B., Barros, V.R., Mastrandrea, M.D., Mach, K.J., Abdrabo, M.K., Adger, N., Anokhin, Y.A., Anisimov, O.A., Arent, D.J., Barnett, J. and Burkett, V.R., 2014. Summary for policymakers. In *Climate change 2014: impacts, adaptation, and vulnerability. Part A: global and sectoral aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, pp.1-32.

Fischer, F., 2019. Knowledge politics and post-truth in climate denial: On the social construction of alternative facts. *Critical Policy Studies*, *13*(2), pp.133-152.

Fleming, J.R., 2014. Climate physicians and surgeons. *Environmental History*, pp.338-345.

Flyvbjerg, B., 2006. Five misunderstandings about case-study research. *Qualitative Inquiry*, *12*(2), pp.219-245.

Fouladkhah, A.C., Thompson, B. and Camp, J.S., 2020. The threat of antibiotic resistance in changing climate. *Microorganisms*, *8*(5), p.748.

Francis, J.J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M.P. and Grimshaw, J.M., 2010. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology and Health*, *25*(10), pp.1229-1245.

Friedlingstein, P., Jones, M.W., O'Sullivan, M., Andrew, R.M., Bakker, D.C., Hauck, J., Le Quéré, C., Peters, G.P., Peters, W., Pongratz, J. and Sitch, S., 2021. Global carbon budget 2021. *Earth System Science Data Discussions*, pp.1-191.

Fritze, J.G., Blashki, G.A., Burke, S. and Wiseman, J., 2008. Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing. *International Journal of Mental Health Systems*, *2*(1), pp.1-10.

Frumkin, H., Hess, J., Luber, G., Malilay, J. and McGeehin, M., 2008. Climate change: the public health response. *American Journal of Public Health*, *98*(3), pp.435-445.

Gaines, S.E., 1991. The polluter-pays principle: from economic equity to environmental ethos. *Texas International Law Journal*, *26*, p.463.

Gallagher, K.M. and Updegraff, J.A., 2011. Health message framing effects on attitudes, intentions, and behavior: a meta-analytic review. *Annals of Behavioral Medicine*, *43*(1), pp.101-116.

Gallie, W.B., 1955. Essentially contested concepts. In *Proceedings of the Aristotelian society*, *56*, pp.167-198.

Gallopín, G. and Vessuri, H., 2017. Science for sustainable development: articulating knowledges. In *Interfaces Between Science and Society*, pp.35-51.

Gardiner, S.M., 2011. Climate justice. *The Oxford Handbook of Climate Change and Society*, pp.309-322.

Geertz, C., 1973. Thick description: Toward an interpretive theory of culture. In *The Interpretation of Culture*, pp.3-30.

Gergen, K.J., 1985. Social Constructionist Inquiry: Context and Implications. In *The Social Construction of the Person*, pp.3-18.

Gerring, J., 2004. What is a case study and what is it good for? *American Political Science Review*, *98*(2), pp.341-354.

GfK Verein, 2016. *Trust in Professions 2016 – a GfK Verein study from firefighters to politicians*. Online. Accessed 25.02.2022, https://cdn2.hubspot.net/hubfs/2405078/cms-

pdfs/fileadmin/user_upload/country_one_pager/nl/documents/trust_in_professions_2016_netherlands_en.pdf.

Ghosh, A., 2018. *The Great Derangement: Climate Change and the Unthinkable*. Penguin UK.

Giddens, A., 1984. *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press.

Gil de Zúñiga, H., Jung, N. and Valenzuela, S., 2012. Social media use for news and individuals' social capital, civic engagement and political participation. *Journal of Computer-Mediated Communication*, *17*(3), pp.319-336.

Gill, P., Stewart, K., Treasure, E. and Chadwick, B., 2008. Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*, *204*(6), pp.291-295.

Gilmore, E.A. and St. Clair, T., 2018. Budgeting for climate change: obstacles and opportunities at the US state level. *Climate Policy*, *18*(6), pp.729-741.

Giugni, M., 2011. Political opportunity: still a useful concept? In *Contention and Trust in Cities and States*, pp.271-283.

Goldstone, J.A., 2004. More social movements or fewer? Beyond political opportunity structures to relational fields. *Theory and Society*, *33*(3-4), pp.333-365.

Good, J.E., 2008. The framing of climate change in Canadian, American and international newspapers: A media propaganda model analysis. *Canadian Journal of Communication*, *33*(2).

Grimshaw, J.M., Eccles, M.P., Walker, A.E. and Thomas, R.E., 2002. Changing physicians' behavior: what works and thoughts on getting more things to work. *Journal of Continuing Education in the Health Professions*, *22*(4), pp.237-243.

Groen, L., Niemann, A. and Oberthür, S., 2012. The EU as a global leader? The Copenhagen and Cancún UN climate change negotiations. *Journal of Contemporary European Research*, *8*(2).

Grundmann, R., 2021. COVID and Climate: Similarities and differences. *Wiley Interdisciplinary Reviews: Climate Change*, *12*(6), p.e737.

Guyoncourt, S., 2019. Extinction Rebellion: 1,300 arrested as healthcare workers join climate change protest. *iNews*. Online. Accessed 25.10.2019, https://inews.co.uk/news/extinction-rebellion-1300-arrested-as-healthcare-workers-join-climate-change-protest-809411.

Guzzini, S., 1993. Structural power: the limits of neorealist power analysis. *International Organization*, 47(3), pp.443-478.

Haberl, H., Wiedenhofer, D., Virág, D., Kalt, G., Plank, B., Brockway, P., Fishman, T., Hausknost, D., Krausmann, F., Leon-Gruchalski, B. and Mayer, A., 2020. A systematic review of the evidence on decoupling of GDP, resource use and GHG emissions, part II: synthesizing the insights. *Environmental Research Letters*, *15*(6), p.065003.

Haines, A., 2017. Health co-benefits of climate action. *The Lancet Planetary Health*, *1*(1), pp.4-5.

Halkier, B. and Jensen, I., 2011. Methodological challenges in using practice theory in consumption research. Examples from a study on handling nutritional contestations of food consumption. *Journal of Consumer Culture*, *11*(1), pp.101-123.

Halkier, B., 2017. Questioning the 'Gold Standard' thinking in qualitative methods from a practice theoretical perspective: Towards methodological multiplicity. In *Methodological Reflections on Practice Oriented Theories*, pp.193-204.

Haluza-DeLay, R., 2008. A theory of practice for social movements: Environmentalism and ecological habitus. *Mobilization: An International Quarterly*, *13*(2), pp.205-218.

Hamilton, L.C. and Stampone, M.D., 2013. Blowin'in the wind: Short-term weather and belief in anthropogenic climate change. *Weather, Climate, and Society*, *5*(2), pp.112-119.

Haraway, D., 2013. *Simians, Cyborgs, and Women: The Reinvention of Nature*. Routledge.

Hardey, M., 1999. Doctor in the house: the Internet as a source of lay health knowledge and the challenge to expertise. *Sociology of Health & Illness*, *21*(6), pp.820-835.

Harkin, S.T., 2004. Health care, not sick care. *American Journal of Health Promotion*, *19*(1), pp.1-2.

Hartter, J., Hamilton, L.C., Boag, A.E., Stevens, F.R., Ducey, M.J., Christoffersen, N.D., Oester, P.T. and Palace, M.W., 2018. Does it matter if people think climate change is human caused? *Climate Services*, *10*, pp.53-62.

Hathaway, J. and Maibach, E.W., 2018. Health implications of climate change: a review of the literature about the perception of the public and health professionals. *Current Environmental Health Reports*, *5*(1), pp.197-204.

Hayes, K., Blashki, G., Wiseman, J., Burke, S. and Reifels, L., 2018. Climate change and mental health: Risks, impacts and priority actions. *International Journal of Mental Health Systems*, *12*(1), pp.1-12.

Haynes, L., 2019. How GPs can become more involved in tackling climate change. *GP Online.* Online. Accessed 25.10.2019, https://www.gponline.com/gps-become-involved-tackling-climate-change/article/1663185.

Häyry, H., 2002. *The Limits of Medical Paternalism*. Routledge.

Heckathorn, D.D., 2007. 6. Extensions of respondent-driven sampling: analyzing continuous variables and controlling for differential recruitment. *Sociological Methodology*, *37*(1), pp.151-208.

Hilgartner, S., 2000. *Science on Stage: Expert Advice as Public Drama*. Stanford University Press.

Hoey, A.S., Howells, E., Johansen, J.L., Hobbs, J.P.A., Messmer, V., McCowan, D.M., Wilson, S.K. and Pratchett, M.S., 2016. Recent advances in understanding the effects of climate change on coral reefs. *Diversity*, *8*(2), p.12.

Hoffman, J.S., Shandas, V. and Pendleton, N., 2020. The effects of historical housing policies on resident exposure to intra-urban heat: a study of 108 US urban areas. *Climate*, *8*(1), p.12.

Hoffmann, M.J., 2013. Global climate change. In *The Handbook of Global Climate and Environment Policy*, pp.3-18.

Holt, A., 2010. Using the telephone for narrative interviewing: a research note. *Qualitative research*, *10*(1), pp.113-121.

Horton, R., Beaglehole, R., Bonita, R., Raeburn, J., McKee, M. and Wall, S., 2014. From public to planetary health: a manifesto. *The Lancet*, *383*(9920).

Hugé, J., Waas, T., Dahdouh-Guebas, F., Koedam, N. and Block, T., 2013. A discourse-analytical perspective on sustainability assessment: interpreting sustainable development in practice. *Sustainability Science, 8*(2), pp.187-198.

Hughes, H. and Vadrot, A.B., 2019. Weighting the world: IPBES and the struggle over biocultural diversity. *Global Environmental Politics*, *19*(2), pp.14-37.

Hughes, H., 2015. Bourdieu and the IPCC's Symbolic Power. *Global Environmental Politics, 15*(4), pp.85-104.

Hughes, H.R. and Paterson, M., 2017. Narrowing the climate field: The symbolic power of authors in the IPCC's assessment of mitigation. *Review of Policy Research, 34*(6), pp.744-766.

Hui, E.C., 2010. Perceptions of ethical practices in Hong Kong public hospitals: inter-and intra-professional similarities and differences. *Journal of Nursing Management*, *18*(6), pp.746-756.

Hulme, M., 2011. Reducing the future to climate: a story of climate determinism and reductionism. *Osiris*, *26*(1), pp.245-266.

Hulme, M., 2014. *Can Science Fix Climate Change? A Case Against Climate Engineering*. John Wiley & Sons.

Hulme, M., 2015. (Still) Disagreeing about Climate Change: Which Way Forward? *Zygon®*, *50*(4), pp.893-905.

Hurlbut, B., 2017. *Experiments in Democracy*. Columbia University Press.

IfD Allensbach, 2013. *Allensbacher Berufsprestige-Skala 2013*. Online. Accessed 30.02.2022, https://www.ifd-allensbach.de/fileadmin/kurzberichte_dokumentationen/PD_2013_05.pdf.

Ipsos, 2018. *Ipsos MORI Veracity Index 2018. November 2018, Version 1*. Online. Accessed 30.02.2022, https://www.ipsos.com/sites/default/files/ct/news/documents/2018-11/veracity_index_2018_v1_161118_public.pdf.

Issa, R., 2019. For doctors like me, joining Extinction Rebellion is a moral duty. *The Independent*. Online. Accessed 25.05.2020, https://www.independent.co.uk/voices/extinction-rebellion-protests-london-doctors-climate-crisis-environment-a9147656.html.

Jasanoff, S., 2004. Science and citizenship: a new synergy. *Science and Public Policy*, *31*(2), pp.90-94.

Jasanoff, S., 2011a. The practices of objectivity in regulatory science. In *Social Knowledge in the Making*, pp.307-337.

Jasanoff, S., 2011b. Cosmopolitan Knowledge: Climate Science and Global Civic Epistemology. In *The Oxford Handbook of Climate Change and Society*, pp.129-143.

Jasanoff, S., 2013. A world of experts: science and global environmental constitutionalism. *Boston College Environmental Affairs Law Review*, *40*, p.439.

Jasanoff, S., 2021. Humility in the Anthropocene. *Globalizations*, *18*(6), pp.839-853.

Jenkins, J.C., Jacobs, D. and Agnone, J., 2003. Political opportunities and African-American protest, 1948–1997. *American Journal of Sociology*, *109*(2), pp.277-303.

Jørgensen, S.L. and Termansen, M., 2016. Linking climate change perceptions to adaptation and mitigation action. *Climatic Change*, *138*(1-2), pp.283-296.

Jowett, A., 2020. Carrying out qualitative research under lockdown-practical and ethical considerations. *Impact of Social Sciences Blog*. Online. Accessed 10.01.2022, https://blogs.lse.ac.uk/impactofsocialsciences/2020/04/20/carrying-out-qualitative-research-under-lockdown-practical-and-ethical-considerations.

Kamphuis, J.H., Galeazzi, G.M., De Fazio, L., Emmelkamp, P.M., Farnham, F., Groenen, A., James, D. and Vervaeke, G., 2005. Stalking—perceptions and attitudes amongst helping professions. An EU cross-national comparison. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice*, *12*(3), pp.215-225.

Kelle, U., 2014. Mixed methods. In *Handbuch Methoden der empirischen Sozialforschung*, pp.153-166.

Kelly, S.E., 2010. Qualitative interviewing techniques and styles. In *The SAGE Handbook of Qualitative Methods in Health Research*, pp.307-326.

King, N., Bishop-Williams, K.E., Beauchamp, S., Ford, J.D., Berrang-Ford, L., Cunsolo, A., Harper, S.L. and IHACC Research Team, 2019. How do Canadian media report climate change impacts on health? A newspaper review. *Climatic Change*, *152*(3-4), pp.581-596.

Kirby, J., 2017. Fleshing out an ecological habitus: Field and capitals of radical environmental movements. *Nature and Culture*, *12*(2), pp.89-114.

Klandermans, B., 2002. How group identification helps to overcome the dilSophia of collective action. *American Behavioral Scientist*, *45*(5), pp.887-900.

Kleinman, A., 2013. What is specific to Western medicine? In *Companion Encyclopedia of the History of Medicine*, pp.41-49.

Klein, N., 2015. *This Changes Everything: Capitalism vs. the Climate*. Simon and Schuster.

Klinenberg, E., Araos, M. and Koslov, L., 2020. Sociology and the climate crisis. *Annual Review of Sociology*, *46*, pp.649-669.

Knox, H.C., 2015. Thinking Like A Climate. *Distinktion*, *16*(1), pp.91-109.

Koos, S. and Naumann, E., 2019. Vom Klimastreik zur Klimapolitik: Die gesellschaftliche Unterstützung der „Fridays for Future"-Bewegung und ihrer Ziele. *Konstanzer Online-Publikations-System*.

Kreslake, J.M., Sarfaty, M., Roser-Renouf, C., Leiserowitz, A.A. and Maibach, E.W., 2018. The critical roles of health professionals in climate change prevention and preparedness. *AJPH Perspectives*, *108*(S2), pp.68-69.

Krishnan, A., Kapoor, S.K. and Pandav, C.S., 2014. Clinical medicine and public health: Rivals or partners. *National Medical Journal of India*, *27*(2), pp.99-101.

Leander, A., 2008. Thinking tools. In *Qualitative Methods in International Relations*, pp.11-27.

Leiserowitz, A. and Akerlof, K., 2010. Race, ethnicity and public responses to climate change. *Yale Project on Climate Change Communication, New Haven*.

Leonelli, S., 2018. Rethinking reproducibility as a criterion for research quality. *Research in the History of Economic Thought and Methodology*, pp.129-146.

Lobe, B., Morgan, D. and Hoffman, K.A., 2020. Qualitative data collection in an era of social distancing. *International Journal of Qualitative Methods*, *19*.

Luke, H., 2003. *Medical Education and Sociology of Medical Habitus: "It's not about the stethoscope!"*. Dordrecht: Springer Netherlands.

MacGregor, S., 2010. 'Gender and climate change': from impacts to discourses. *Journal of the Indian Ocean Region*, *6*(2), pp.223-238.

Machin, A., 2013. *Negotiating Climate Change: Radical Democracy and the Illusion of Consensus*. Bloomsbury Publishing.

Maibach, E.W. and van der Linden, S.L., 2016. The importance of assessing and communicating scientific consensus. *Environmental Research Letters*, *11*(9), p.091003.

Maibach, E.W., Nisbet, M., Baldwin, P., Akerlof, K. and Diao, G., 2010. Reframing climate change as a public health issue: an exploratory study of public reactions. *BMC Public Health*, *10*(1), p.299.

Maki, A., Carrico, A. R., Raimi, K. T., Truelove, H. B., Araujo, B., & Yeung, K. L. (2019). Meta-analysis of pro-environmental behaviour spillover. *Nature Sustainability*, *2*(4), 307-315.

Malka, A., Krosnick, J.A. and Langer, G., 2009. The association of knowledge with concern about global warming: Trusted information sources shape public thinking. *Risk Analysis: An International Journal*, *29*(5), pp.633-647.

Manzo, K., 2010. Beyond polar bears? Re-envisioning climate change. *Meteorological Applications*, *17*(2), pp.196-208.

Manzo, R., 2021. Climate Equity or Climate Justice? More than a question of terminology. *International Union for Conservation of Nature*. Online. Accessed 10.08.2021, https://www.iucn.org/news/world-commission-environmental-law/202103/climate-equity-or-climate-justice-more-a-question-terminology.

Marshall, M.N., 1996. Sampling for qualitative research. *Family Practice*, *13*(6), pp.522-526.

Marvasti, F.F. and Stafford, R.S., 2012. From "sick care" to health care: reengineering prevention into the US system. *The New England Journal of Medicine*, *367*(10), p.889.

Mathews, A.S., 2014. Scandals, audits, and fictions: Linking climate change to Mexican forests. *Social Studies of Science*, *44*(1), pp.82-108.

McCammon, H., 2013. Discursive opportunity structure. In *The Wiley-Blackwell Encyclopedia of Social and Political Movements*. Wiley-Blackwell.

McCourt, D.M., 2016. Practice theory and relationalism as the new constructivism. *International Studies Quarterly*, *60*(3), pp.475-485.

McCright, A.M., 2010. The effects of gender on climate change knowledge and concern in the American public. *Population and Environment*, *32*(1), pp.66-87.

McCullough, L.B., 2011. Was bioethics founded on historical and conceptual mistakes about medical paternalism?. *Bioethics*, *25*(2), pp.66-74.

McDonald, M., 2016. Bourdieu, environmental NGOs, and Australian climate politics. *Environmental Politics*, *25*(6), pp.1058-1078.

McDonald, R., 2009. Market reforms in English primary medical care: medicine, habitus and the public sphere. *Sociology of Health & Illness*, *31*(5), pp.659-672.

McDonald, R., 2014. 'Bourdieu', medical elites and 'social class': a qualitative study of 'desert island' doctors. *Sociology of Health & Illness*, *36*(6), pp.902-916.

McLaren, D. and Markusson, N., 2020. The co-evolution of technological promises, modelling, policies and climate change targets. *Nature Climate Change*, *10*(5), pp.392-397.

McManus, I.C., Gordon, D. and Winder, B.C., 2000. Duties of a doctor: UK doctors and good medical practice. *BMJ Quality & Safety*, *9*(1), pp.14-22.

McRobert, C.J., Hill, J.C., Smale, T., Hay, E.M. and Van der Windt, D.A., 2018. A multi-modal recruitment strategy using social media and internet-mediated methods to recruit a multidisciplinary, international sample of clinicians to an online research study. *PLoS One*, *13*(7), p.e0200184.

Medact, n.d. Climate & Environment. *Medact*. Online. Accessed 25.10.2020, https://www.medact.org/our-work/climate-environment.

Mendelson, M., Balasegaram, M., Jinks, T., Pulcini, C. and Sharland, M., 2017. Antibiotic resistance has a language problem. *Nature*, *545*(7652), pp.23-25.

Merton, R.K. and Kendall, P.L., 1946. The focused interview. *American Journal of Sociology*, *51*(6), pp.541-557.

Meyer, D.S. and Minkoff, D.C., 2004. Conceptualizing political opportunity. *Social Forces*, *82*(4), pp.1457-1492.

Morgan, M.G. and Dowlatabadi, H., 1996. Learning from integrated assessment of climate change. *Climatic Change*, *34*(3-4), pp.337-368.

Morris, A., 2003. Reflections on social movement theory: Criticisms and proposals. In *Rethinking Social Movements: Structure, Meaning, and Emotion*, p.233.

Moser, S.C., 2010. Communicating climate change: history, challenges, process and future directions. *Wiley Interdisciplinary Reviews: Climate Change*, *1*(1), pp.31-53.

Moser, S.C., 2016. Reflections on climate change communication research and practice in the second decade of the 21st century: what more is there to say? *Wiley Interdisciplinary Reviews: Climate Change*, *7*(3), pp.345-369.

MS4SF, n.d. About MS4SF. *Medical Students for a Sustainable Future*. Online. Accessed 20.10.2021, https://ms4sf.org/aboutms4sf.

Murtaugh, P.A. and Schlax, M.G., 2009. Reproduction and the carbon legacies of individuals. *Global Environmental Change*, *19*(1), pp.14-20.

Myers, T.A., Nisbet, M.C., Maibach, E.W. and Leiserowitz, A.A., 2012. A public health frame arouses hopeful emotions about climate change. *Climatic Change*, *113*(3-4), pp.1105-1112.

Nash, N., Whitmarsh, L., Capstick, S., Hargreaves, T., Poortinga, W., Thomas, G., Sautkina, E. and Xenias, D., 2017. Climate-relevant behavioral spillover and the potential contribution of social practice theory. *Wiley Interdisciplinary Reviews: Climate Change*, *8*(6), p.e481.

Naumanen, P., 2007. The expertise of Finnish occupational health nurses. *Nursing & Health Sciences*, *9*(2), pp.96-102.

Nerlich, B., Koteyko, N. and Brown, B., 2010. Theory and language of climate change communication. *Wiley Interdisciplinary Reviews: Climate Change*, *1*(1), pp.97-110.

Nightingale, A.J., Eriksen, S., Taylor, M., Forsyth, T., Pelling, M., Newsham, A., Boyd, E., Brown, K., Harvey, B., Jones, L. and Bezner Kerr, R., 2020. Beyond Technical Fixes: climate solutions and the great derangement. *Climate and Development*, *12*(4), pp.343-352.

Nilan, P., 2017. The ecological habitus of Indonesian student environmentalism. *Environmental Sociology*, *3*(4), pp.370-380.

Nisbet, M.C., 2009. Communicating climate change: Why frames matter for public engagement. *Environment: Science and Policy for Sustainable Development*, *51*(2), pp.12-23.

Norton, A., 2019. Climate justice and the IPCC special report on land. *International Institute for Environment and Development*. Online. Accessed 30.01.2020, https://www.iied.org/climate-justice-ipcc-special-report-land.

Nowotny, H., Scott, P. and Gibbons, M., 2001. *Re-thinking Science: Knowledge and the Public in an Age of Uncertainty*. Cambridge: Polity.

O'Dea, C.J., Bueno, A.M.C. and Saucier, D.A., 2018. Social vigilantism and the extremity, superiority, and defense of attitudes toward climate change. *Personality and Individual Differences*, *130*, pp.83-91.

Okereke, C. and Coventry, P., 2016. Climate justice and the international regime: before, during, and after Paris. *Wiley Interdisciplinary Reviews: Climate Change*, *7*(6), pp.834-851.

Oliver, P.E., Cadena-Roa, J. and Strawn, K.D., 2003. Emerging trends in the study of protest and social movements. *Research in Political Sociology*, *12*(1), pp.213-244.

Ollis, T. and Hamel-Green, M., 2015. Adult education and radical habitus in an environmental campaign: Learning in the coal seam gas protests in Australia. *Australian Journal of Adult Learning*, *55*(2), pp.202-219.

Olsson, C., Kalén, S. and Ponzer, S., 2019. Sociological analysis of the medical field: using Bourdieu to understand the processes preceding medical doctors' specialty choice and the influence of perceived status and other forms of symbolic capital on their choices. *Advances in Health Sciences Education*, *24*(3), pp.443-457.

Olzak, S. and Ryo, E., 2007. Organizational diversity, vitality and outcomes in the civil rights movement. *Social Forces*, *85*(4), pp.1561-1591.

Oppenheimer, M., O'Neill, B.C., Webster, M. and Agrawala, S., 2007. The limits of consensus. *Science*, *317*(5844), pp.1505-1506.

Oreskes, N. and Conway, E.M., 2011. *Merchants of Doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing.

Oreskes, N., 2004. The scientific consensus on climate change. *Science*, *306*(5702), pp.1686-1686.

Owusu, P.A. and Asumadu-Sarkodie, S., 2016. A review of renewable energy sources, sustainability issues and climate change mitigation. *Cogent Engineering*, *3*(1), p.1167990.

Pachauri, R.K., Allen, M.R., Barros, V.R., Broome, J., Cramer, W., Christ, R., Church, J.A., Clarke, L., Dahe, Q., Dasgupta, P. and Dubash, N.K., 2014. *Climate change 2014: synthesis report. Contribution of Working Groups I, II and III to the fifth assessment report of the Intergovernmental Panel on Climate Change*. IPCC.

Paglia, E., 2018. The socio-scientific construction of global climate crisis. *Geopolitics*, *23*(1), pp.96-123.

Panu, P., 2020. Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability*, *12*(19), p.7836.

Pattie, C., Seyd, P. and Whiteley, P., 2003. Citizenship and civic engagement: Attitudes and behaviour in Britain. *Political Studies*, *51*(3), pp.443-468.

Patton, C. and Loshny, H., 2008. Negotiating Home and Care among the HIV+ Homeless: An Ethnographic Case Study of Home Care Nursing Habitus. *Canadian Journal of Nursing Research Archive*, pp.172-188.

Pearce, W., Grundmann, R., Hulme, M., Raman, S., Hadley Kershaw, E. and Tsouvalis, J., 2017a. Beyond counting climate consensus. *Environmental Communication*, *11*(6), pp.723-730.

Pearce, W., Grundmann, R., Hulme, M., Raman, S., Hadley Kershaw, E. and Tsouvalis, J., 2017b. A reply to Cook and Oreskes on climate science consensus messaging. *Environmental Communication*, *11*(6), pp.736-739.

Pearce, W., Mahony, M. and Raman, S., 2018. Science advice for global challenges: Learning from trade-offs in the IPCC. *Environmental Science & Policy*, 80, pp.125-131.

Pecorino, P., 2015. Olson's Logic of Collective Action at fifty. *Public Choice*, *162*(3-4), pp.243-262.

Petrovic, N., Madrigano, J. and Zaval, L., 2014. Motivating mitigation: when health matters more than climate change. *Climatic Change*, *126*(1-2), pp.245-254.

Pichler, P.P., Jaccard, I.S., Weisz, U. and Weisz, H., 2019. International comparison of health care carbon footprints. *Environmental Research Letters*, *14*(6), p.064004.

Pickering, A., 1993. The mangle of practice: Agency and emergence in the sociology of science. *American Journal of Sociology*, 99(3), pp.559-589.

Pieh, C., O´ Rourke, T., Budimir, S. and Probst, T., 2020. Relationship quality and mental health during COVID-19 lockdown. *PloS One*, *15*(9), p.e0238906.

Polkinghorne, D.E., 1995. Narrative configuration in qualitative analysis. *International journal of qualitative studies in education*, *8*(1), pp.5-23.

Porter, A.J., Kuhn, T.R. and Nerlich, B., 2018. Organizing authority in the climate change debate: IPCC controversies and the management of dialectical tensions. *Organization Studies*, *39*(7), pp.873-898.

Ramanathan, V. and Haines, A., 2016. Healthcare professionals must lead on climate change. *BMJ*, *355*.

Rao, H., Morrill, C. and Zald, M.N., 2000. Power plays: How social movements and collective action create new organizational forms. *Research in Organizational Behavior*, *22*, pp.237-281.

Read, E.A., 2016. Nurses' Workplace Social Capital: Development and Validation of a Self-report Questionnaire. *Electronic Thesis and Dissertation Repository*. Western University, 3767.

Riessman, C.K., 2002. Narrative Analysis. In *The Qualitative Researcher's Companion*, pp.216-270.

Riessman, C.K., 2008. *Narrative Methods for the Human Sciences*. Sage.

Ritchie, H. and Roser, M., 2020. CO_2 and greenhouse gas emissions. *Our World in Data*. Online. Accessed 30.01.2022, https://ourworldindata.org/co2-emissions.

Roenn-Smidt, H., Larsen, K. and Pallesen, H., 2021. The practices of body in rehabilitation after stroke: a qualitative study of how physiotherapy affects identity reconstruction. *European Journal of Physiotherapy*, *23*(5), pp.270-278.

Rossman, G.B. and Rallis, S.F., 2003. *Learning in the Field: An introduction to qualitative research*. Sage.

Roulston, K., 2014. Analysing interviews. In *The SAGE Handbook of Qualitative Data Analysis*, pp.297-312.

Royal College of Physicians, 2005. *Doctors in Society: medical professionalism in a changing world*. London: RCP.

Rustin, M., 2000. Reflections on the Biographical Turn in Social Science. In *Life Story Research*, pp.153-172.

Ryan, F., Coughlan, M. and Cronin, P., 2009. Interviewing in qualitative research: The one-to-one interview. *International Journal of Therapy and Rehabilitation*, *16*(6), pp.309-314.

Saldaña, J., 2013. *The Coding Manual for Qualitative Researchers*. SAGE.

Saunders, K.L., 2017. The impact of elite frames and motivated reasoning on beliefs in a global warming conspiracy: The promise and limits of trust. *Research & Politics*, *4*(3), p.2053168017717602.

Scannell, L. and Gifford, R., 2013. Personally relevant climate change: The role of place attachment and local versus global message framing in engagement. *Environment and Behavior*, *45*(1), pp.60-85.

Schatz, E. and Maltseva, E., 2012. Assumed to be universal: The leap from data to knowledge in the American Political Science Review. *Polity*, *44*(3), pp.446-472.

Schatzki, T.R., 1996. *Social Practices: A Wittgensteinian approach to human activity and the social*. Cambridge University Press.

Schinkel, W. and Noordegraaf, M., 2011. Professionalism as symbolic capital: Materials for a Bourdieusian theory of professionalism. *Comparative Sociology*, *10*(1), pp.67-96.

Schlosberg, D. and Collins, L.B., 2014. From environmental to climate justice: climate change and the discourse of environmental justice. *Wiley Interdisciplinary Reviews: Climate Change*, *5*(3), pp.359-374.

Schmidt, G.A., 2015. What should climate scientists advocate for? *Bulletin of the Atomic Scientists*, 71(1), pp.70-74.

Schmitz, A., Witte, D. and Gengnagel, V., 2017. Pluralizing field analysis: Toward a relational understanding of the field of power. *Social Science Information*, *56*(1), pp.49-73.

Schwartz-Shea, P., 2015. Judging quality: Evaluative criteria and epistemic communities. In *Interpretation and Method*, pp.120-146.

Semenza, J.C., Ploubidis, G.B. and George, L.A., 2011. Climate change and climate variability: personal motivation for adaptation and mitigation. *Environmental Health*, *10*(1), p.46.

SfGH, n.d. Vision & Mission. *Students for Global Health*. Online. Accessed 20.10.2021, https://studentsforglobalhealth.org/vision-mission.

Shah, D.V., Cho, J., Eveland Jr, W.P. and Kwak, N., 2005. Information and expression in a digital age: Modeling Internet effects on civic participation. *Communication Research*, *32*(5), pp.531-565.

Shank, J.B., 2008. Crisis: A useful category of post–social scientific historical analysis? *The American Historical Review*, *113*(4), pp.1090-1099.

Shapin, S. and Schaffer, S., 2011. *Leviathan and the Air-Pump*. Princeton University Press.

Shaw, C., Hales, S., Howden-Chapman, P. and Edwards, R., 2014. Health co-benefits of climate change mitigation policies in the transport sector. *Nature Climate Change*, *4*(6), pp.427-433.

Shome, D. and Marx, S.M., 2009. *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. New York.

Shrivastava, M., Cappa, C.D., Fan, J., Goldstein, A.H., Guenther, A.B., Jimenez, J.L., Kuang, C., Laskin, A., Martin, S.T., Ng, N.L. and Petaja, T., 2017. Recent advances in understanding secondary organic aerosol: Implications for global climate forcing. *Reviews of Geophysics*, *55*(2), pp.509-559.

Siisiäinen, M., 2003. Two concepts of social capital: Bourdieu vs. Putnam. *International Journal of Contemporary Sociology*, *40*(2), pp.183-204.

Smith, E.K. and Mayer, A., 2018. A social trap for the climate? Collective action, trust and climate change risk perception in 35 countries. *Global Environmental Change*, *49*, pp.140-153.

Smith, K.R., Woodward, A., Campbell-Lendrum, D., Chadee, D.D., Honda, Y., Liu, Q., Olwoch, J.M., Revich, B. and Sauerborn, R., 2014. Human health: impacts, adaptation, and co-benefits. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global*

and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp.709-754.

Smith, L., Adam, L., Moffat, S., Meldrum, A. and Ahmadi, R., 2017. Undergraduate Bachelor of Oral Health student and educators' understandings of professionalism. *New Zealand Dental Journal*, *113*(1).

Smithson, M.J., 2008. Social theories of ignorance. In *Agnotology: The Making and Unmaking of Ignorance*, pp.209-229.

Solomon, C.G. and LaRocque, R.C., 2019. Climate change—a health emergency. *New England Journal of Medicine*, *380*(3), pp.209-211.

Sonnett, J., 2010. Climates of risk: A field analysis of global climate change in US media discourse, 1997-2004. *Public understanding of science*, *19*(6), pp.698-716.

Soss, J., 2015. Talking our way to meaningful explanations: A practice-centered view of interviewing for interpretive research. In *Interpretation and Method*, pp.161-182.

Sotirovic, M., and McLeod, J.M., 2001. Values, communication behavior, and political participation. *Political Communication*, *18*(3), pp.273-300.

Spence, A. and Pidgeon, N., 2010. Framing and communicating climate change: The effects of distance and outcome frame manipulations. *Global Environmental Change*, *20*(4), pp.656-667.

Spence, A., Poortinga, W. and Pidgeon, N., 2012. The psychological distance of climate change. *Risk Analysis: An International Journal*, *32*(6), pp.957-972.

Srivastava, P. and Hopwood, N., 2009. A practical iterative framework for qualitative data analysis. *International Journal of Qualitative Methods*, *8*(1), pp.76-84.

Starkstein, S., 2018. Sigmund Freud and the psychoanalytical concept of fear and anxiety. In *A Conceptual and Therapeutic Analysis of Fear*, pp.231-257.

Stein-Parbury, J. and Liaschenko, J., 2007. Understanding collaboration between nurses and physicians as knowledge at work. *American Journal of Critical Care*, *16*(5), pp.470-477.

Stevenson, K.T., King, T.L., Selm, K.R., Peterson, M.N. and Monroe, M.C., 2018. Framing climate change communication to prompt individual and collective action among

adolescents from agricultural communities. *Environmental Education Research*, *24*(3), pp.365-377.

Storey, M., Killian, S. and O'Regan, P., 2017. Responsible management education: Mapping the field in the context of the SDGs. *The International Journal of Management Education*, *15*(2), pp.93-103.

Stürmer, S. and Simon, B., 2004. Collective action: Towards a dual-pathway model. *European review of social psychology*, *15*(1), pp.59-99.

Suldovsky, B. (2017). The information deficit model and climate change communication. In *Oxford Research Encyclopedia of Climate Science*. Oxford University Press.

Tanner, T. and Allouche, J., 2011. Towards a new political economy of climate change and development. *IDS Bulletin*, *42*(3), pp.1-14.

Taylor, M., 2019. Doctors call for nonviolent direct action over climate crisis. *The Guardian*. Online. Accessed 27.10.2021, https://www.theguardian.com/environment/2019/jun/27/doctors-call-for-nonviolent-direct-action-over-climate-crisis.

Thaler, R. H. and Sunstein, C. R., 2008. *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.

Thøgersen, J. and Crompton, T., 2009. Simple and painless? The limitations of spillover in environmental campaigning. *Journal of Consumer Policy*, *32*(2), pp.141-163.

Townsend, M., 2019. Tube protest was a mistake, admit leading Extinction Rebellion members. *The Guardian*. Online. Accessed 25.10.2021, https://www.theguardian.com/environment/2019/oct/20/extinction-rebellion-tube-protest-was-a-mistake.

Tuana, N., 2019. Climate apartheid: The forgetting of race in the Anthropocene. *Critical Philosophy of Race*, *7*(1), pp.1-31.

Turner, R.K., 1995. Sustainable development and climate change. *Studies in Environmental Science*, 65, pp.55-66.

Underman, K., 2015. Playing doctor: Simulation in medical school as affective practice. *Social Science & Medicine*, *136*, pp.180-188.

Underwood, J., Middleton, J., Pencheon, D., Jones, B., and Kemple, T., 2019. Doctors against climate catastrophe. *The Guardian*. Online. Accessed 25.10.2020, https://www.theguardian.com/environment/2019/jun/27/doctors-against-climate-catastrophe.

United Nations, 1992. *United Nations Framework Convention on Climate Change*. Online. Accessed 30.01.2020, https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

Valerio, M.A., Rodriguez, N., Winkler, P., Lopez, J., Dennison, M., Liang, Y. and Turner, B.J., 2016. Comparing two sampling methods to engage hard-to-reach communities in research priority setting. *BMC Medical Research Methodology*, *16*(1), pp.1-11.

Vargo, S.L. and Lusch, R.F., 2016. Institutions and axioms: an extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, *44*(1), pp.5-23.

Veatch, R.M., 2000. *Cross-cultural Perspectives in Medical Ethics*. Jones & Bartlett Learning.

Verplanken, B., Marks, E. and Dobromir, A.I., 2020. On the nature of eco-anxiety: How constructive or unconstructive is habitual worry about global warming? *Journal of Environmental Psychology*, *72*, p.101528.

Vincent, S., 2016. Bourdieu and the gendered social structure of working time: A study of self-employed human resources professionals. *Human Relations*, *69*(5), pp.1163-1184.

Vliegenthart, R., 2012. Framing in mass communication research–An overview and assessment. *Sociology Compass*, *6*(12), pp.937-948.

Wald, H.S., Anthony, D., Hutchinson, T.A., Liben, S., Smilovitch, M. and Donato, A.A., 2015. Professional identity formation in medical education for humanistic, resilient physicians: pedagogic strategies for bridging theory to practice. *Academic Medicine*, *90*(6), pp.753-760.

Walker, B.J., Kurz, T. and Russel, D., 2018. Towards an understanding of when non-climate frames can generate public support for climate change policy. *Environment and Behavior*, *50*(7), pp.781-806.

Wansink, B. and Pope, L., 2014. When do gain-framed health messages work better than fear appeals? *Nutrition Reviews*, *73*(1), pp.4-11.

Waterfield, J., 2015. Using Bourdieu's theoretical framework to examine how the pharmacy educator views pharmacy knowledge. *American Journal of Pharmaceutical Education*, *79*(10), p.153.

Watts, N., Adger, W.N., Ayeb-Karlsson, S., Bai, Y., Byass, P., Campbell-Lendrum, D., Colbourn, T., Cox, P., Davies, M., Depledge, M. and Depoux, A., 2017. The Lancet Countdown: tracking progress on health and climate change. *The Lancet*, *389*(10074), pp.1151-1164.

Weathers, M.R. and Kendall, B.E., 2016. Developments in the framing of climate change as a public health issue in US newspapers. *Environmental Communication*, *10*(5), pp.593-611.

Weaver, R., Peters, K., Koch, J. and Wilson, I., 2011. 'Part of the team': professional identity and social exclusivity in medical students. *Medical education*, *45*(12), pp.1220-1229.

Weinberg, D., 2008. The philosophical foundations of constructionist research. In *Handbook of Constructionist Research*, pp.13-39.

Welch, D. and Yates, L., 2018. The practices of collective action: Practice theory, sustainability transitions and social change. *Journal for the Theory of Social Behaviour*, *48*(3), pp.288-305.

Wensing, M., Jung, H.P., Mainz, J., Olesen, F. and Grol, R., 1998. A systematic review of the literature on patient priorities for general practice care. Part 1: Description of the research domain. *Social Science & Medicine*, *47*(10), pp.1573-1588.

Whiteley, P.F., Seyd, P., Richardson, J. and Bissell, P., 1994. Explaining party activism: The case of the British Conservative Party. *British Journal of Political Science*, *24*(1), pp.79-94.

WHO, 1990. *Potential health effects of climatic change: report of a WHO task group*. World Health Organization.

WHO, 2008. *Closing the gap in a generation: Health equity through action on the social determinants of health. Final report of the commission on social determinants of health*. World Health Organization.

WHO, 2010. *A conceptual framework for action on the social determinants of health*. World Health Organization.

WHO, 2020. *WHO Director-General's opening remarks at the media briefing on COVID-19 - 27 July 2020*. World Health Organization. Online. Accessed 04.12.2021, https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---27-july-2020.

WHO, 2022. *WHO Coronavirus (COVID-19) Dashboard*. World Health Organization. Online. Accessed 05.02.2022, https://covid19.who.int.

Wickberg, D., 2007. What is the history of sensibilities? On cultural histories, old and new. *The American Historical Review*, *112*(3), pp.661-684.

Williams, B., Fielder, C., Strong, G., Acker, J. and Thompson, S., 2015. Are paramedic students ready to be professional? An international comparison study. *International Emergency Nursing*, *23*(2), pp.120-126.

Williams, G.H., 2003. The determinants of health: structure, context and agency. *Sociology of Health & Illness*, *25*(3), pp.131-154.

Williams, S.J., Katz, S. and Martin, P., 2011. Neuroscience and Medicalisation: Sociological Reflections on Memory, Medicine and the Brain. In *Sociological Reflections on the Neurosciences*, pp.231-254.

Wilson, B., 2020. Urban heat management and the legacy of redlining. *Journal of the American Planning Association*, *86*(4), pp.443-457.

Witman, Y., Smid, G.A., Meurs, P.L. and Willems, D.L., 2011. Doctor in the lead: balancing between two worlds. *Organization*, *18*(4), pp.477-495.

WMA, n.d. *About Us. WMA's mission*. World Medical Association. Online. Accessed 20.03.2022, https://www.wma.net/who-we-are/about-us.

Wolgemuth, J.R., Erdil-Moody, Z., Opsal, T., Cross, J.E., Kaanta, T., Dickmann, E.M. and Colomer, S., 2015. Participants' experiences of the qualitative interview: Considering the importance of research paradigms. *Qualitative Research*, *15*(3), pp.351-372.

Wong, D. and Tien, N.I, 2014. A "double alienation": The vernacular Chinese Church in Malaysia. *Asian Journal of Social Science*, *42*(3-4), pp.262-290.

Woodward, A., 2019. Climate change and the surgeon: what is the problem? Why is it so hard? What can be done? *ANZ Journal of Surgery*, *89*(11), pp.1358-1363.

Workman, A., Blashki, G., Bowen, K., Karoly, D. and Wiseman, J., 2018. The political economy of health co-benefits: Embedding health in the climate change agenda. *International Journal of Environmental Research and Public Health*, *15*(4), p.674.

Wright, C. and Nyberg, D., 2015. *Climate Change, Capitalism, and Corporations*. Cambridge University Press.

Wullenkord, M., Tröger, J., Hamann, K.R., Loy, L. and Reese, G., 2021. Anxiety and Climate Change: A Validation of the Climate Anxiety Scale in a German-Speaking Quota Sample and an Investigation of Psychological Correlates. *Climatic Change*, *168*(3), pp.1-23.

Wynne, B., 1996. A reflexive view of the expert-lay knowledge divide. *Risk, Environment and Modernity: Towards a new Ecology*, *40*, p.44.

Yang, L., Liu, C., Hess, J., Phung, D. and Huang, C., 2019. Health professionals in a changing climate: protocol for a scoping review. *BMJ Open*, *9*(2).

Yanow, D. and Schwartz-Shea, P., 2015. *Interpretation and Method: Empirical Research Methods and the Interpretive Turn*. Routledge.

Yanow, D., 2003. Interpretive empirical political science: What makes this not a subfield of qualitative methods. *Qualitative Methods*, *1*(2), pp.9-13.

Yanow, D., 2017. Qualitative-interpretive methods in policy research. In *Handbook of Public Policy Analysis*, pp.431-442.

York, C., 2019. Extinction Rebellion Joined By Doctors And Nurses To Highlight Health Risks Of Climate Change. *Huffington Post*. Online. Accessed 25.10.2019,

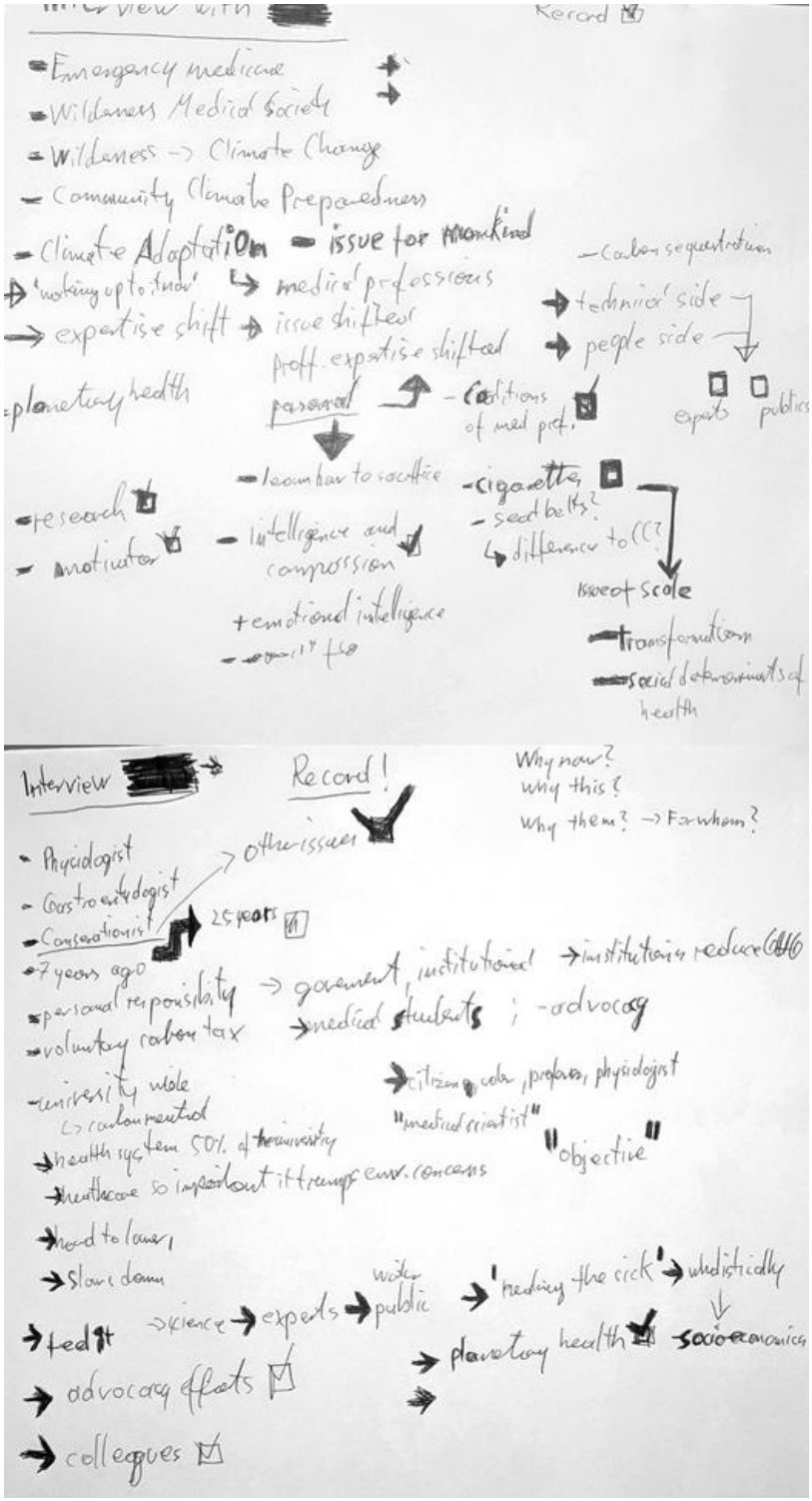
https://www.huffingtonpost.co.uk/entry/extinction-rebellion-doctors-nurses_uk_5da1ef43e4b02c9da04b324c.

Zald, M.N. and McCarthy, J.D., 2002. The resource mobilization research program: Progress, challenge, and transformation. *New Directions in Contemporary Sociological Theory*, pp.147-171.

Zaleha, B.D. and Szasz, A., 2015. Why conservative Christians don't believe in climate change. *Bulletin of the Atomic Scientists*, *71*(5), pp.19-30.

Appendices

Appendix 1: Interview Notes



Appendix 2: Interview Guide

Before the Interview

- Check if the **participant consent form has been returned** & digitally signed by the participant ahead of the interview
    - If the consent form has been returned signed, sign the form myself and return a copy of it to the participant via e-mail
    - If the consent form has **not** been returned signed, send out the form again to the participant and inform them that they have the opportunity to ask further questions in person before returning the form should they wish to do so
- Confirm Google Meet invitation link and join room 5 minutes in advance
- Upon entry of participant thank them for attending and **affirm that they are willing to participate** in the research interview
    - If the consent form has been returned signed at this point, give the participant another opportunity to ask questions, and remind them that a copy of the signed form has been sent to them for their keeping
    - If the consent form has **not** been returned signed at this point, read through the consent form ticking off each point along the way upon participant agreement. Sign the form and send them the signed form once more per mail to sign it themselves before returning the form
- Remind them one final time that this interview will be recorded, and **start the recording**

The Interview

- Briefly summarize the purpose of the interview again, **informal discussion** with a guide to make sure I cover areas of interest
- Make clear that this is not about a statement from an organization, but your **personal and professional position, views, and experiences**
- Remind the interviewee that the interview is an opportunity for them to share their perspectives and experiences, and an **opportunity for me to learn from them**
- Many of the points of discussions raised below will emerge naturally in the course of the interview, others may not. I will bring them in as they fit into the ongoing discussion.

- Start with an introductory question along the lines of '**To begin, would you tell me a bit about yourself and your background?** What made you interested in the subject of this research project?'

The points of discussion are in no particular order:

Their perceptions of climate change

- When did you learn about climate change?
- What do you see as the central concerns with climate change?
- When did you learn about climate change as a health issue?
- What do you see as the central intersections between health and climate change? What do you think of the idea of Planetary Health?
- What role do you see scientific knowledge play in public discussions of climate change?
- Do you see climate change as a socio-politically contested issue? If so, why do you think that is?
- Do you think climate change has been inadequately addressed? If so, why do you think that is?

Their professional status & role

- How do you see your status and role as a medical professional relate to your efforts?
- Do you feel a sense of professional responsibility or duty to engage in such efforts?
- Do you/why do you think it is important to engage in these efforts explicitly as a medical professional?
- In what ways do you see your efforts strengthen or hindered by your role as a medical professional/the institutional structures of the medical professions?
- When they speak of trust: What does trust mean in this context, what does it do? Why is it important?

Their climate activism and advocacy efforts

- What types of efforts do you engage in?
- When did you start engaging in these efforts?

- Do you engage in these efforts alone, with your colleagues, with groups outside of your work?
- What made you engage in these efforts? Priorities? Why do you do what you do the way you do it? What resources do you draw on in doing it?
- Why do you think what you're doing is important? Necessary?
- What are you trying to achieve or change with your efforts?
- Did you become involved in existing efforts? Did you yourself organize these efforts?
- Are there efforts that you know other medical professionals are engaging in that you yourself are not? Why do you not engage in these efforts?
- Do you experience resistance from colleagues/friends/family, to what extend do you experience support?

Their engagement with similar socio-political efforts

- Are you engaged in similar efforts on other issues, such as social justice or animal rights?
- What made you engage in these?
- Are/how are these efforts and climate change related to each other in your opinion?
- Are your social surroundings/colleagues/family involved in or concerned about similar issues?

Debrief & After the Interview

- Ask them if they want to add anything else before I stop the recording
- **Stop the recording**
- Explain that I have now stopped the recording, and remind them once more that the recording is saved securely to a Google Drive administered by the University of Sheffield, and that this recording will be transcribed anonymously for further use in the research
- Thank them again for participating, and remind them that they are free to contact me at any time

Appendix 3: Participant Information Sheet

Interview Participant Information Sheet

Planetary Fever - Participant Information

Introduction and Background

You are being invited to take part in a research project entitled "**Planetary Fever**". Before deciding whether or not you wish to participate, it is important for you to understand the purpose of this research and what it involves. Take your time to read the following information carefully and feel free to contact the principal investigator August Lindemer (a.lindemer@sheffield.ac.uk) from the University of Sheffield if you have any questions. Thank you for acquainting yourself with the project.

This research aims to develop new insights into what mobilises and facilitates the climate change communication engagement of health professionals. By doing so it hopes to contribute to strengthening such efforts in the future. You have been sent this invitation to participate because you either declared an interest to do so in a previous questionnaire you submitted or because you have been identified as a health professional relevant to this research.

Scope of Participation

Your participation will involve an interview with the principal investigator on the topic of climate change communication. During this interview you are given an opportunity to describe your background, what communication efforts relating to climate change you are engaging in, and your motivation for doing so. Discussing the subject of climate change can be distressing, in particular in its health implications. You are free to at any point ask to skip questions, take breaks, or end the interview.

Your participation in the research is voluntary and you are free to stop and withdraw your participation in and any information you have provided for the study at any time before, during and after the interview before 01.01.2022 without giving any reason and without any adverse consequences. If you wish to withdraw after your participation before or after the interview please contact the principal investigator through the abovementioned e-mail address.

Privacy Notice

The interview will be recorded and transcribed for subsequent use in the research. Personal information about you provided before, during and after the interview will only be available to the principal investigator August Lindemer and the study supervisor Warren Pearce. This means that you will be unidentifiable in any resulting reports, publications, or by any other authorised researchers with whom the data will be shared. Your question relevant responses may be used for or quoted anonymously in publications, reports, web pages, and other research outputs.

According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice https://www.sheffield.ac.uk/govern/data-protection/privacy/general.' The University of Sheffield will act as the Data Controller for this study. This means that the University is responsible for looking after your information and using it properly. So that the information you provide can be used legally by the researchers, we ask you to assign the copyright you may hold in any materials generated as part of this project to The University of Sheffield.

Funding and Complaint Information

This project is funded by the Grantham Centre for Sustainable Futures at the University of Sheffield, and has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the Department of Sociological Studies.

If you wish to complain for any reason please contact the study supervisor, Warren Pearce. You also can contact the Head of Department at the Department of Sociological Studies, Nathan Hughes, who will then escalate the complaint through the appropriate channels. If the complaint relates to how the participants' personal data has been handled, information about how to raise a complaint can be found in the University's Privacy Notice mentioned above.

If you do decide to take part in this research you will be given this information sheet to keep for future reference, and be asked to sign a participant consent form.

Contact Details for Questions, Complaints, and Other Inquiries

August Lindemer, a.lindemer@sheffield.ac.uk, 07312132663 (Principal investigator)

Dr Warren Pearce, warren.pearce@sheffield.ac.uk, 01142226454 (Supervisor)

Professor Nathan Hughes, nathan.hughes@sheffield.ac.uk, 01142226439 (Head of Department)

University of Sheffield, Department of Sociological Studies – Elmfield Building, Northumberland Road – Sheffield S10 2TU

Appendix 4: Participant Consent Form

Interview Participant Consent Form

Planetary Fever - Research Consent Form

Please tick the appropriate boxes	**Yes**	**No**
Taking Part in the Project		
I have read and understood the participant information sheet dated 03/03/2021 or the project has been fully explained to me. (If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)		
I have been given the opportunity to ask questions about the project.		
I agree to take part in the project. I understand that taking part in the project will include being interviewed and having what is being said recorded for later transcription.		
I understand that the discussion of climate change is potentially distressing, and that my taking part is voluntary and that I am free to skip questions, take breaks, and stop and withdraw my participation in and any information I have provided for the study at any time before, during and after the interview before 01.01.2022 without giving any reason and without any adverse consequences.		
I understand that if I wish to complain I can contact the study supervisor Warren Pearce as well as the Head of Department at the Department of Sociological Studies Nathan Hughes, using the contact details provided below, who will then escalate the complaint through the appropriate channels.		
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will only be available to the principal investigator August Lindemer and the study supervisor Warren Pearce.		
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.		
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.		
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.		
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.		

Name of participant [printed]	Signature	Date

Name of Researcher [printed]	Signature	Date

Contact Details for Questions, Complaints, and Other Inquiries

August Lindemer, a.lindemer@sheffield.ac.uk, 07312132663 (Principal investigator)

Dr Warren Pearce, warren.pearce@sheffield.ac.uk, 01142226454 (Supervisor)

Professor Nathan Hughes, nathan.hughes@sheffield.ac.uk, 01142226439 (Head of Department)

University of Sheffield, Department of Sociological Studies – Elmfield Building, Northumberland Road – Sheffield S10 2TU