Approaching the Edge
Towards a New Materialist Theory of Democracy for the Anthropocene
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APPROACHING THE EDGE: TOWARDS A NEW MATERIALIST THEORY OF DEMOCRACY FOR THE ANTHROPOCENE is an attempt to rethink what democracy might mean in a time of widespread ecological and climatic crises. The dissertation offers a new materialist reconceptualization of three central concepts in contemporary democratic theory: political participation, political representation, and political leadership. The theoretical innovations are developed in close conversation with an ongoing ethnographic engagement with a small rural community on the west coast of Denmark called Lemvig, where many of the challenges associated with democratic politics in the Anthropocene are acutely felt. By investigating the abstract theoretical matters through the lens of this particular place, the dissertation aims to offer a different kind of situated knowledge about the state of democracy today, which takes seriously the multiple and complex character of the Anthropocene condition.
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Towards a New Materialist Theory of Democracy for the Anthropocene

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Prelude

Storying Worlds

Story I

You squint your eyes as the small blue sphere approaches in the horizon. When it comes closer, you see that on its surface there are small discrete objects travelling across space, sometimes bumping into each other and changing directions, and at other times, when not interfered with, moving in the same direction until they eventually come up against the boundaries of space itself. At first, it looks like the mechanical world of Newtonian physics driven by immovable laws of motion and gravitation. When you look closer, you realize that the moving objects are not objects at all. They are human subjects. This is not a world of lifeless objects moving around in space with no purpose, it is a society of human individuals acting with and against each other in pursuit of their respective conceptions of a good life. The boundaries of this human space, which they call society, are drawn by all that which is not distinctly human. Earth, nature, and all its inanimate objects, animals, micro-organisms and other forms of non-human matter, provide the stage for this human society as well as the constitutive outside to it – that which humans are distinct from.

As you move closer into this world, a fascinating plurality of stories begin to unfold. Stories about freedom and autonomy, language and meaning, community and culture, science and progress, war and peace, love and hate. From in here, you have to look far and wide for stories from or about the outside. Even when you do catch a glimpse of it, in between the intricate webs of social relations, you cannot avoid feeling that the sophistication and attraction of ‘human’ stories stand in stark contrast to the dullness of the ‘natural’ stories of cause and effect,
determination and necessity, force and reaction, inert matter and unintelligent animals.

As you move deeper into this society, you begin to wonder what mysterious forces might be governing all of the tumultuous human relations unfolding around you. The answer, the humans tell you, is politics. When you ask them what the word means, they repeat two things: First, that politics is about the regulation of basic social institutions such as hospitals, schools, courts, prisons, private corporations, roads, sports clubs, media firms, the military, museums, communication networks, ministries, and so on. Second, that politics is a range of activities that take place in certain parts of society, first and foremost in national parliaments where the main actors are representatives, parties, interest groups and journalists. Politics, they tell you, is a specific set of human practices concerned with the arrangement of society’s basic institutions.

Intrigued by these answers, you decide to see for yourself and probe deeper into the depths of this thing they call politics. You attend parliamentary debates, monitor political elections, study statistical surveys, speak with voters and politicians, read political manifestos and opinion pieces. Slowly, a more determinate picture begins to emerge. Politics, in this world, is fundamentally about the exchange of, and struggle between, political ideas about what the best and most just arrangement of society might be. The means through which this battle of ideas operate are speech, deliberation, and argumentation. While politics is not void of disagreements altogether, it is not succumbed by them either. There exists among the inhabitants of this world a common ground for adjudicating between competing ideas, namely their shared human capacity for reason. By each exercising their rational ability to weigh competing reasons against each other and assess their validity, individuals change and refine their political convictions through individual reflection and in deliberation with others. Over time, when all reasonable competing views have been put to the test, and no special interests have thwarted the process, the best ideas eventually win out, resulting in shared enlightenment. They call this progress.

As you move away from this world again, you cannot help thinking to yourself: “What a magnificent world this is!” A world inhabited by human subjects freely pursuing their individual conceptions of a good life under conditions determined by their common societal institutions, which
are constantly refined in collaboration through practices of politics, in which competing ideas battle for authority. A free exchange of political ideas leading to progress. Eureka!

As you move further away, and again see this world at a distance, you cannot shake the feeling that there is something incongruent about the world of human subjects you have just left behind, and the world of moving objects you now see before you. As you move even further away, and the blue sphere with its Newtonian objects falling through space becomes a mere blip on the horizon, this feeling grows stronger.

Story II

This story does not start from far away, but from within. There is no blue sphere here and in the beginning all you see, or rather sense, is a multiverse of vibrating flows and energies moving in all directions at once. There is no telling where this dizzying world begins and ends. But slowly, as your senses begin to adjust, you realize that the flows and energies around you are not moving at the same pace. Some disperse, change, and transform quickly, while others move more slowly, making them appear like stable objects.

With time, you gradually begin to make sense of this turbulent field in which various and variable materialities collide, congeal, morph, evolve and disintegrate. At one range of temporalities, we can call them ‘human temporalities’, this new world does not appear all that different from the world you just left behind. Here walking, talking constellations of minerals that call themselves ‘human’ move around in a space populated by many other things and beings, including mountains, rivers, forests and shopping malls. At other temporalities, however, this new world looks very different. At the temporalities of geological change, for example, formerly stable things like minerals and mountains suddenly begin to move and become active shapers of the world, rearranging and transforming vast
landscapes, while the material powers of human beings start to look much more insignificant and passive.

While observing all of these material flows, in all their different temporalities, you begin to feel that the categorical difference between the human ‘inside’ and the natural ‘outside’, which seemed so inescapable in the former world, has little meaning here. Everything in this world – not only human beings, but worms, rocks, microbes, and metallic substances too – move around, change, and exhibit an intrinsic drive to persist. In doing so, they exert different degrees of material power that affect other bodies, in turn enhancing or weakening their respective powers. Despite their remarkable capacities for sophisticated language and reflection, human beings, too, exhibit forms of material power that work with and against a multiplicity of other material powers and agencies, which often outstrip the abilities of human beings in co-shaping the world. In this world, human bodies, and all other bodies for that matter, do not so much move around “in” space as they are constantly bending the contours of space, altering environments to their desires.

The more you dwell in this world, the more difficult it becomes for you to draw definite distinctions between individual beings and their environments. A human being, for example, is made up of a complex constellation of minerals, cells, microbes, water molecules, desires and thoughts that operate both within and across the supposed demarcation of the human body. Is the oxygen in its lungs, or the water in its cells, part of the human ‘inside’ or the natural ‘outside’? And what about all the ‘natural environments’ that have been transformed and cultivated by human actions?

Faced with questions like these, you decide to leave behind the strict inside-outside distinction altogether. Every entity in this world, human or not, only exists through, and become what it is, in all its intricate and entangled relations and interconnections with many other things and beings. It is an inescapable ontological condition of material existence here, it appears, that any single body depends on the collaboration, cooperation, and interactive interference of many other bodies and forces. Maybe it would be more helpful, then, to think not so much in terms of individual bodies, but of interconnected ecologies or assemblages that consist of multiple bodies and forces, which operate at many different speeds and scales as they act through, with, and against each other.
When you begin to observe more closely the movements of the material bodies that call themselves ‘human’, their behavior start to look all the more puzzling. Despite their dependence on and assemblage-like entanglement with other species, most human beings seem to carry out their lives in complete ignorance of any such interconnectedness. In fact, they work hard not only to deny, but to systematically destroy the myriad ecological entanglements on which they depend. Even more curiously, when you ask them what really matters in this world, they will tell you the exact same stories you just heard in that other world: stories of basic societal institutions, rational deliberation, and human progress. This is despite the fact that, as far as you can tell, what actually matters for the conditions of livability and behavior of particular, situated human beings in this world are as much a matter of melting icescapes, bodily desires, bacterial mutations, atmospheric concentrations, interpersonal affects, collapsing ecosystems, burning churches, fluctuating metabolisms, spatial segregations, human-animal interactions, electronic devices, disease proliferation patterns, architectural planning, and changing weather systems – to name just a few things. Why is it, then, that the stories they tell themselves feature only human beings?

As you retreat from this world and things again begin to mesh into one big flux of shifting flows of matter-energies, you find yourself overtaken by a new sense of wonder. Not the momentary eureka-like wonder you experienced in the previous world, but a deeper and more ambiguous kind of wonder, one that stems from having sensed the profound interconnectedness of all things existing in this new world, while simultaneously realizing that for many of its inhabitants this very interconnectedness, and therefore their conditions of livability, are in imminent danger.

These two stories are brief examples of what Jane Bennett has called ‘speculative onto-stories’.¹ A concept that connects the realm of ontology with engaged storytelling and

highlight the conditions of contestation and unknowability inherent to all ontological arguments. The two onto-stories presented here are not, strictly speaking, true. They are more precisely two different ways of envisioning and representing the world, which prescribe, or rather invite, different affects, attitudes, and responses.

The first onto-story represents the world of liberal humanism. It is the theoretical dwelling place of liberal thinkers like John Locke, Immanuel Kant, John Stuart Mill, Jürgen Habermas, John Rawls and many others. The point is not that the first onto-story is for these thinkers an apt description of the world as it exists today. Far from it. But it is the kind of world that they have in mind when theorizing and making prescriptions about the world, politics and societal institutions. In this sense, it is both the idealized world in which their theories exist, and the world they are actively trying to bring about. There is no doubt that this onto-story has been and still is a captivating one, and one that has inspired many thinkers. But it is not a description of the world as it is. It is a story of an imagined world, a particular liberal-humanist story that still constitutes a powerful political imaginary in many societies today.

The second onto-story, which is probably less familiar to the average reader, represents the world of new materialism. A world envisioned, for example, by thinkers such as Jane Bennett, Donna Haraway, Bruno Latour, and many others. A world full of myriad and entangled human and nonhuman assemblages with different material capabilities and potentialities unfolding in time and space. I imagine that this second onto-story, and much of what will follow in the succeeding chapters of this dissertation, is going to rest somewhat uneasily with many of its readers’ existing intuitions about the world. This is unsurprising. After all, as I suggest in the chapters that follow, it is only natural to feel a certain unease, perhaps even disorientation, when faced with something that is so immediately foreign.

If it is any form of consolation, I had no idea I would end up here when I started this project several years ago, and my former self would certainly have shared many of the same reservations and initial skepticisms. If you make it all the way to the end, I hope you will find it to be a transformative, even if occasionally frustrating, journey too.
Introduction:
Approaching the Edge

Edges are intriguing. Who has not felt the rush that comes from stepping closer to the steep edge of a cliff, and the sense of awe at the sight of the fall below? In the beginning of February 2020, when carrying out fieldwork on the west coast of Denmark, I found myself standing at one such edge. Any other day of the year, the strip of coast next to the lighthouse would be full of visitors, who come here to walk along the coast and take in the magnificence of the North Sea. But that day, the parking lot next to the lighthouse was empty. Everyone had heard about the incoming storm and decided to stay home. Except for me. I wanted to experience firsthand what the locals meant when they said that ‘nature is different out here’. When I finally summoned the courage to leave my car, and slowly approached the edge of the cliff to take a look at the roaring North Sea below, winds were pulling in me from all directions, and my heart was racing. They had been right. This was not the kind of nature I knew. This was something else, something much bigger, much stronger.

About a month after the storm, the Danish Meteorological Institute announced that the winter of 2019/2020 had been the warmest Danish winter on record. Only a few weeks later, in the middle of March, the Danish prime minister went on national television to declare a society-wide lockdown. Due to a highly infectious sub-microscopic agent, political communities across the world suddenly faced a whole new situation: a global pandemic. These events all happened within the span of two months in early 2020. Something is brewing these days. New edges are approaching. Local storms that used to happen every other decade, now happen every other year with dire consequences for local communities. Average global temperatures keep rising to the point where old records are constantly being rewritten. The jump of a small zoonotic virus to a human host has the ability to wreak havoc throughout human societies across the globe.

What are we to make of events like these as political theorists? How do they invite us to rethink and reform existing political institutions? How do they fit into existing theories of politics? Do they fit at all? These are some of the pressing questions for our times motivating this dissertation. By addressing them head on, in the chapters that
follow, we will come to see not only that the current ecological and climate crises pose challenges to current democratic institutions, but that they call for a fundamental reorientation of our understanding and practices of democratic politics as such.

Working the Edge

An edge is never simply an edge. Edges are elusive and malleable lines of division constantly being negotiated and (re)constructed. That is true both for the symbolic edges between human communities and collective identities, the epistemological edges between different scientific disciplines, and the ecological edges of the material world. A coastal edge, for example, is never in a single place, but is continually refigured in the coming and goings of sand and water in an endless process of flow and change. Thus, the concept of ‘an edge’, as I use it here, does not refer to a simple ‘boundary’ or ‘limit’, but to a tensions place of in-between-ness that comes from being neither-nor. It is in these tensionsal places that we often learn something new.\(^2\)

This dissertation is situated along multiple edges, metaphorical and actual. The first set of edges, and perhaps the most tangible, are the geological and political edges that exist in the area of ‘Lemvig’, a small rural community on the west coast of Denmark where I carried out fieldwork for this dissertation between 2018 and 2020. Located just where the North Sea and the inlet waters of Limfjorden meet (figure 1), the dual proximity of coastal edges means that the communities in Lemvig have always had to live with the recurrent threat of erosions, storms, and floods. Over time, human communities have sought to fight back against the tides, both through the material remolding of the coast, first with dikes and stony groins, and more recently in the form of climate mitigation initiatives such as the new anti-flood sea wall on the harbor front in Lemvig. For generations, the local landscapes and the human communities in Lemvig have re-shaped each other. In recent years, however, the community has been increasingly shaped by another set of more symbolic edges: the social and political edges between rural communities like Lemvig and urban centers like Copenhagen. After decades of centralizations, the area has seen its

\(^2\) See for example Romand Coles, *Visionary Pragmatism: Radical and Ecological Democracy in Neoliberal Times* (Duke University Press, 2016). Coles argues that the conditions of creative theorizing are most fertile at the very edges between different disciplinary epistemologies where new connections are most likely to arise.
population dwindle, its schools close, and local jobs move away. Both of these edges, the geological and the symbolic, come together around climate politics in Lemvig today.

At a more general level, this dissertation is situated in the context of the climatic and ecological crises of the Anthropocene, and the rapidly approaching planetary edges beyond which most existing ecosystems on Earth are likely to collapse. These edges are sometimes referred to as climatic thresholds, or ‘tipping points’, after which whatever humans do to stop disruptive climate change is unlikely to make much of a difference. New climatic equilibriums will obtain eventually, but the odds that current forms of life, including our own, will survive these transitions are miniscule. Existing life on earth have adjusted to the relative climatic stability of its recent geological past, and today’s ecological and climatic changes are happening at a speed where evolutionary adaption is unable to keep up, already leading to what some scientists have started to call a sixth mass extinction event. The last time a comparable event took place was around 65 million years ago when the dinosaurs went extinct along with many other species due to the aftermath of a meteorite impact. Today, the primary cause of extinction is not an extra-terrestrial object, but the activities of human beings here on earth.

In addition to the geological, symbolic, and planetary edges, the dissertation engages a set of more abstract epistemological edges existing between the different scientific disciplines and methodological approaches. The principal approach in this dissertation is that of political theory, the academic discipline in which I have had most of my formal training. The dissertation is, first and foremost, an attempt to contribute to the academic literature on the complex and troubled relationship between democracy and climate change within the field of political theory. More specifically, it engages in discussions within contemporary democratic theory and the burgeoning theoretical tradition of ‘new materialism’ by rethinking three central political concepts – participation, representation and leadership – in light of the ongoing ecological and climatic crises of the Anthropocene. The other prominent approach is ethnography. Throughout this dissertation, the conceptual work of political theory is coupled with a series of interludes that draw on ethnographic fieldwork in Lemvig, and seek to simultaneously situate and juxtapose the theoretical chapters. By combining political theory and ethnography, the dissertation works with the space of creativity that exist at the edges of different methodologies, different epistemologies, and different types of academic writing.

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4 Ibid., 81.
Related to the different edges, the dissertation makes three core scientific contributions: one methodological, one theoretical, and one political. **First**, it contributes to a public-political discourse about how to address the ongoing ecological and climatic crises from the perspective of democratic politics. It does so at a general level by arguing for a specific new materialist approach to democratic politics over other alternatives such as eco-modernism and eco-Marxism, but also at a more specific level by showing how these considerations come to matter in a Danish context through the politics of climate and ecology that unfold in a place like Lemvig. **Second**, it contributes to ongoing discussions within the field of political theory over the role of nonhuman entities for democratic politics. In line with a tradition of new materialism, the dissertation argues that there is a need for theorists to take seriously the forces of nonhuman things and beings, and that doing so forces us to rethink familiar political and democratic concepts. At the same time, however, it argues in the other direction that there is a need for theories of new materialism to become more ‘applied’, or ‘political’, in order to help guide concrete political action and intuitional reforms in light of the climate and ecological crises. **Third**, and finally, the dissertation contributes to ongoing debates about scientific methodology in social science, and more specifically to discussions about the relevance of theory versus empirical science. It argues for and in turn demonstrates the relevance of combining political theory with in-depth ethnographic fieldwork and engaged storytelling.

In the remainder of this introduction chapter, I sketch out these three contributions, and the three edges they pertain to, in more detail. I begin with the largest context, the planetary edges of the Anthropocene and the advent of a new geological epoch in which the entanglements of human and nonhuman forces have become inseparable. I then move closer to earth and investigate the more specific geographical and political edges that arise through my fieldwork in Lemvig, where the communities are currently struggling with a combination of political and ecological challenges. Finally, I introduce the potentialities and difficulties that come with combining the two different scientific approaches, political theory and ethnography, and argue for a specific kind of ethnography that I call a ‘new materialist ethnography’, which aims to take seriously the political relevance of both human and nonhuman entities.

**Planetary Edges: Welcome to the Anthropocene**

We are standing on the edge of large-scale planetary change today. Average global temperatures have already reached +1.1°C compared to pre-industrial levels, and existing political frameworks agreed to in the Paris Agreement from 2015 aim at keeping the temperatures below +1.5 °C. That is no arbitrary number. Leading climate scientists suggest that just around that level of warming, perhaps a little more, perhaps a little less,
the increase in average global temperatures is likely to set off self-reinforcing feedback mechanisms that will bring ecological changes out of control and set the earth on path towards a new climatic equilibrium.\(^5\) The scientists somberly refer to that new equilibrium as ‘hothouse earth’, indicating a radically warmer world unsuited for humans, as well as many other forms of life.\(^6\) But if current trends continue, we do not even have to worry about whether these planetary thresholds are reached at +1 or +2 °C degrees warming compared to pre-industrial levels. With existing trends of greenhouse gas emissions, the planet could very well be on track towards a +4 °C or warmer world by the end of the century.\(^7\)

Way before we reach those scenarios, however, things will already have started to look dire. In fact, many of the consequences of global warming are already felt around the world today. The number of extreme weather events have doubled since 1990, and there could be an estimated 200 million climate-related refugees by 2050.\(^8\) Add to this the already widespread and increasing de-stabilization of geopolitical relations around the world as a consequence of natural disasters, droughts, disease proliferation and crop-failures, and you have what we might somewhat bleakly call a perfect political storm.

These and other developments have led some natural scientists to argue that we have entered a whole new geological epoch, which has been given the name ‘Anthropocene’ (from the Greek \textit{Anthropos} meaning human, and \textit{cene} meaning time or new).\(^9\) The name is meant to signal the fact that through their impact on earthly ecosystems, human beings have for the first time in earth’s history become a geological force of its own. The accumulated effects of human actives can already be seen in the geological record and will affect the global climate for millennia to come. The concept of the Anthropocene has, since its origin in the natural sciences in the early 2000s, spread

\(^{6}\) Ibid.
across various scientific disciplines and even outside the walls of academia into art, music, and dance. Despite its popularity, however, the Anthropocene remains a highly contested concept, especially within the social sciences, where it has been criticized for being too masculine,too colonial, too white and too capitalist. I agree with the spirit of many of these criticisms, and if the concept were to be adopted uncritically as a label of our current times, it would certainly be problematic. But over time, the Anthropocene concept has also proven itself to be an incredibly generative concept to think both with and against, and it has opened up new conversations about climate change and our current global condition that cut across many of the usual divisions between science, activism, and art. This is why I continue to use it here, even if I do so with a measure of critical ambivalence.

In recent years, at least three competing representations of the Anthropocene have gained significant traction within social and political theory. I refer to them, in chapter 1, as the ‘good’, the ‘bad’ and the ‘uncanny’ stories of the Anthropocene. The ‘good’ Anthropocene is the one promoted by so-called eco-modernists, who see the new epoch as an opportunity for humans to extend the management, perhaps even mastery, of nature at a hitherto unprecedented scale. The ‘bad’ Anthropocene refers to the story told by eco-Marxists, who see the Anthropocene as a tragedy produced by a capitalist socio-economic system that has put us firmly on track towards the apocalypse. Finally, the ‘uncanny’ Anthropocene is the one envisioned by proponents of a new materialism, who see the new epoch neither as an opportunity for human redemption, nor as a simple history of capitalist

13 Kathryn Yusoff, A Billion Black Anthropocenes or None (U of Minnesota Press, 2018).
destruction. For these thinkers, the Anthropocene represents a new, complex, and unsettling condition that calls for a deep philosophical and political reorientation of the way we think of ourselves as (human) beings in this world, and about our myriad relations to all the other (nonhuman) beings on Earth.18

These three representations of the Anthropocene, and their respective understanding of the contemporary moment, work as a theoretical anchoring point throughout the dissertation. In chapter 1 (“Storying the Anthropocene”), the next chapter, I unfold each of these three narratives in more detail, before arguing for the relevance of embracing the new materialist understanding of the Anthropocene. For now, it is worth noting that the advent of the Anthropocene signals not only the beginning of a new geological epoch, but also what is being left behind, namely the Holocene. The Holocene epoch was characterized, above all, by an unusually high degree of ecological stability compared to the majority of the earth’s 4.5 billion-year history. While homo sapiens have been around for more than a hundred thousand years, all of what we today think of as human civilization has developed within the c. 12,000 years since the last ice age. This Holocene stability is now disappearing. We tend to think of the earth as our rightful property. That the planet is ours somehow. But for the majority of Earth’s existence it has been entirely uninhabitable to human beings, and one day it will become so again.

Political Edges: Ecological Politics at the Edge of Denmark

Metaphorically speaking, we are standing on the edge of a cliff today and looking down into a more unstable and fearful future below. In light of the ecological and climatic changes already happening at a global scale, inaction is beginning to look more and more deadly. With the feet firmly placed in the ground, we will have to approach the edge, take a sober look into the abyss, and begin to plan for the descent. The sight of what lies ahead is likely to invoke a sense of fear, but maybe a dose of clear-headed fear can help dispel not only the still widely shared illusion that there is no edge at all, but also the hubristic fantasies of human kind being able to set off at the edge and fly into an eternal horizon.19

As we begin the descent, we will not be able to continue our lives as before, but we might

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find crevices or new plateaus along the way, where we can start living new lives in the ruins of the old.

Despite its force, the metaphor of a single planetary edge is not a perfect one. The mental image it produces – that of a singular, uniform edge of a cliff – risks conveying the impression that the potentially apocalyptic futures ahead will arrive as a sudden extraordinary event like the ones popularized in Hollywood blockbuster movies. That will not be the case. If anything, the crisis-ridden futures, many of which are already here, will look more like a series of slow and situated unfoldings, prolonged edges, not unlike the ones already facing many human and nonhuman communities today. Despite their global reach, the ecological and climatic crises of the Anthropocene are situated and multiple phenomena whose diverse and entangled effects vary across different contexts. They entail multiple, overlapping, and shifting edges, which reinforces a need for a more situated approach to knowledge production and displaces appeals to universalism and one-size-fits-all solutions. Planetary edges, too, come to matter and must be (re)negotiated in particular settings.

The Anthropocene is a quintessential example of what Timothy Morton has called ‘hyperobjects’; objects that are too spatially and temporally dispersed, too intangible, and too wicked for us to truly fathom. In order to avoid getting overwhelmed by this multiplicity, and to take seriously the situatedness of both the ecological crises and its knowledge production, many of the stories I tell in this dissertation evolve around a specific place. A small rural community on the west coast of Denmark called Lemvig, where I carried out a total of six months of fieldwork between the fall of 2018 and the spring of 2020. Lemvig is no simple place either, but the hope is that turning to a specific, tangible place might help us approach the complexities of the Anthropocene in a more embodied and situated way.

Let me introduce you to this place: The municipality of Lemvig covers an area of around 500 square kilometers and is squeezed in between the North Sea to the west, the inlet waters of Limfjorden to the north, and the plantation forests of Klosterheden to the southeast. It is home to around 20,000 human inhabitants and many more nonhuman inhabitants, including several hundreds of thousands of farm animals. Historically, the human communities in Lemvig have lived off the surrounding natural landscapes, particularly through fishing and agriculture. For anthropologists and ethnologists alike, Lemvig has always been an interesting place to study. As the local historian Ellen

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Damgaard suggests in her three-volume book series about Lemvig, the area offers a
textbook example of an ethnographic laboratory:

Within a distance of less than 50 km you have a small laboratory. An old market
town with harbor and private railway, inlet and sea coasts with fishing, shipping
industry and strandings, a farm land of fat clayey soils to the north and lean sandy
soils to the south.22

In the area of Lemvig and its histories, you can study anything from

merchant trade and kinship relations, farm production and demand, the relationship
between town and countryside, urban versus pagan patterns of consumption, to the
role of markets and shipping. All within a bounded area, and in a long-time
perspective.23

In 1983, the famous Danish ethnologist Thomas Højrup published his book The Forgotten
People, where he investigated the cultural and political cleavages existing between rural and
urban ways of life, or what he calls different lifeforms.24 While not a book about Lemvig
per se, but about rural peripheries more generally, many of the dynamics from the early
1980s are present, and have even been exacerbated, in Lemvig today.

The contemporary history of Lemvig is in many ways one of peripherality. After
decades of urbanization and centralization, the area has seen a steady decline in its human
population, while health clinics have moved away, small countryside schools have had to
close, and many jobs have left the area. Despite this peripherality, or in part because of it,
the story of Lemvig is also one of local initiative and collective action. The political-
administrative centers of Copenhagen were always far away, why people in Lemvig have a
long history of showing local initiative and “fighting their own fight without waiting for the
authorities.”25 The people living on this part of the Danish west coast have always, at least
partly, turned their back to the rest of Denmark and looked elsewhere, particularly through
trading routes via the North Sea. In other words, being located at the edge, at least on this
specific coastal and societal edge, has always posed both a threat and an opportunity.

This intersection of peripherality and local initiative is becoming increasingly
apparent today around the politics of climate change. With water on all fronts, Lemvig is
located at the very forefront of climate change in Denmark. The area has always been exiled
exposed to an unruly and unpredictable coastal environment, with occasional storms and

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otherwise noted, all translations from Danish to English are my own.
23 Ibid.
floods, but these threats are becoming even more pronounced today in light of the ecological and climatic crises of the Anthropocene. As a result, current ways of life in Lemvig are challenged in a dual way. From one direction through depopulation, centralization, urbanization, and globalization. From another through water, erosion, sinking land, storms, and floods. These two sets of challenges might seem disconnected, but they are not. In Lemvig, the democratic and ecological challenges are deeply entangled. As I argue throughout this dissertation, the way people in Lemvig think about and approach climate change is informed both by a cultural self-representation of having lived in and with unruly natural landscapes for generations (Interlude I, “Unruly Waters”) and by the historical and present feeling of political peripherality (Interlude III, “Winds of Change”). Most of the people I met in Lemvig care more about their immediate community and less about the abstract threat of global warming (Interlude II, “Earthly Belonging”). This, in turn, might explain why there is limited identification among the locals with the broader struggle against climate change.

In February 2020, while doing fieldwork in Lemvig, the area was hit by a large storm and a subsequent flooding of the harbor front; the same storm that featured in the beginning of the chapter. In the local media, the event was reported as a 20-year event, meaning that events like these are supposed to happen only every twenty years. These days, they happen much more often. In 2013, the coast was hit by one of the most violent storms in recent years and just two years later, in 2015, another unusually powerful storm arrived. Had it not been for the new climate protection sea wall, Le Mur, which was built on the harbor front a few years earlier in 2012, the parts of the town closest to the harbor would have been flooded. The sea wall is a good illustration of the way people in Lemvig tend to approach the issue of climate change: Instead of worrying about the abstract dangers of global warming, they act on what is here and now. Whether it is building a sea wall on the harbor front to keep the water out, or sand-feeding the coast to prevent the land from eroding, they have always had to react to the comings and goings of sand, water, and wind. The landscapes out here have always been changing. The pressing question of today, therefore, is to what extent the planetary dynamics of the Anthropocene are changing the game altogether.

Epistemological Edges: Doing Political Theory in the Anthropocene

The ongoing ecological and climatic crises of the Anthropocene challenge not only the material relationship between humans and their natural environments, but also the way we think and theorize about ourselves as human beings in and of a more-than-human world. As Deleuze and Guattari, a great source of inspiration for many of the new materialists cited in this dissertation, write in *A Thousand Plateaus*: “in truth, there are only inhumanities,
humans are made exclusively of inhumanities, but of very different ones, with different natures and speeds. Part of the challenge today – particularly for a discipline like political theory, which has spent so much time paying minute attention to human beings – is how to study these inhumanities and in turn develop a better understanding of how all that which is not distinctly human affects politics. For example, what does nonhuman disruptions, such as natural disasters or a blackout, teach us about the more-than-human dimensions of politics? What role does material things, such as pay phones or a lighthouse, for orienting democratic politics? How might existing democratic institutions be reformed to represent and better account for the myriad interests of non-human animals and ecosystems?

New materialist thinkers like Bruno Latour, Donna Haraway, and Jane Bennett offer invaluable resources in this regard. In *Vibrant Matter*, for example, Bennett invites us to imagine what the world might look and feel like when leaving behind a conventional Cartesian view of the world as divided into two distinct realms with inert and passive things and nonhuman beings on one side, and vibrant and active human beings on the other. In its place, Bennett envisions the world as a “turbulent, immanent field in which various and variable materialities collide, congeal, morph, evolve and disintegrate”, where everything – not only human beings, but worms, rocks, and metallic substances too – exert different degrees of thing-power that “affect other bodies, enhancing or weakening their power”. Bennett’s hope is that paying attention to the active and agentic powers of more than human beings might help “distribute value more generously” and inspire “a greater sense of the extent to which all bodies are kin, in the sense of inextricably enmeshed in dense networks of relations.”

I am highly sympathetic to this new materialist project and have found it immensely productive for thinking about the ecological crises of the Anthropocene, especially when it comes to recognizing the active powers of non-human entities. This dissertation builds on these insights, but in order to develop new materialism in a more explicitly political and institutional direction it brings these insights to bear on three concepts that have been central to contemporary democratic theory: political participation (chapter 3), political
representation (chapter 4), and political leadership (chapter 5). In each of these three chapters, I show both how mainstream democratic theory have thought about these political concepts in all-too-human registers, but also that there do exist incipient resources within democratic theory that, when combined with insights from new materialism, allow us to stretch and expand the concepts in order to better account for the political relevance of nonhuman entities.

In addition to thinking differently, the dissertation is also an attempt at doing political theory differently, an ambition I lay out in more detail in chapter 2 (“An Edgy Methodology”). The central argument here is that there exists a tension between arguing, on the one hand, that the Anthropocene condition requires a radical transformation of our modes of political thinking, while adhering largely to the same way of doing political theory, which usually entails sitting in university offices and engaging in philosophical reflection, either alone or in dialogue with academic colleagues. If the new materialists are right, it seems to suggest not only a need for a change in theoretical outlook, but also a need for altering, or at least expanding, the modes of inquiry available to us as political theorists. Thus, following the cues of scholar-activists and thinker-practitioners like Romand Coles and Anna Tsing, I aim to show that engaging in ethnographic research, which shifts the emphasis away from abstract theory and towards a practical and physical engagement with the world ‘out there’, entails valuable resources for political theory today.

The conceptual chapters of the dissertation are juxtaposed with a series of interludes, which draw on ethnographic encounters from my fieldwork in Lemvig. The purpose of these interludes is not to prove the theoretical claims by empirical demonstration, but to ground some of the theoretical reflections in a specific place and time, and to open up the reader’s imagination to why those reflections matter in and for social and political practice. They are attempts to produce from within a discipline of political theory what Donna Haraway has called ‘situated knowledges’.

The desire to tell situated stories is connected to an ongoing debate within contemporary social and political theory about the relative role of critique versus affirmation: Is a ‘critical’ theory one that demasks or one that enchants? Do the challenges of today call for a politics of debunking or one of composition? While critique can be important for understanding the dynamics of our current moment, it is not by itself sufficient to bring about change. As Bennett writes in *The Enchantment of Modern Life*, moral

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judgments “remain inert without a disposition hospitable to their injunctions, the perceptual refinement necessary to apply them to particular cases, and the affective energy needed to perform them.” In the face of the ongoing ecological crises of the Anthropocene, maybe it is time that stop spending so much time talking about justifiability in political theory, and begin talking more about motivation. Instead of judging a phenomenon like a lack of climate consciousness in rural communities from afar, we might ask: What is it that makes certain motivations, desires, affects, and patterns of behavior so persistent? What might motivate them to change? Addressing questions like these require that we move closer to the phenomenon at hand instead of providing distanced critique.

The interludes serve another function as well. They make room for a different kind of writing and storytelling than what is custom within the academic discipline of political theory. There are several motivating reasons for this. One has to do with the affects produces by engaged storytelling. As Sara Ahmed writes in *The Cultural Politics of Emotion*, texts “name or perform different emotions”, which themselves “depend on past histories, at the same time as they generate effects.” By relying on thick narrative, the interludes aim to speak to readers in a more visceral register than the more conceptual chapters. The interludes invoke, in other words, what multispecies anthropologist Thom Van Dooren calls ‘lively stories’. For Van Dooren, lively stories are not an alternative to accurate description, or even truth. Rather, they are an attempt to produce “a fleshier, more lively truth that in its telling might draw us all into a greater sense of accountability.” The lively stories of the interludes invoke the thickness and presence of narrative in an attempt to bring readers in and make them see and feel things in a new way.

In the end, the interweaving of conceptual political theory and ethnographic interludes in this dissertation is an experiment. It is an attempt to find new ways of grappling with the challenges of today. We are looking into a more unstable and uncertain future, already treading unfamiliar ground, and most of our old bearings have been lost. In order to find a new footing, we must draw “on all of our sensory apparatuses to find different kinds of stories to tell” as Astrida Neimanis writes in *Bodies of Water*. Experimenting with different forms of academic writing is a way to perform and envision other worlds. The interludes are a means through which I have sought to create a more affirmative and experimental space for thinking and writing at the edges of existing disciplinary boundaries. This space has enabled an odd intermixing of personal experiences, ethnographic encounters, unfinished thoughts, literary insights, natural science digressions,

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34 Ibid., 131.
37 Ibid., 10.
and speculative fabulations. This might sound strange, but as Brian Massumi writes in *Parables for the Virtual*, we must take joy in these unexpected digressions and allow ourselves to stray afield, because

that is where the unexpected arises. That is the experimental aspect. If you know where you will end up when you begin, nothing has happened in the meantime. You have to be willing to surprise yourself writing things you didn’t think you thought.”

With this experimental attitude comes a risk of “silliness or even outbreaks of stupidity.”

But maybe affirming one’s silliness and occasional stupidity is a needed antidote to the overly stern and confident postures that seems so prevalent in academia these days.

As people like Van Dooren, Massumi, and Neimani remind us, the stories we tell through our research matter. They are figurative. They figure us. With the challenges lying ahead, we are in urgent need of new stories, stories that figure us in different ways. Perhaps the most central question we should ask of narratives about the Anthropocene and democratic politics today is this: What is it about a particular story that “calls to us, that asks the echoes in our salty tear ducts, or our watery wombs, to respond?” In other words, how do different stories make us respond? How do some stories, rather than others, come to resonate with us and render us capable of responding? The hope is that some of the stories told in this dissertation will resonate with its readers and make them think differently, perhaps even respond differently, to the ecological and climate crises unfolding around us.

**Approaching the end of many worlds**

During the early days in February when the storm hit, I was in the middle of reading the memoir of Elisabeth Møller Jensen, a Danish author and literary critic, who grew up in mid-twentieth century Lemvig under the grip of conservative, albeit slowly eroding, gender roles and religious doctrines. In her memoir, she recalls in a matter-of-factly way just how habitual yearly harbor floods were:

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40 Ibid.
41 I am also inspired here by Derek Denman’s working paper “Outside the Circle: Notes Toward an Eccentric Political Ethos” presented at a workshop in Copenhagen, August 2020. Here, Denman argues for the affirmation of a more playful, experimental, and indeed ‘eccentric’ approach to political theorizing.
43 Ibid., 136.
44 Elisabeth Møller Jensen, *Dengang i Lemvig: en familiehistorie* (Goldendal, 2015).
Every fall the water level in the harbor would rise so much that basements would be filled with water. Now and then the water levels were so high, you couldn’t even see where the harbor ended and the town began.\textsuperscript{45}

What really caught my attention, however, was the anecdote from one particular year when the floods were particularly severe:

A fishing vessel was making its way to the main square through one of the streets that year, when the water stood all the way up to the church. The entire central area was full of water, flowing into the houses, and in the lowest parts, where the situation was at its worst, people had to evacuate. But an old man, who was living alone furthest down by the harbor, refused to evacuate.\textsuperscript{46}

The image of the old man, who refuses to evacuate even in the face of imminent danger, resonates with many of the stories I have heard when talking with people in Lemvig about climate change. In the public debate, it is sometimes suggested by well-meaning urbanite elites that rural communities have to get with the program and move to the large cities in order to reduce their ecological footprint. What is often forgotten, however, is that for many of the people in a place like Lemvig, leaving behind their communities would, in fact, amount to losing their entire world. A world that they have cultivated through generations.

When I first came across the anecdote of the old man, it reminded me of a conversation from a year before, during the spring of 2019, when I had visited Brown University in the United States. In one of my classes there, Kyle Whyte, an environmental justice scholar and member of the Citizen Potawatomi Nation, had been invited to talk about indigenous Indian American perspectives on the ecological crises. During one of our conversations, Whyte asked the class: “Why would anyone want to save the world?” At first, the question baffled me. How could you not want to save the world? During the course of the conversation, however, it dawned on me that he was really asking: “Why would anyone want to save this world?” Why save a world that is so full of suffering, injustice, and exploitation? Is such a world really worth saving? For members of his own indigenous community the question was a tangible one—They had already seen their worlds end. Or rather, they had had their worlds ended by the consequences of settler colonialism. They are living the apocalypse.\textsuperscript{47}

\textsuperscript{45} Ibid., 184.
\textsuperscript{46} Ibid.
In the streets of capitals around the world, climate activists are urging everyone to hurry up, because we only have a few years left to save the world. They are not wrong. But paying attention to the many communities around the world and within our own societies, whose worlds have already ended, or are currently coming to an end, reminds us not to forget an important questions: Whose world is currently ending? Whose worlds are we currently trying to save, and whose worlds are even perceived as worth saving? We should not forget, as Kathryn Yusoff reminds us in *A Billion Black Anthropocenes or None*, that even though

"the Anthropocene proclaims a sudden concern with the exposures of environmental harm ... it does so in the wake of histories in which these harms have been knowingly exported to black and brown communities under the rubric of civilization, progress, modernization, and capitalism."

Climate activists are right that rapid transformations of existing societies are needed in order to ward of many of the worst consequences of today’s climatic and ecological crises, but speeding up processes of change is only part of the solution. We will also have to slow down and rethink. Both in order to avoid repeating the dominations and injustices of the past and present, and to avoid doubling down on illusions of human control, such as the ones represented in the fantasies of geo-engineering or interplanetary travel.

Perhaps the first step of coming to terms with the ecological and political challenges of the Anthropocene – the first step of approaching the edge – is the very realization that no matter where we go from here, there is no salvation in sight. Many communities around the globe, human and nonhuman, have already seen their worlds end, and many more are going to. Recognizing these historical harms, and the many ways they reverberate throughout the present, while working to create more ethical futures is, as I read it, what Donna Haraway means by “staying with the trouble.” We must learn to stay with the trouble of both past and future, and without letting that trouble overwhelm us completely begin to work from the here-and-now. It is not too late to start cultivating new arts of living on this damaged planet, and it is still possible to find new ways of life in the ruins of the old. But to do so, we will have to re-orient ourselves, our concepts, our bodies, and our senses, in order to prepare ourselves for the long and difficult descent ahead.

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48 Yusoff, *A Billion Black Anthropocenes or None*, p. xiii.
50 Haraway, *Staying with the Trouble*. 
The dissertation is divided into two main parts. Part I, *Political Theory in the Anthropocene*, introduces the concept of the Anthropocene (chapter 1) and lays out the methodological and epistemological issues related to combining political theory and ethnographic research (chapter 2). Part II, *Towards a New Materialist Theory of Democracy*, is then structured around three conceptual chapters and four ethnographic interludes. Each of the three theoretical chapters focuses on a central concept within democratic theory and shows how each of these concepts have to stretch and transform in their encounter with new materialism and the conditions of the Anthropocene.

Chapter 3, *Democracy that Matters*, centers on the concept of political participation. Who and what is part of the political? How and to what extent do more-than-human things and forces matter for democracy politics? The chapter draws on recent contributions from the literature on new materialism, which centers on the agency of non-human actors or, as they are sometimes called, ‘actants’. Relying on thinkers such as Bruno Latour, Jane Bennett, Noortje Marres and Bonnie Honig, the chapter aims to show how we might go about rethinking a concept like democratic participation when the relevance of non-human actants is recognized alongside and in its entanglements with human agency.

In turn, chapter 4, *Parliaments of Things*, engages with the concept of democratic representation. The primary question motivating the chapter is: If it is true, as chapter 3 argues, that the more-than-human world matters for democratic politics, how then to include and let that insight be reflected in our democratic institutions? The chapter focuses specifically on new forms of non-human representation that have gained increasing attention in recent years within both theoretical and political discourse, such as according legal personhood to nonhuman entities, as well as different forms of substantive parliamentary representation of the interests of nonhuman nature. While these types of institutional innovations, as well as their promises and limitations, are the main topic of the chapter, it also engages a more general discussion about how to improve the political relations between humans and the more than human world. More specifically, it argues that the successful institutionalization of nonhuman representation relies on a set of more basic capacities for recognizing nonhuman others, including the ongoing cultivation of a more than human receptivity and care.

Finally, chapter 5, *The Politics of Global Swarming*, centers on the concept of democratic leadership: What happens to democratic leadership when human beings are no longer the sole agents of political change? Where might we look today for new forms of leadership and insurgent democratic energies if we want to maintain hopeful in face of the increasingly overwhelming future of ecological disaster? Motivated in part by the reflections at the end of chapter 4 about the limitations of institutional arrangements, this
chapter discusses different forms of extra-institutional democratic activism. Central to the
chapter is the notion that in complex systems the conditions of change are most fertile at
the edges of existing orders as suggested by scholar-activist Romand Coles, and the
concept of a ‘swarming politics’ developed by democratic theorist William Connolly that
brings together individual experimentation with large-scale structural change in the image
of a global strike. Informed by these theoretical innovations, and examples of on-the-
ground eco-activism, the chapter argues for a new way of conceptualizing democratic
leadership. One that re-envisions leadership as an inherently multi-sited and ecologically
entangled affair, and takes seriously the emergent and often unpredictable character of a
swarming politics.

In between these three conceptual chapters are a series of interludes, each of which
revolves around a different theme that have arisen out of my ethnographic fieldwork in
Lemvig. Interlude I, Unruly Waters, takes outset in the unruly coastal-human relationships
that have developed over generations, and the way that relationship unfolds today in light
of climate change. Interlude II, Earthly Belonging, addresses the forms of multi-species
belonging that exist between the human communities and the landscapes in Lemvig,
particularly through practices such as farming and hunting. Interlude III, Winds of Change,
deals with the winds of change that started blowing in the early 1990s, when the green
energy sector around windmills started booming. Each of these stories simultaneously aim
to situate the theoretical arguments of the conceptual chapters in time and place, while they
point to the ways in which the complex realities of lived experiences constantly exceed
what can be contained in the form of abstract academic argumentation.

The dissertation ends with a fourth and final interlude, Playing With Fire, which uses
the complex ecosystems of forests, and the phenomenon of wildfires, to speculate about
what it means to be living at the edge of a world that is ending. What can fire teach us
about living with multispecies others on a damaged planet?
PART I

Political Theory in the Anthropocene
The story of the Anthropocene is a captivating one. But what kind of story is it? A tale of increased human powers, a tragedy of human fallibilities, or something else entirely? In this chapter, I introduce three different stories of the Anthropocene that have gained particular interest within social and political theory in recent years. First, I introduce the narrative of a ‘good’ Anthropocene promoted by people who call themselves ecomodernists. Then, the notion of a ‘bad’ Anthropocene critiqued by scholars of eco-Marxism. And finally, the ‘uncanny’ Anthropocene envisioned by proponents of a new materialism. All three of these Anthropocene stories contribute to and shape ongoing discussions within social and political theory about the challenges of the ongoing ecological crises and, more generally, the relationship between human beings and the natural environment.

In what follows, I retrace each of these stories as they unfold in the works of some of the most influential proponents within each tradition. I conclude the analysis of the different Anthropocene narratives by suggesting, in accordance with the new materialists, that what we need today is both more and different kinds of Anthropocene stories. The grand narratives of the Anthropocene promoted by ecomodernism and eco-Marxism tell only part of the story and must be supplemented with, even decentered by, other forms of smaller, more situated, and less human stories. As such, the chapter works both as an introduction to the three different conceptions of the Anthropocene, which provide an analytical anchoring point for the rest of the dissertation, and also as a more substantive argument for a specific approach to the study of the Anthropocene, which emphasizes situated analysis and engaged storytelling. This methodological approach is described in more detail, in the next chapter.
Ecomodernism and the “good” Anthropocene

One of the most captivating versions of the ‘good’ Anthropocene is found in the Ecomodernist Manifesto, which was published in 2015 by 18 co-authors including several prominent figures from within environmental circles. The stage of the ecomodernist story is set in the manifesto’s opening lines: “To say that the Earth is a human planet becomes truer every day. Humans are made from the Earth, and the Earth is remade by human hands.” This story of the Anthropocene is a distinctly human story, one featuring human actors, problems, and solutions. It is humans that have brought us into the current mess, and now it is up to humans to bring us out of it again. Following this mantra, the manifesto lays out its vision for how humans might come to realize what they call a “good, or even great, Anthropocene.”

The backdrop of this ecomodernist story is a selective history of recent economic progress and human flourishing. Over the past two centuries, average human life expectancy has more than doubled, while individual economic and political liberties have spread across the globe and are, as the manifesto puts it, “today largely accepted as universal values.” Over the same period, however, natural ecosystems have been severely depleted, wildlife have decreased, and anthropogenic climate change now poses “serious long-term environmental threats to human well-being.” How did we end up here? The answer is offered halfway through the manifesto:

Ecosystems around the world are threatened today because people over-rely on them: people who depend on firewood and charcoal for fuel cut down and degrade forests; people who eat bush meat for food hunt mammal species to local extirpation. Whether it’s a local indigenous community or a foreign corporation that benefits, it is the continued dependence of humans on natural environments that is the problem for the conservation of nature.

According to the ecomodernists, the crux of today’s ecological problems is that human beings over-rely on and thereby deplete their natural environments. Whether it is cutting

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51 While the 2015 Ecomodernist Manifesto is probably the most notable ecomodernist publication, see also Nordhaus and Shellenberger, Break Through; Brand, Whole Earth Discipline; Pielke, The Climate Fix; Lynas, The God Species; Pinker, “Enlightenment Environmentalism. The Case for Ecomodernism”; Pinker, Enlightenment Now, 121–55.
52 These include, among others, Stewart Brand (author of the Whole Earth Discipline: The Rise of Ecopragmatism from 2010), Mark Lewis (author of Green Delusions: An Environmentalist Critique of Radical Environmentalism from 1994), Ted Nordhaus (co-author of Break through: From the death of environmentalism to the politics of possibility from 2007), Mark Lynas (author of The God Species: Saving the Planet in the Age of Humans from 2011) and David V. Keith (author of A Case for Climate Engineering from 2015).
54 Ibid.
55 Ibid., 8.
56 Ibid., 10.
57 Ibid., 17.
down trees for firewood or hunting mammals for their next meal, the accumulated effects of those individual acts lead to ecological destruction in the aggregate. The achievement of the ecomodernists’ good Anthropocene, therefore, ultimately hinges on the ability of human innovations to “liberate the environment from the economy”, what they call decoupling.58 There are notable historical examples of increased decoupling of human activities and natural systems, such as the rapid increase in agricultural productivity from the mid-17th century to the 19th century, which reduced the amount of land needed to grow crops and food for an average person by one half.59 According to the authors, there are several other promising processes of decoupling taking place today, including stagnating population growth, increasing urbanization, and decreasing resource intensity.60

These developments all reduce the total human impact on the environment. But they do so too slowly. Therefore, processes of decoupling must be accelerated through technological innovation. In fact, without “profound technological change there is no credible path to meaningful climate mitigation.”61 In other words, averting the dangers of climate change hinges not only a radical decoupling of humans from nature, but also on an increased technological control over nature. As one of the co-authors of the manifesto, Mark Lynas, puts it in his book *The God Species* from 2011: “playing God (in the sense of being intelligent designers) at a planetary level is essential if creation is not to be irreparably damaged or even destroyed.”62 In the Anthropocene, human beings have become a geological force of its own and it is now “up to the human species to clean up the mess it has made and “return balance to the system”.63 Only human beings have the promethean powers needed to save the planet.

This story of divine human powers is fueling contemporary attempts to combat climate change through so-called Geoengineering, which is “intentional large-scale manipulation of the environment, particularly manipulation that is intended to reduce undesired anthropogenic climate change.”64 One of the most prominent and vocal supporter of the geoengineering agenda today is Harvard professor of applied physics and public policy, David V. Keith, who also co-authored the ecomodernist manifesto. In

58 Ibid., 18.
59 Ibid., 13.
60 Ibid., 11–15.
61 Ibid., 21.
63 Ibid. See “Preface”.
64 Lynas himself recognizes the connection between his vision of the Anthropocene and geoengineering, but he remains undecided about the desirability of, at least, the most daring forms of geoengineering, such as Solar Radiation Management (see in particular chapter 7 of *God Species*, “Aerosols”). The definition of geoengineering comes from David W. Keith, “Geoengineering the Climate: History and Prospect,” *Annual Review of Energy & the Environment* 25, no. 1 (November 2000): 245, https://doi.org/10.1146/annurev.energy.25.1.245.
addition to his research on geoengineering, Keith is the founder and executive chairman of the Canadian clean energy company *Carbon Engineering*, which is backed by several private investors including Bill Gates, and works to develop and commercialize Carbon Capture and Storage technologies that that can remove CO₂ from the atmosphere and thereby significantly reduce global warming. These technologies are, however, only a subset of a larger set of geoengineering solutions that come in many variations and differ significantly in terms of technological complexity, scope and impact. At one end of the continuum exists relatively low-tech and nature-based technologies, such as reforestation and greening of dry lands. While the mitigating effects of these technologies are not insignificant, they do not measure up to the vast amounts of greenhouse gasses already emitted to the atmosphere, and remain at best ‘supporting actors’ in a more holistic approach.

At the other end of the continuum are much more drastic, far-reaching, and risky geoengineering technologies that have the potential to bring about radical changes to natural ecosystems. Among the most popular high-risk, high-impact geoengineering technologies today is *Solar Radiation Management*, which involves manipulating the amount of sunlight that enters the atmosphere in an attempt to reduce global warming. The scientific debates about Solar Radiation Management first gained traction in 2006, when atmospheric chemist Paul Crutzen (the same Crutzen who first introduced the Anthropocene concept in 2000) published an article on the potentials of *Stratospheric Aerosol Injection* (SAI). SAI entails spraying aerosol particles, in this case sulfate particles, up into the upper atmosphere in order to block out sunlight and reduce global temperatures, not unlike what happens in the event of large volcano eruptions. In his article from 2006, Crutzen emphasized that lowering greenhouse emissions would “by far” be the preferred climate change-solution, although he recognized that SAI might become a necessary last measure in order to avoid whole-sale climatic disaster if temperatures keep rising as projected.

In his book *A Case for Climate Engineering* from 2013, Keith makes the case for the SAI technologies that Crutzen opened up for in 2006. As Keith lays out in the opening pages of the book, injecting sulfuric acid particles into the upper atmosphere is not only possible, it is also both “cheap and technically easy”, making it a dream case geoengineering technology for ecomodernists who insist on the inseparability of economic growth and climate mitigation. SAI is a technology that could be up and running in “a few years for

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68 Ibid., 216–17.
the price of a Hollywood blockbuster". While Keith recognizes that it is not without risks of its own, he believes it could and should be used as an efficient geoengineering measure to significantly slow down global warming and reduce its most severe impacts over the coming decades. Even though it is not a fix-all solution, it could work as a temporary measure that would give us time to develop more long-term solutions that bring down greenhouse gas emissions.

While the jury is still out on these technologies – both in terms of their consequences and their desirability – geoengineering proposals remain a site of hope for many ecomodernists. This hope is sustained by the underlying ecomodernist understanding of the Anthropocene as a story of increased human powers. It is humanity that has created this mess, and now it is up to humanity to solve it. Recall, again, the opening lines of the 2015 manifesto: “To say that the Earth is a human planet becomes truer every day. Humans are made from the Earth, and the Earth is remade by human hands.” In the Anthropocene, human beings have become the primary geological agent and now it is up to humans – with their world-altering powers – to ensure that it becomes a good, or even great, Anthropocene, even if it requires they become miniature Gods.

**Eco-Marxism and the “bad” Anthropocene**
The second, and competing, story of the Anthropocene is that of the “bad” Anthropocene told by eco-Marxists. At first sight, this story runs directly counter to the ‘good’ Anthropocene envisioned by ecomodernists. Where ecomodernists view climate change and global warming as challenges to be solved within existing political and economic systems, eco-Marxists argue that any feasible solutions are going to require a fundamental break with these very structures. Despite their immediate differences, however, these two stories share, as we will see, a number of underlying assumptions about the Anthropocene condition. But before we get there, let us take a closer look at the eco-Marxist story of the Anthropocene.

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71 Ibid., 8–10.
72 Ibid., 15.
73 For a more critical (and sobering) engagement with these kinds of high-risk geoengineering projects, see Hamilton, *Earthmasters*.
75 It should be noted here that most eco-Marxists oppose the concept of the Anthropocene itself. Andreas Malm and others have suggested, instead, the name “Capitalocene”, which emphasizes the decisive and detrimental role played by capitalism in bringing about this new geological epoch and its ecological crises. However, primarily for purposes of consistency, I stick to the usage of Anthropocene here. For a more thorough discussion on these matters see the volume *Anthropocene or Capitalocene?: Nature, History, and the Crisis of Capitalism* edited by Jason W. Moore.
One of the most persuasive accounts of the eco-Marxist story is found in Andreas Malm’s book *Fossil Capital* from 2016.76 The main culprit here is not the unintended consequences of individual human actions, but the systematic effects of what Malm calls ‘the fossil economy’, the socio-ecological structure “of self-sustaining growth predicated on the growing consumption of fossil fuels”.77 The current climate and ecological crises are the foreseeable result of an inherently problematic capitalist system that has relied on continued extraction of fossil fuels in its pursuit of perpetual economic growth. Malm locates the historical origins of this system in the British Industrial Revolution of the late 18th century and the invention of the steam engine.78 While the steam engine itself did not cause climate change, its introduction helped consolidate new social and economic relations of power, which made a small capitalist elite increasingly powerful at the expense of all the rest of humanity.79 On this view, the origins of the fossil economy, and by extension the origins of the Anthropocene, is first and foremost a story of unequal human power. The first step in addressing the challenges of the Anthropocene, therefore, is tracing the human origins of these unequal power relations in the hope that we might identify “at least a hypothetical possibility of changing course.”80

In short, Malm’s historical account of the fossil goes like this: Up until the invention of the steam engine, the British economy had relied, primarily, on water power. The arrival of the steam engine, and its reliance on coal, provided several decisive advantages from the perspective of private capital: First, because coal could be circulated, stocked, and sold in the marketplace, it could be *commodified*.81 Second, coal did not rely on collective management of public resources. With the steam engine, all you needed was to buy some coal, and you had readily available *private energy*.82 Third, coal was spatially and temporally *mobile*, which meant that for the first time in history, the energy source (the coal mine) and the energy release (the combustion of coal) could be dislocated. This allowed employers to move freely to areas with the most readily accessible and profitable labor pool, and also meant that coal could be made to follow any clock, including that of the factory.83 Fourth, in contrast to a mill driven by water power, the accumulative power

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76 See also Malm, *The Progress of This Storm*; Moore, *Capitalism in the Web of Life*; Moore, “The Capitalocene, Part I”; Foster, “Marxism in the Anthropocene.”
78 Ibid., 16.
79 Ibid., 19.
80 Ibid.
81 Ibid., 119.
82 Ibid., 120.
83 Ibid., 162–64.
generated by coal was, in theory, *unlimited*. The owner of a steam engine could simply “add one more engine” and burn more coal.\textsuperscript{84}

In addition to these material advantages of coal – commodification, privatization, mobility, and unlimited power – the introduction of the steam engine provided another very important benefit to capital owners: It could impel a machine. Machinery made employers less dependent on labor and, in turn, insulated them from the resistance of their workers. The combination of all of these factors drove the owners of capital in late 18\textsuperscript{th} century Britain to adopt the steam engine: “The struggle against labour called for machinery, which called for steam power, which called for coal…”\textsuperscript{85} A development that, in turn, put the world on the path towards continuous fossil fuel combustion, greenhouse gasses emissions, and global warming that we are still on today.\textsuperscript{86}

With this historical account in place, we can begin to understand the Eco-Marxist critiques of the Anthropocene narrative. Contrary to the ecomodernist story, it is not the human species as a whole that has initiated the Anthropocene, and therefore not humanity as a whole that bears the responsibility for climate change. It was a small minority of humanity, an “all-mall, all-white” class of British capitalists in the late 18\textsuperscript{th} century, who installed the steam engine and ushered in a fossil economy that today has life on earth to the brink of extinction.\textsuperscript{87} To this day, it is still only a subset of humanity that emits the majority of the world’s greenhouse gasses: “In the early twenty-first century, the poorest 45 percent of humanity generated 7 percent of current CO2 emissions, while the richest 7 percent produced 50 percent”.\textsuperscript{88} One of the main problems with the Anthropocene narrative promoted by ecomodernists is that it denies the differentiated responsibilities within humanity and naturalizes the social origins of climate change by positing a ‘humanity’ as the root of the problem. If humanity as a whole is the problem – rather than the specific socio-economic structures of fossil capitalism – it becomes increasingly difficult to imagine political solutions short of grand technological interventions, such as geoengineering, which seek to either fix humanity, by making it less dependent on natural ecosystems, or fix nature, by becoming masters of the Earth.

According to the eco-Marxists, what is actually needed is radical collective action that addresses the root of the problem: the fossil economy.\textsuperscript{89} What does that action look like? This question is addressed more explicitly by Malm in his more recent book *The*
Here, he leaves behind the historical approach of *Fossil Capital* and engages in a more explicitly philosophical project. In Malm’s own words, the book is an attempt to lay out a “conceptual map” that can guide revolutionary climate action and resistance. One of his main philosophical targets are new materialists like Bruno Latour and Jane Bennett, who argue that agency is a capacity distributed across the human and non-human. Their extension of the concept of agency leads, Malm argues, to the highly unreasonable conclusion that we can no longer say whether it is the carbon dioxide itself, or the human beings who combust fossil fuels, that are the main actors and therefore bear the main responsibility for climate change. What we are left with is a myriad of “motely actants bumping into each other, agglomerating for a moment and splitting off, never meriting any central source of power to form a vertical structure around itself.” By flattening the ontological terrain in this way, new materialists make it impossible to address issues of structure and power – two of the key elements for addressing climate change today. Just when “the biosphere began to catch fire, social theory retreated … into the pure air of text”, Malm writes.

What we need instead, according to eco-Marxists, is a *historical materialist* approach to climate politics that recognizes the dialectical relationship between society and nature and forefronts unequal social and economic powers among humans beings. After all, as *Fossil Capital* laid out, it was a specific shift in socio-economic relations of power that initiated and now determine the outcome of the climate crisis. A historical materialist approach emphasizes the fundamental antagonism that exists between the global capitalist elites and everyone else today. In a world where “the richest 1 percent have a carbon footprint some 175 times that of the poorest 10 percent”, we simply “cannot afford not to draw lines of separation,” Malm writes. Dissolving the antagonism between capitalist elites and everyone else only serves to blur our analytical vision, when what we ought to do is push that antagonism even further, towards a “radical polarization”. Only then can social theory remain any hope of promoting, rather than inhibiting, radical political action and contributing to a revolutionary ecological politics that seeks to liberate both nature and humans from the destructions of fossil capitalism.

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90 Malm, *The Progress of This Storm*.
91 Ibid., 16–18.
92 Ibid., 82.
93 Ibid., 82–83.
94 Ibid., 147–48.
95 Ibid., 21.
96 Ibid., 161–63.
97 Ibid., 73–76.
98 Ibid., 189. Emphasis in original.
99 Ibid.
100 Ibid., 174.
The eco-Marxist story of the Anthropocene told by Malm stands on shoulders of earlier influential contributions to ecological Marxism. Among its primary sources is the work of John Bellamy Foster, whose revival of Marx’s concept of ‘the metabolic rift’ has been extremely influential within eco-Marxist circles since the late 1990s. In *The Ecological Rift* from 2011, Foster and his co-authors have argued that the advent of the Anthropocene “highlights that a potentially fatal ecological rift has arisen between human beings and the earth, emanating from the conflicts and contradictions of the modern capitalist society.” This metabolic rift is not merely an irrational side-effect of an otherwise well-functioning economic system, but the inevitable result of a “social metabolic order of capitalism [that] is inherently anti-ecological, since it systematically subordinates nature in its pursuit of endless accumulation and production on ever-larger scales.” Therefore, according to Foster and Malm, if we want to emancipate nature today, it requires a radical confrontation with, indeed the end of, existing capitalist structures.

In many ways, this eco-Marxist story of the Anthropocene runs directly counter to the ecomodernist story. Where the ecomodernists seek to defend existing political systems and its liberal values while arguing for technological fixes, the eco-Marxists want to revolutionize the system and subvert capitalist systems through radical political action. The eco-Marxist story centers around the increased powers of a small subset of humanity, the capitalist elites, over everyone (and everything) else. Unlike the ecomodernists, there is nothing ‘good’ or hopeful about the Anthropocene condition. In contrast, the Anthropocene and its ecological crises represent the ‘bad’ outcome of a fundamentally destructive capitalist system. However, despite the immediate and over differences of these two stories, they share a fundamental similarity: They are both distinctly human stories.

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103 Ibid. Ch. 2: “Rifts and Shifts”.
104 For a competing view from within the eco-Marxist camp, see Jason Moore’s fascinating book *Capitalism in the Web of Life*. Moore argues that capitalism should be understood not only as a social or economic system, but as way of organizing nature. Moore’s work remains, however, controversial within eco-Marxist circles. Malm has criticized it for being “unbridled hybridism in Marxist garb,” and Foster has said in a recent interview that he believes Moore now stands in opposition to the eco-Marxist struggle as a whole.
New materialism and the “uncanny” Anthropocene

The third story of the Anthropocene, the new materialist story, opens with a paradox. On the one hand, the advent of the Anthropocene signals the increased world-making powers of (some) human beings over others and over the natural environment. At the same time, its ecological crises and lack of effective human response also demonstrates the limits of human capabilities and illuminates that the Earth is indeed inhabited by many other things and forces, whose powers often outstrip humans many times over. This double movement of the Anthropocene invites us, the new materialist argue, to start paying more attention to the dependencies, entanglements, and resonances that cut across and interrupt the categorical distinctions between humans and nonhumans, between culture and nature.

We can begin the narration of the third story by turning to one of the most influential new materialist texts in recent years, Jane Bennett’s *Vibrant Matter: A Political Ecology of Things* from 2010. The starting point for Bennett is the claim that the contemporary ecological crises do not only constitute a technical or political problem, but reflect a deeper cultural and philosophical problem. A similar concern had been raised twenty years earlier by Felix Guattari in *The Three Ecologies* from 1989, where he argued that the ongoing crises of ecology reflects a deeper psychological crisis, whose underlying of ideas and desires will also have to be challenged and transformed. In line with Guattari, Bennett argues that the mechanical Western understanding of the material world as inherently passive and inert has provided philosophical fuel for human “fantasies of conquest and consumption” that see the natural world first and foremost as a resource to be extracted. What is needed, therefore, is not only a new kind of politics, but also a philosophical reorientation that disrupts the ontological divide that separates the world into passive matter and active human beings.

In *Vibrant Matter*, Bennett embarks on this project through a series of reflections she refers to as a speculative ‘onto-story’, which emphasizes the conditions of contestation and unknowability inherent to all ontological arguments. Relying on thinkers such as

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105 While the concept of the Anthropocene had not yet ascended to its current levels of attention in the social sciences, and therefore does not appear explicitly in the book, Bennett here lays out one of the most persuasive accounts of the ontological worldview that underpin, or at least inform, the new materialist story of the Anthropocene. Other potential starting points for this new materialist story would be Bruno Latour’s *We Have Never Been Modern* from 1991, where Latour argues for the inseparability, and increased entanglements, between the human and the non-human world, and challenge the modern separation between “culture” and “nature”. Or Karen Barad’s *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* from 2007, in which she combines insights from Niels Bohr and Judith Butler in a highly original fashion to promote an ontology of “agential realism”, which emphasizes the vibrant, entangled and performed character of the material world, even at a quantum level.


107 Bennett, *Vibrant Matter*, ix.
Spinoza and Deleuze, Bennett’s new materialist onto-story begins by suggesting that deep down everything in the world is made of “the same quirky stuff, the same building blocks”, which “we might call … atoms, quarks, particles streams or matter-energy”. These building blocks exist in a “turbulent, immanent field in which various and variable materialities collide, congeal, morph, evolve and disintegrate” making up what we perceive as the world. Everything in this world – not only human beings, but worms, rocks, and metallic substances too – exhibit an intrinsic drive to persist and exert different degrees of “thing-power” that can “affect other bodies, enhancing or weakening their power”. They entail what Bennett calls a “vitality intrinsic to matter itself.”

This intrinsic vitality of all matter can sometimes be difficult to discern when inhabiting the human temporalities of daily life, where many of the nonhuman materialities we interact with appear passive and inert, unless moved by the active forces of human beings. But even seemingly lifeless things such as “stones, tables, technologies, words, and edibles” only appear fixed because their movement and change “proceeds at a speed or a level below the threshold of human discernment.” From the perspective of different temporalities, for example that of biological evolution or deep geological time, seemingly stable things like minerals and mountains begin to move, transform, and become active shapers of the world, while the powers of “human beings, with their much-lauded capacity for self-directed action” begin to look less significant and much more passive. Paying attention to the active (thing:)power of nonhuman matter, challenges the conventional belief that human beings are the only, or even the most important, agents operating in an otherwise passive material world.

Moreover, on this new materialist view, all beings and things exist and become what they are in their intricate and overlapping relations with other beings and things. As Bennett writes in dialogue with Spinoza, it is a material, ontological condition of any existing body that it “depends on the collaboration, cooperation, or interactive interference of many bodies and forces” and therefore “never really acts alone”. In an effort to capture this deep ontological entanglement, Bennett draws on Deleuze and Guattari’s concept of an ‘assemblage’, which refers to lively and diverse constellation of “vibrant

108 Ibid., xi.
109 Ibid.
110 Ibid., 2–3.
111 Ibid., 10–11.
112 Ibid., 58.
113 Ibid., 11.
114 Similar arguments are made by both Latour and Haraway. See for example Latour 2017, pp. 98-107, or Haraway 2016, ch. 2.
115 Bennett, Vibrant Matter, 21.
materials of all sorts” that are “not governed by any central head”. A human being, for example, is a complex assemblage of cells, microbes, air and water molecules, desires, thoughts, and so on, all of which play a role in determining its capacities. At the same time, human beings are part of numerous other complex assemblages, say as a work place or political community, which are themselves comprised of a numerous other human and non-human entities. As suggested by James Lovelock and Lynn Margulis in the early 1970s with their ‘Gaia hypothesis’, even the Earth itself can be understood as particularly complex kind of assemblage, made up of a multiplicity of other complex assemblages that constantly encroach upon and develop in relation to other assemblages.117

In a series of lectures from 2017, Bruno Latour invokes this assemblatic concept of Gaia, first introduced by Lovelock and Margulis, to tell a distinctly new materialist version of the Anthropocene story. Resonating with Bennett’s claim that we need a new onto-story, Latour argues in these lectures that rising to the challenges of the Anthropocene requires the discovery of a whole new cosmology. A counter-Copernican revolution as he calls it.118 The old Western cosmology, which posits a strict bifurcation between humans and nature, no longer applies.119 In the Anthropocene, rather than viewing the Earth as a stable background on which human history unfolds, we must instead come to terms with the Earth as Gaia; that is neither as stable environment or a unified global system, but as a world of worlds, systems within systems, or with Bennett and Deleuze, assemblages within assemblages. Embracing the cosmology of Gaia, for Latour, entails rediscovering the Earth as a complex system of multiple entangled human and non-human entities that forces that constantly encroach on each other.120

The arrival of the Anthropocene signals, for Latour, a situation where the planet itself has become a site of politics.121 If the nature of the Holocene remained largely indifferent to human activity, what we see today with climate change is that Gaia is reacting to our actions and have begun to “treat us as enemies.”122 In order to avoid waging a war against the planet itself, humans will have to “learn to become capable of responding” to Gaia,123 which requires that we first free ourselves from illusions of the infinite, such as those of infinite growth and infinite progress, which have brought us into this mess in the

116 Ibid., 24.
118 Latour, Facing Gaia, 61. (See also lecture 8).
119 Ibid., 14.
120 Ibid., 288.
121 Ibid., 281.
122 Ibid., 281.
first place. Instead, human beings must come back down to Earth and learn to live within its planetary boundaries. For Latour, as well as for Bennett, this means that we will learn how to inhabit the planet in a way that is sensitive to, and makes space for, the many other beings and agencies on Earth.

To begin this process of coming back down to earth, Latour argues for a new kind of politics that he calls a politics of “composition”. Entering the compositionist politics of the Anthropocene entails realizing that there is no longer any common ground that can be assumed pre-politically, or any higher arbiter such Science, God, Nature, or the Market that can save us. Instead, the different and distinct peoples of the Earth, including its more-than-human peoples, will have to come together, in the absence of a higher arbiter, under the new conditions of politics, and begin composing what it might mean to live together with others in the Anthropocene. What we will have to realize then, according to Latour, is that there exists today an outright war between “Humans living in the epoch of the Holocene”, who have not yet realized that the Earth is moving beneath there feat, and “the Earthbound of the Anthropocene”, who have realized that in order to survive, they will have to come down to Earth, occupy a territory, and learn how to sense and respond to the Earth, to Gaia. The ecological crises of the Anthropocene have, Latour argues, brought the planet into a new Schmittean war between friend and enemy: Either you understand that the world is on a direct path towards ecological collapse, and are willing to change your ways to avoid it, or you are part of the problem.

While Latour’s story of the Anthropocene is an appealing one, I want to conclude the new materialist story by turning to another thinker, Donna Haraway, who complicates, even obscures, the story told in the end by Latour. Instead of stories of war and conflict that draws up new lines of friend and enemy, Haraway invites us to pursue what she in her book Staying with the Trouble calls “tentacular thinking.” Tentacular thinking is “a method of tracing, of following a thread in the dark, in a dangerous true tale of adventure, where who lives and who dies and how might become clearer for the cultivating of multispecies justice.” Throughout the book, Haraway follows threads into many places, finding valuable lessons in everything from art-activism projects in Southern California that

124 Ibid., 285.
125 Ibid., 244.
128 Ibid., 261.
129 Ibid., 247–53.
130 Haraway, Staying with the Trouble.
131 Ibid., 3. This resonates strongly with what Latour suggests in other parts of his lectures, for example when he suggests that an earthbound science is engaged with tracing “loops”. See Latour, Facing Gaia, 137–41.
practice interspecies trust between humans and pigeons, the chthonic (under)worlds of Gorgons in Greek myths, the frontiers of biological research on symbiogenesis, the science-art worldings of a computer game informed by experiences of native Inupat people in Alaska, and her own fictional speculations about future multispecies societies.

If this sounds troubling or a bit too speculative, it is because it is. By invoking concepts and modes of story-telling that rely on speculation, fabulation, and fiction, Haraway is intentionally pushing against our limits of (scientific) knowability. For Haraway, this speculative work is required because the Anthropocene has left us in the dark, without bearings and with only concepts such as “nature” and “culture”, “organism” and “environment”, “subject” and “object”, which no longer help us to think. But think we must! So we must learn to think differently, and here it matters immensely who and what we think-with. This is why Haraway takes issue with Latour for enlisting Carl Schmitt as his thinking companion. Latour, Haraway argues, unwillingly gets too caught up in masculine stories of enemies and war that rely on tropes of heroes, victory, and defeat. What we need today is a different kind of stories. Smaller, situated, tentacular, and more patient stories. Stories that extend their webs and tentacles in many directions and include both Gorgons, spiders, corals, and octopuses to name just a few of Haraway’s protagonists. Stories that seek to story new worlds, which can help us envision and prefigure multi-species justice.

The new materialist story of the Anthropocene presented here by Bennett, Latour, and Haraway leaves us with a decidedly different understanding of the present moment than the one conveyed in the previous two stories. One in which the main actors are no longer human beings alone, but a much wider range of actors that include oceans, rivers, metals, corals, spiders, mythical creatures, and Gaia. It is a story in which the identification of the main problem shifts away from a sole focus on CO2 emissions or fossil capitalism to a much broader, philosophical, and cultural problem that is connected with the many ways in which we, as human beings, think about and act in relation to the more-than-human inhabitants of this world. Reformulating the problem in this way both changes and expands

134 Haraway, *Staying with the Trouble*, 42–43.
135 Ibid., 52–55.
136 Ibid., 12–13. In her own speculative stories, Haraway suggests another name for our new geological epoch, the “Chthulucene” – a world, or rather multiple worlds within world, populated by all sorts of tentacular entities and earthly beings. For Haraway, the Chthulucene is an active attempt to imagine and enact alternatives to anthropocentric stories of the Anthropocene, which envision a world populated solely by human beings.
the kinds of politics that are needed to address the situation. Politics-as-usual, technological solutions, or even taking down capitalism is no longer going to cut it. What is needed is a whole new understanding of the world and our place in it.

Part of this new understanding entails learning to ‘stay with the trouble’, as Haraway puts it. Staying with the trouble means, among other things, acknowledging the many complex and entangled, often destructive, histories that have brought about and still exist within the present moment – such as the histories of euro-colonialism that still have their tentacles all over the place today – without succumbing to the belief that it is impossible or already too late to think and act differently. The discourses of futurity conveyed by both the ecomodernists and the eco-Marxists lend themselves all too easily to cynicism or self-fulfilling prophesies by envisioning all-too-necessary futures (‘if technology/revolution does not save us, then it is game over’) of the kind that make some people willing to gamble on high-risk geoengineering, while others give up in face of the legendary forces of a capitalism. But there is still time for other stories. Ones that do not rely on grand narratives of apocalypse or salvation.

Stories that matter: Sensing different worlds

The stories we tell about the Anthropocene matter. They matter for what we become able to see, think, and do. With Jacques Rancière, we might think of them as different “partitions of the sensible”, which organize and orient the world by reducing complexity and allowing us to make sense of it. For example, by telling stories of the Anthropocene that feature almost exclusively human beings, and where the natural environment is something passive that must be protected by and for the sake of human beings, the active capacities of all other beings and things remain out of sight. Such stories render the world of non-human matter passive and inert, making us less attentive and responsive to its active and agential powers. The stories we tell not only represent, but also (re)configure what we find worth caring for and are able to respond to. Storytelling is, as Haraway puts it, a way to practice “caring and thinking.” Therefore, by telling different stories, ones that feature more than just human beings, we might exercise our blunted capacities for caring and responding to the more-than-human world.

137 Ibid., 56.
138 Ibid.
140 Haraway, Staying with the Trouble, 37.
141 Ibid., 29.
The stories we tell about the Anthropocene also matter for the kinds of politics that become feasible and, indeed, thinkable. If the Anthropocene is storied as a tale of increased human powers, it is much more likely that responses to climate change will take the form of high-risk geoengineering projects fueled by hubristic images of human beings as demigods. Whereas emphasizing the complex, entangled and often unpredictable character of ecological assemblages nurtures a rather different kind of careful, humble attitude towards intervening in the world. Similarly, if the Anthropocene is storied as an epic, tragic, tale of an all-powerful capitalist system hurdling with incredible speed towards the abyss of ecological catastrophe, it becomes much more likely that people will give in to self-fulfilling ‘it is already over’-narratives and succumb to the inaction of despair. The point here is not that the ecomodernist and eco-Marxist stories carry no truth at all – the impressive powers of human technology and the capitalist economy should not be neglected – but it is important to remember that they are only part of the story, why they must be supplemented, even displaced, by other stories.

When telling these other stories, we cannot not neglect the force and bind of already existing stories, and the ways they matter too. This is why I have spent some time dwelling on the three stories of the Anthropocene presented in this chapter. Each story represents a distinct way of perceiving the world, or rather of partitioning the world, which matters – conceptually, sensorially, politically – for what we are able to think, sense and do. Both the ecomodernist and the eco-Marxist story rely on a dualist ontology that partitions the world into two realms with active and agential human beings on one side and passive law-abiding natural environments on the other. Both stories remain couched within explicitly human- and socio-centric perspectives that overestimate the world-making capacities of human beings and downplay our dependence on, as well as the active powers of, all of the myriad of non-human forces that greatly exceed our control. It is this anthropocentrism in particular, this partitioning of the sensible, that the new materialists take issue with.

The point of the new materialist story is not that we should stop telling human stories altogether. In the Anthropocene, the actions of human beings matter, and not only from a human perspective, but from an ecological perspective too. As Haraway writes,

“the doings of situated, actual human beings matter. It matters with which ways of living and dying we cast our lot rather than others. It matters not just to human beings, but also to those many critters across Taxa which and whom we have subjected to extermination’s, extinction, genocides, and prospects of futurelessness”.

142 Ibid., 55.
Moreover, it follows from the new materialists’ emphasis on situatedness and entanglement that we can never completely escape our distinctly human perspectives, even if we wanted to. We meet and interact with the world through our embodiment as human beings with a specific temporality and spatiality. This perspectival character of human existence extends all the way into ethics, as Bennett also acknowledges:

“I cannot envision any polity so egalitarian that important human needs, such as health or survival, would not take priority. … To put it bluntly, my conatus will not let me “horizontalize” the world completely. I also identify with members of my species, insofar as they are bodies most similar to mine … even as I seek to extend awareness of our interinvolvements and interdependencies.”143

Even from a completely self-interested human perspective, the only way to persist in the world is to persist in collaboration with other things and beings – whether it is the microbes in our bodies, the pollinators in vital ecosystems, or the oxygen in the troposphere. Today, more than ever, we are in urgent need of finding new ways to live-with, make space for, and engage in meaningful relations with human and nonhuman others, who we depend on, and who depend on us. In order to start recognizing these others, and to become attentive and capable of responding to them, we will have to (also) tell less human stories. Stories that seeks to displace the idiosyncratic Western understanding of the human individual so that we might begin to see what else is there, what else could be there.

According to Andreas Malm, the new materialist narrative of the Anthropocene muddles the story and complicates what is to be done. In a way, he is right. Where the ecomodernist and eco-Marxist stories of the Anthropocene provide relatively simple theoretical directives for the kind of political action needed – ‘politics as usual’ versus ‘take down capitalism’ – the new materialist story presents a much more blurry picture. But this critique misses the point. The new materialists are not against clarity per se. They are arguing that the world of the Anthropocene really is a complex mess of entangled agencies and interdependencies that constantly exceeds and challenges our human capacities for comprehension and description. No wonder, therefore, that their stories do not provide any simple answers.

Scholars with a strong desire for certainty might want to resist this conclusion and find consolation in Malm’s critiques. For what happens to concepts such as freedom, equality, and responsibility when human beings are no longer the only relevant political agents? And what on earth happens to the discipline of political theory when we start adding spiders, jellyfish, and tentacular sea monsters? The discomfort and disorientation

143 Bennett, *Vibrant Matter*, 104.
that accompanies these questions is entirely unsurprising when considering the radicalism of the reorientation of our common sense(s) that the new materialists ask us to undertake in order to enter the uncanny world of the Anthropocene. Instead of escaping the discomfort and disorientation by reverting back to the all-too-familiar categories of ‘Man’ or ‘Capitalism’, the new materialists pose a much more radical challenge: What happens if we start engaging in new forms of thinking and scientific research that seek to take the entangled messiness of the Anthropocene seriously? In short, this is the challenge that motivates this dissertation.

Conclusion
The three stories of the Anthropocene, I have introduced in this chapter, resonate throughout the remaining chapters of this dissertation. Some of these resonances are conveyed explicitly via encounters in the field, such as the CEO of a local utility company, who told me in an interview that he is not at all concerned about climate change, because he is one hundred percent certain that the inherent human drive for profit will propel humanity to come up with technical solutions needed to address global warming in time. Other resonances bounce back from the corridors and classrooms I frequent in my daily life as an academic, where colleagues sometimes dismiss, or at least show little interest in, any attempts to address the ongoing ecological crises that do not have the overthrow of capitalism as their immediate and primary purpose. The loudest and most vibrant resonances appear, however, between the rush of stories I tell in the chapters that follow, and the uncanny world of the Anthropocene storied by the new materialists.

All of the theoretical, ethnographic, and speculative stories in this dissertation are small and by themselves inadequate attempts at envisioning a democratic, multi-species Anthropocene, or rather multiple such Anthropocenes. While the stories I tell seek to open up our senses to other worlds, they also open up a whole new range of demanding and challenging questions for political and social theory, which I address head on in the second part of this dissertation. But first, in the next chapter, I discuss the methodological challenges of combining political theory, ethnography, and engaged storytelling as I have done while carrying out research on the west coast of Denmark, following threads into the dark, not knowing exactly where I would end up.
An Edgy Methodology: 
Political Theory, Ethnography, and Story-telling

In 2018, the Danish writer Amalie Smith gave a public talk about the ‘hybrid form’ as a method in art and writing. In her work, Smith draws together many different disciplines, including literature, visual art, history, and natural sciences. “I have found it liberating to combine things across familiar categories that often felt like limits”, she says. For as long as she can remember, she has been drawn towards hybrid forms, always on the lookout for what the Canadian philosopher Marshall McLuhan calls ‘hybrid energy’, the creative energy that exists in the spaces between things and disparate forms of knowledge; between fact and fiction, reason and affect, science and speculation. Pursuing this hybridity has not always come easy. When writing her first book *The Next 5000 Days*, a collection six seemingly unrelated stories, she had to fight an inner resistance towards the hybrid form, sometimes feeling ashamed that she had not written something more coherent, more unified: “The longing for the uniform exists everywhere, and it is powerful. It also exists in me”, she admits. In the end, she resisted this longing and never lost faith in the material and the way it belonged together despite its hybrid form.

As someone who has never felt at home in a single discipline either, Smith’s remarks on hybridity resonate with me in profound ways. While working on this dissertation, I have experienced many of the same intermingled feelings of hybrid excitement, doubt, and trust. The exhilaration that comes with combining different approaches in unfamiliar ways, sensing that you are on to something new and interesting, unlocking hybrid energies. But also the doubts, perhaps even shame, that comes with doing many things at once, worrying how it will all come together in a coherent way. Will it be enough? Will it be whole enough? What follows in this chapter, is an attempt to make sense of a four-year research process that has been full of hybrid excitement and doubt. Rather than talk about hybridity, I use the concept of an edge, and the edges that exists

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between different disciplines and different forms of knowledge. These edges are full of hybrid energies, which is part of what makes them exciting but also sometimes anxious spaces to occupy.

More specifically, this chapter addresses the epistemological edges that exist between the different scientific approaches I have employed in the research for this dissertation. One approach, primarily conceptual, comes from the sub-discipline of political theory where I have most of my formal academic training. This conceptual approach is coupled with another approach, namely ethnography, not itself a coherent scientific discipline but a range of approaches that crosses several disciplinary boundaries – political theory rarely being one of them. In addition to combining these two approaches, the dissertation also experiments with the style and form of familiar academic writing through a series of interludes, which invoke the arts of engaged storytelling.

The main purpose of this chapter is to make sense of, indeed make the case for, this somewhat unusual methodological approach. What I want to argue is not only that political theory, ethnography, and engaged storytelling can help enrich each other in the study of politics more generally – although I think that is true as well – but that a new materialist approach to ethnography is particularly well-suited for studying the political and philosophical complexities of human and nonhuman entanglements in the Anthropocene.

**Theorizing from somewhere: Between political theory and ethnography**

Political theorists rarely engage in ethnographic forms of research that involve moving oneself, corporeally and mentally, to a new place, and then use that place to think from. One exception is political theorist and activist-scholar Romand Coles, who has written extensively about how participation in political practice can help inform political theorizing. In his book *Beyond Gated Politics* from 2005, Coles lament that the contemporary academic world has become “increasingly hermetic” to the point where scholars “rarely venture out to read, write, speak, and listen in other different or broader public venues.” This is particularly problematic for a discipline like political theory, because “theorizing tends to become stale, empty, and increasingly blind, when removed from attentive interrogative engagement with embodied social movements, actual others’ speaking, writing, listening, and struggling”.

For Coles, engaging in participatory forms of research is a way to deliberately counter the risk of political theory becoming too detached from the world it studies and irrelevant to anyone outside small academic circles. It does so

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146 Coles, *Beyond Gated Politics*, xix.
147 Ibid, xx.
by moving outside familiar academic spaces, by engaging in new conversations with and
listening to non-academics, and by theorizing from out there instead of from the confines
of an academic office.

Coles’ insistence on the relevance of engaging in political practices as part of your
research is particularly inspiring to me, because contrary to other scholars promoting
participatory research, he does not seek to replace theory with practice, but to inhabit the
space that exists in between theory and practice. In his most recent book, *Visionary
Pragmatism*, he argues for thinking from and along edges.148 The edges that exist between
scholarship and action, political theory and ethnography, theory and practice. With a
metaphor from ecology, he talks about these edges as ‘ecotones’, the particularly rich and
ecologically fecund zones that exist where two ecosystems meet.149 The aim, for Coles, is
not to leave theory behind in order to immerse oneself only in practice, but to ensure that
theory and practice inform and sustain each other in mutually productive ways.150

This working in between – on the edges of – theory and practice is a crucial
motivation for the combination of political theory and ethnography in this dissertation.
While ethnographic inquiry can help political theory become more grounded and
responsive to the practical world, political theory can, in turn, help the ethnographic
knowledge speak to larger issues. As Timothy Pachirat, another scholar arguing for the
relevance of ethnography to the study of politics, writes in *Among Wolves*, good
ethnography is about striking a balance between the small facts and large issues:

“To live only among the small facts … leads to irrelevance. We learn about the small facts
… but we have no ability to signal why they matter. Yet to talk only about large issues like
epistemology and revolution is to resign ourselves to an irrelevance of a different kind, an
irrelevance of made-in-the-academy-concepts.”151

However, combining political theory and ethnography is about more than just situating
theory and making ethnographic insights speak to larger issues. It is also about different
ways of representing the world. Where the stringent, conceptual approaches of political
theory often smoothen things out, ethnography’s thick descriptions of lived experiences
tend to complicate and muddle the picture. When reading or writing a political theory
paper, elements of the world are meant to come together and let the argument flow
effortlessly from A to B, leaving in its wake a skillfully presented conclusion. In contrast,

149 Ibid., 1.
150 Ibid., 13.
when reading ethnographic work, or spending time in the field, you are constantly reminded that the world is indeed a complex and often paradoxical, even incoherent place. Because of these differences in representation, a lot of thought has been given to the ordering of the chapters in this dissertation, and how that would affect the relationship between the conceptual and the ethnographic work. In the end, a series of more ethnographic chapters have been placed before the theoretical chapters in a series of interludes. If this ordering works as intended, the interludes are meant to bring the reader in to field and provide a place from which to think, and in that sense situate the theoretical work. At the same time, however, the interludes from Lemvig are also meant to complicate things and help equip the reader with resources for resisting, or at least reflecting about, the sometimes too-neat conceptual arguments that follow in their wake.

The ethnographic interludes entail a combination of different types of knowledge and different genres of writing. They combine first-person on-the-ground narratives reconstructed from fieldnotes, second-hand narratives carried forth through interviews with the locals, and historical and theoretical narratives from secondary sources. In the aim of engaged storytelling, each interlude ties together many different stories into a distinct narrative, or at least one overarching theme. This work of curation is potentially deceiving, because it risks representing Lemvig as a too unified or coherent place. While Lemvig is a small community in terms of population size, and a tight-knit one too, it is by no means a singular entity. Every time part of the community is pulling in one direction, there will be someone tugging the other way. There are exceptions, contradictions, and multiplicity in all directions. There is no single Lemvig, only particular (re)representations.

In the writing of the interludes, I have tried to counter the risk of presenting Lemvig as a too homogenous place by allowing for loose ends and story threads that have no neat conclusions, and by giving space to multiple, sometimes conflicting, voices at once. If the reader comes away with the feeling that the interludes tell a simple story, or provide a straightforward lesson for democratic politics in the Anthropocene, they have either found something that is not there, or I have failed to properly (re)present the incongruences of Lemvig.

**Theorizing with more than humans: A new materialist ethnography**

Before turning to the field itself, let me say something about how I understand ethnography, and how I approached the fieldwork for this dissertation. The kind of ethnography employed here draws part of its intellectual fuel from recent theories of new materialist that reject an anthropocentric view of the world as separated into active human agents on one side and inert material objects on the other. Instead of assuming prior to scientific investigation of a specific phenomenon that humans are the only, or even the
most important actors, a new materialist approach to ethnography acknowledges what Jane Bennett refer to as ‘distributed agency’, which places human and non-human actors on the same ontological plane. Distributed agency does not mean equal agency. Different material entities have difference material capacities. Whether it is food, commodities, weather patterns or other non-human beings, all of these entities have the capacity “not only to impede or block the will and design of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own.” A new materialist ethnography, therefore, does not restrict itself to studying human relations and symbolic or linguistic interaction alone, but emphasizes the importance of paying attention to the myriad of non-human forces that exist and act within, alongside and in tandem with human forces. Not because all human and non-human actors are always equally relevant to any given issue, but because claims about the relative distribution of agency cannot and should not be made prior to empirical investigation.

It is safe to say that the combination of political theory and a new materialist ethnography, which emphasizes the agentive capacities of more-than-human matter, is not part of conventional social science methods. In recent years, however, a growing and increasingly influential literature has emerged within the humanities and the broader social sciences that provide at least some tentative guidelines as to how one might go about carrying out a new materialist ethnography. One of the most prominent strands within this literature is Actor Network Theory (ANT), developed over the years by science and technology scholars such as Bruno Latour, Michel Callon, Frank Law, Annemarie Mol, and others. While ANT should not be confused with a single coherent discipline, a core methodological commitment that connects many of its proponents is a commitment to observational fieldwork. Through ethnographic immersion, ANT researchers aim to carefully describe and ‘follow’ the actants in a given network, wherever that may lead them. In practice, that means the descriptive and analytical work of empirically mapping out relevant actors, and their mutual relations within a given field, takes center stage.

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152 Bennett, *Vibrant Matter.*
153 Ibid., p. viii.
154 Ibid., 109.
example, as Latour has argued in his earlier work, if we want to understand the production of scientific knowledge, we will have to understand not only the intangible circulation of ideas in an abstract scientific community, but also the material reality of the myriad of others actors that are needed in order to bring about new knowledge. In the lab settings Latour has studied, this include microscopes, bacteria, human bodies, among many other things.158 Mapping out all of these heterogenous and diverse elements requires the kind of intimacy and attentiveness that ethnography offers.159

However, practicing a new materialist ethnography entails more than a commitment to observational fieldwork and mapping. As Frank Law argues in After Method, studying complex and lively assemblages in all their messy human and non-human entanglements requires not only different methods, but a whole new understanding of methodology.160 As Law suggests, many important phenomena are not easily grasped by mainstream social science inquiry: “Pains and pleasures, hopes and horrors, intuitions and apprehensions, losses and redemptions, mundaneities and visions, angels and demons, things that slip and slide, or appear and disappear, change shape or don’t have much form at all, unpredictabilities, these are just a few of the phenomena that are hardly caught by social science methods.”161 If these phenomena matter to political life – and it would be difficult to argue otherwise – it is about time we start employing new methods, new forms of scientific inquiry, that are more attentive to such matters. Not in order to leave behind existing forms of inquiry altogether, but in order to expand and pluralize the range of available methodologies.

Another thinker shaped by this tradition, who I have found helpful for thinking about how to practice a new materialist ethnography is Donna Haraway. In Staying with the Trouble, she discusses several methodological strategies that are relevant for a new materialism ethnography. In chapter 7, which draws on philosopher Vinciane Despret’s ethnographic work with animals, Haraway introduces the concept ‘to go visiting’, which entails more than just moving physically to a field site.162 To go visiting, in Haraway’s sense, requires cultivating into our research practices a ‘wild virtue of curiosity’, which lets those we visit shape our research agenda and that recognizes that they are not necessarily who we expected them to be, just like we are not necessarily who/what they expected us to be either.163 To be able to go visiting means training one’s whole being to visit unfamiliar

159 Latour have called his ethnographic approach an “asymmetric anthropology”. See Latour, We Have Never Been Modern.
161 Ibid., 2.
162 Haraway, Staying with the Trouble. Chapter 7.
163 Ibid.
places with an open mind, to find alien others actively interesting, and to hold open the very real possibility that “surprises are in store, that something interesting is about to happen”, even though there are never any such guarantees.164

What is particularly important here is that these insights extend beyond human encounters. Despret’s work on human-animal relations demonstrates that studying animals is a collaborative process too. What researchers “do in the field affect the ways ‘animals see their scientists seeing them’ and therefore how animals respond.”165 To become attuned to this entanglement, Despret practices in her own work what Haraway calls a ‘thinking-with’ other beings, human and non-human, that render her capable of “actual encounters” with others, including animal others.166 In addition to this thinking-with, Haraway emphasizes what she calls a ‘thinking-from’, which captures the importance of thinking from a particular, historical somewhere, and of being in conversation with real, situated others.167 I take all these three elements – to go visiting, thinking-with and thinking-from – to be central features of practicing a new materialist ethnography. The goal is to nurture a genuine curiosity towards one’s research field and its inhabitants, which allows you to carefully listen to and think with others in order to tell embodied, historically situated, and more-than-human stories that matter to others both in and outside academic communities.

Another scholar relevant for thinking through these matters, and perhaps the single most important source of influence for my approach to ethnography, is the anthropologist Anna Tsing.168 Where Law and Haraway’s reflections point out the need to rethink our methodologies and scientific encounters, Tsing’s work provides an example of how to carry out a new materialist ethnography in practice. In her book, The Mushroom at the End of the World, Tsing follows the entangled histories of the much sought-after Matsutake mushroom from precarious mushroom-picking communities in the mountain regions of Oregon US and all the way to the high end restaurants of Japan.169 Through a “rush of stories”, Tsing explores – with Matsutake as her guide – what it means to live in the ruins of capitalist progress, and how we might begin to think of and practice conditions of resurgence, for human and non-humans alike, in otherwise precarious times.170 Along the

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164 Ibid., 127.
165 Ibid., 128. See also her seminal paper on situated knowledges: Haraway, “Situated Knowledges.”
166 Haraway, Staying with the Trouble, 126–27.
167 Ibid., 131.
169 Tsing, The Mushroom at the End of the World.
170 Ibid., 24.
way, she tells stories about an impressive range of topics, including freedom, war, immigration, the state, gift giving, science, smell, patchy capitalism, pine trees and forests.

There are, in particular, three aspects of Tsing’s work I have found instructive for practicing my own new materialist ethnography:

i. Her insistence that we need new arts of noticing: “To learn anything we must revitalize arts of noticing and include ethnography and natural history”.171 Practicing these arts of noticing requires expanding the range of senses relevant to scientific inquiry, such sight, touch, taste, and smell.172 It also requires, as suggested by Haraway, cultivating a “radical curiosity”173 that remains open to the transformative potentials of unpredictable encounters with human and non-human others: “We are contaminated by our encounters; they change who we are as we make way for others.”174 Becoming aware of and attentive to such encounters and allowing them to influence and even contaminate our research is a central part of what new arts of noticing are about.

ii. Her emphasis on telling a rush of stories as an alternative method: “If a rush of troubled stories is the best way to tell about contaminated diversity, then it’s time to make that rush part of our knowledge practices.”175 This is more than a commitment to narrative and story-telling. It is a commitment to a particular kind of story-telling and writing that does not rely on grand narratives, but brings together many small, different and situated stories into an open-ended assemblage that always call for more stories. Tsing relies here on science fiction writer Ursula K. Le Guin’s “Carrier Bag Theory of Fiction”, which promotes a kind of story-telling that “pick up diverse things of meaning and value and gather them together, like a forager rather than a hunter waiting for the big kill. In this kind of storytelling, stories should never end, but rather lead to further stories.”176

iii. The combination of ethnography and natural history: “At the heart of the practices I am advocating are arts of ethnography and natural history,” Tsing writes.177 In her work, she actively tries to decenter human perspectives by telling more-than-human

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171 Ibid., 27.
172 For a concrete example, see the interlude “Smelling”, The Mushroom at the End of the World, 45-55.
173 Ibid., 144.
174 Ibid., 27.
175 Ibid., 34.
176 Ibid., 288.
177 Ibid., 159.
histories of forests and landscapes that feature no “human heroes”. She engages in what she calls a “multispecies story-telling” that recounts the entangled histories of bacteria, mushrooms, root network, trees, spores, birds, and many other beings. The point is not that human beings do not matter to these histories. But engaging in multi-species storytelling, which features human beings merely as one participant among others, can help displace dominant human perspectives and allow us to see what else is there, and what else might matter for precarious survival on a damaged planet.

My commitment to this sort of ethnography is motivated by a desire to tell different stories and enact different worlds within political theory. Stories that take seriously the desires and grievances of human as well as non-human beings. One of the ways I aim to realize this ambition is by juxtaposing the conceptual chapters of the dissertation with a series of interludes that experiments with different forms of narrative and styles of writing. They are attempts to tell what another of my thinking companions, Thom Van Dooren, calls “lively stories”. He writes:

“Narratives allow us to weave diverse materials—scientific research, ethnography, history and philosophy, amongst others—into a single account. Whilst necessarily partial and in complete, these stories nevertheless allow us to develop “thick” accounts of the species that we are describing; that is, accounts that draw in diverse voices in a way that might enable an audience to develop a sense of curiosity about them and concern for their futures.”

Narrative and fiction should not be confused here. While the stories I tell in the ethnographic interludes sometimes involve weird and unfamiliar protagonists such as innovative palm trees, curious cows, and animated spiritual worlds, they are not works of fiction. I am not saying that to discount fiction; there is certainly plenty of room for fiction in academic work, especially work that involves philosophy and ontological speculation. But this dissertation is not a work of fiction. It is a written, and in this sense constructed, account of my academic research over the past years. I invoke story-telling not to stray away from the realities at hand, but to produce an effect and to make the realities felt in a new way.

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178 Ibid., 155–56.
179 Tsing, The Mushroom at the End of the World, x.
180 Ibid., 158.
182 Van Dooren, “Vulture Stories,” 54.
Doing ethnography remains a marginal approach in contemporary political science, and in political theory especially. Adding a new materialist sensitivity only moves it even further towards the edges of conventional forms of scientific inquiry. But it does so with full intent. Different modes of inquiry bring about different knowledges, produce different affects. Practicing a new materialist ethnography entails moving slowly while cultivating new arts of noticing that help expand our senses and make it possible to trace and tell the entangled histories of multispecies beings and things, as they unfold in specific places, such as Lemvig. If this sounds troubling, it might be worth remembering that doing research is an inherently risky, uncertain, and often troubling process. If it was safe and certain, it would hardly be worth doing.

**Theorizing in the field: Approaching the Edge of Denmark**

When I began the work for this dissertation in 2017, I thought about going to South Africa to study the privatization of water resources, or to Canada and study the multi-species disruptions of gas pipelines that pass through indigenous lands. Eventually, edged along by caring interlocutors, my research moved in a different direction. “If the Anthropocene truly is a global condition, why not study it in a place closer to home?”, a former teacher, Mark Levene, asked me during a visit to Copenhagen. Soon, a different idea began to materialize: Every summer when I was a kid, I would go to a place called Lemvig on the Danish west coast, to stay with my extended family. As I grew older, I started visiting less often. Once a year, sometimes even less. But the place never left its grip on my imagination, and when the idea presented itself, a late afternoon in a poorly lit university office, it stuck. I knew they were struggling with several ecological challenges related to climate change in Lemvig, and that they had recently built a new climate protection sea wall at the harbor front. So here it was, an opportunity to study the dynamics and challenges associated with the Anthropocene in a place that I knew well and, in contrast to South Africa and Canada, had unique access too.

Lemvig is a small rural municipality with around 20,000 inhabitants located on the west coast of Denmark. In public and political discourse, Lemvig is part of what Danish media often call “udkantsdanmark” (“peripheral Denmark”), a concept that represents not only the formal geographical, but also the symbolic distance between rural areas and larger Danish cities, particularly Copenhagen. The concept carries distinctly negative connotations and has been highly contested by locals, but it continues to be used and has been used frequently over the last decade. While some have tried to reverse the symbolic signification
by suggesting other concepts such as “coastal Denmark”, these efforts have had limited success. In some respects, the municipalities of Lemvig and Copenhagen are indeed worlds apart. In recent years, populations in and around Copenhagen have grown to the point where housing markets are overstrained, while Lemvig experienced a net population loss of almost 1 percent in 2017 – the steepest decline in all of Denmark that year. If the trend continues, Lemvig will be more or less depopulated by the end of this century. The local politics are very different in the two municipalities too. Lemvig has been, for decades, a stronghold for the liberal-conservative party, Venstre, which currently holds a single-party majority in the city council. In the most recent local elections in 2017, every two out of three elected representatives in Lemvig came from traditionally right-wing parties. In Copenhagen the share was one of four. Trends like these in other parts of Denmark have occasioned ongoing political discussions about whether the country is breaking apart, and if there is a need to re-unite the nation.

That being said, there is also a risk here of overemphasizing, perhaps even orientalizing, the distance between rural communities, like Lemvig, and the rest of society. Lemvig is, in some respects, located on the symbolic and political edges of the Danish society. A peripherality that is evident not only in the way people talk about Copenhagen as a ‘far away’, but also in the socio-demographic challenges the municipality has with stagnating housing prices, a scarcity of skilled jobs, and population decline. However, it is equally true that Lemvig is, in other ways, an integrated part of the Danish liberal-capitalist welfare society. Those who live here certainly think of themselves as part of Denmark, part of a national community, to the point where it sometimes leads to people expressing rather exclusive discourse around immigrant and refugee ‘outsiders’. Similar things can be said about the dynamics around gender roles, or the internalization of neoliberal-capitalist values of economic competition and sustained growth. Lemvig might be located on the edge, but it does not escape the grip of national, patriarchal, and capitalist imaginaries.

What I am trying to say is that Lemvig is a complicated place. Like other rural communities, it offers a tentative outside perspective to the political centers of existing societies, but it never completely escapes those same dynamics. This is exactly what the concept of an ‘edge’ is trying to capture. The edge is neither inside nor outside, but a liminal state of in-between. Lemvig is, in other words, a place of in-betweeness that can help us to study the problems of our existing societies in a new way. The political and ecological problems of Lemvig are not as unique to the place as they might seem. Whether

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183 A word count in national Danish newspapers via Infomedia.dk reveals that the term “Udkantsdanmark” started catching on in the 2010s. From 33 uses in 2009, it was used 1051 times in 2010 and between 2010 and 2018 it was used, at average, more than 700 times per year.
it is the problem of distinguishing weather and local environmental changes from global climatic changes (interlude I), the problem of transitioning away from a historical dependence on intensified agriculture and culturally ingrained patterns around food (interlude II), the problem of resisting long-run destructive patterns of neoliberal-capitalist competition and consumption without dismissing the transformative potentials of short-run engagements (interlude III), these are all problems that are particular to Lemvig, and therefore located in a specific time and place, but they are also problems facing many other communities around the world today.

Then why study this place, this edge, in particular? Why Lemvig? As outlined above, both serendipity and biographical attachment played a major role — something I want to emphasize in order to help counter an unproductive tendency in academia to retrospectively write more coherence into a research project than was there during the process itself. That being said, there are also more substantive reasons why one might think of Lemvig as a particularly interesting place to study the entanglement of democratic and ecological crises in the Anthropocene. One of these reasons have to do with the relationship between the local human communities and the area’s natural landscapes. Through generations, the human communities in Lemvig have had to find ways of living off the nearby landscapes through fishing and agriculture. At the same time, they have lived with the ever-lurking dangers posed by living close to unruly waters. To ward of the dangers of erosion and floods, they have built dikes and groins along the coast. But even then, violent storms, damaging floods and loosing people to the North sea was part of the everyday for many generations. For as long as there have lived people in Lemvig, they have had to find ways of living both with and against an unruly and ever-changing natural environment. Therefore, in a time like the Anthropocene, where ecological instability is becoming an increasingly global condition, we might learn something about living on the edge by turning our attention to a place like Lemvig.

My first research visit to Lemvig was in November 2018, and over the course of a few weeks, I got the chance to speak with more than a dozen people in the area about climate change and local politics, trying to get a better sense of the political landscape. Every time I introduced myself, either via phone or e-mail, I would tell people that my mother grew up in Lemvig, and people would often recognize her family name, or at least give the impression that they did. More than a few times, I got the impression that this biographical connection helped convince people of my good intentions. Again, I found myself on the edge, both inside and outside. It was during this visit I first met many of the central characters in this dissertation, including Arne, the ecological farmer in his mid-sixties, who is also a member of the city council; Carlo, the middle-aged coastal engineer from
Copenhagen, who came to the area in the early 2000s and often wears colorful shirts with floral patterns; Lars, the CEO of the local utility company, who in recent years has spearheaded the efforts of turning Lemvig into a climate municipality; or Jens, the local ranger who offers guided tours into the natural landscapes and often talks about nature as something that must be experienced from within. It was also during this visit I first encountered many of the things and places the stories of this dissertation center around, including the sea wall erected on the harbor front in 2012, just in time for the following storms in 2013 and 2015; the lighthouse at Bovbjerg, which was rescued from being handed over to a private enterprise only by the sustained efforts of a local action group; and the Klimatorium, a new international climate science center built on the harbor front in Lemvig, whose iconic building was ready for opening in 2020.

Finally, it was during this trip I first got a chance to familiarize myself with some of the many nonhuman beings and forces that matter in a place like Lemvig, including the unruly waters of the North Sea; the relative calm of Limfjorden; the strong on-shore winds and occasional storms; the curious cows at Arne's farm; the plantation forests of Klosterheden and its interesting history with wildfires.

After my first visit in the end of 2018, I went back in the spring of 2020 and stayed in Lemvig for five months. That gave me a chance to follow up on many of the connections I had made a little more than a year earlier, particularly around the Klimatorium that has come to occupy a central role for the green agenda in Lemvig (see interlude III). Staying in Lemvig also allowed me to take part in the daily routines of life here, for example by being part of the local football club, which provided an interesting opening into the informal aspects of the community (see interlude II). Finally, living in Lemvig gave me an opportunity to experience many of the surrounding natural landscapes first hand, including regular trips to the Lighthouse at Bovbjerg on one of the most spectacular strips of the west coast (Interlude I).

For the first few months of 2020, everything was going according to plan. I met people, I was invited to things, I started to feel at home. Then, in the middle of March, the situation changed. I remember sitting in the apartment by myself, trying to take in the surreal images on my computer screen: Denmark is enforcing a societal-wide lockdown to fight COVID-19. From one moment to the next, I found myself isolated and alone in a place that suddenly felt very far from home. The following months until I returned to Copenhagen in June far from went as planned, and I was lucky to have already collected a lot of interesting impressions and ethnographic material.

The majority of this dissertation has been written in the midst a global pandemic, much of it under the physical and psychological duress of lockdown. For the most part, I have resisted the urge to make the dissertation about COVID-19, although I think the
current crisis highlights many of the things I speak about throughout the dissertation, including most notably the political force of non-human entities. In light of the Anthropocene, the current pandemic is best viewed as a warning sign of more unstable and conflict-ridden futures to come. It urges us to think more carefully about how to address the damaged relationships between human beings and their environments, and therefore only makes the issues addressed in this dissertation even more urgent.

Conclusion
In a conventional political science language, Lemvig can be thought of either as a critical, extreme, or exemplary case. Critical, because if democratic divisions interfere with climate politics here, in an otherwise homogenous, geographically small, and economically equal society, similar dynamics are likely to exist elsewhere in more divided societies. Extreme, because Lemvig is one of the most exposed areas in all of Denmark when it comes to climate change. Unruly weather and waters pose threats from all sides. Due to this ‘extremity’, we may study more clearly how a community in an affluent, Western, society reacts to environmental changes. Exemplary, because of their generational knowledge of living in a violent and ever-changing landscape. A condition extended in the Anthropocene. Perhaps we can gain valuable insights from studying what they are doing and have done for generations.

These are all good reasons to consider Lemvig a viable candidate for a case study. But this dissertation is not a case study. It does not treat Lemvig as a case of something, but as a place to think with and from. This might sound vague, but it is in fact quite tangible. I cannot recount the number of workshops I have been to where people would ask me an abstract theoretical question (“Where does change begin?”, “How can we speak on behalf of the nonhuman?” etc.) and I would answer by thinking through what these questions look like, how they become transformed, by placing them in the context of Lemvig. What do local processes of change look like here? How do nonhuman entities, such as the sea or the land, affect local politics in non-linguistic ways? In this sense, there is an deep constitutive relationship between the ethnographic and theoretical work. I could not have written the conceptual chapters without my engagement in Lemvig. They would not have been the same. Just like the ethnographic interludes would not have been the same, had they not been formed by my theoretical aims and interests.

In the end, the chapters that follow are the result of that constitutive relationship between my political theorizing and the place of Lemvig. As thinkers like Romand Coles,

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Donna Haraway, and Anna Tsing remind us, it matters not only where we think, but also who and what we think with. If this dissertation works, it is because it has nurtured the hybrid energies that exist between political theory and ethnography, and between thinking and thinking from somewhere.
PART II
A New Materialist Theory of Democracy
It is Sunday the 6th of February 2020. Less than a week ago, I arrived on the Danish west coast where I am going to spend the next five months doing fieldwork. Today, I am on my way to Bovbjerg Lighthouse, a 143 year-old lighthouse located about 10 km south of where the waters of the North Sea enter the mainland and turn into the shallow waters of Limfjorden. I am going there to experience a forecasted 20-year storm firsthand.

The car I have borrowed from my cousin is bumping up and down the small dirt road leading up to the lighthouse. The strong winds meet no obstructions in the open coastal landscape, and gusts are pushing and pulling in the car from all sides. When I reach my destination, the parking lot is empty. The area is usually crowded with people, both locals and tourists who come to visit the lighthouse and the beauty of its surrounding landscapes. Today I have the place all to myself. Even from inside the car, the currents...
are so strong I fear that a sudden gust of wind could flip it over. On the other side of the car’s thin aluminum frame, the weather is roaring violently. This is not like anything I have experience before.

It takes a while to summon the courage to open the door of the car, and when I finally do, I must use all my strength to close the door behind me and prevent it from being ripped off its hinges. I take a few steps away from the car. The adrenaline is hurtling through my body, and my legs are shaking. It is only a couple of meters from here to the edge, then a 50 meter drop to the shore. It feels as if at any moment now, a blast of wind could, if it wanted to, lift me off my feet and send me flying into the abyss below.

Down there, the sea is a roaring chaos. Tall and foamy waves are banging against the rocky groins, set up decades ago to protect the beach. This is one of those rare awe-inspiring moments where the usually slow and steady battle between water and land, sea and shore, turns into a violent and breathtaking spectacle.

In his genre-defying book *The Songs of Trees*, biologist David George Haskell tells a series of spectacular stories about different tree species located around the world. One of these trees is the Sabal Palm on St. Catherines Island, located near the coast of the U.S. state Georgia. The difference between ebb and flow on St. Catherines is almost three vertical meters; only a little more than the strongest tides on the part of Danish west coast I visited during the storm in early February 2020. Over time, the tides on St. Catherines bring slow but steady destruction to the coasts and threaten the livelihoods of its local inhabitants. This slow destruction is intensified during storms where salty waters breach the familiar edges between coast and sea and “one breach can open a channel that kills many hectares of wetland or smothers a large copse of forest.” Once “a tide reaches this point, what were terrestrial communities will shortly be turned to be a ch, then seawater.”

Through hundreds of thousands of years of evolution, the sabal palm has been formed by its proximity to an unruly sea. The “forces of the waves and moving sand have molded every part of the sabal palm’s existence, from its body to its fruits, its early growth, and the chemistry of the cells in its leaves.” In the process, the sabal palm has had to find ways that allow it to thrive in ever-changing coastal environments. It can store large

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186 Ibid., 64.
amount of fresh water needed for survival in its trunk, which, if uprooted during a storm, allows it to surf the waves of sand and water, until things begin to calm down again and it can find a new place to plant its roots. As a result, “old palms will persists for decades in overwashed, salty areas, riding out the waves until the very end.”

In the Anthropocene, change and uncertainty is the name of the game. Living at the sandy edges between coast and sea, the sabal palm has developed extraordinary means of survival amidst great uncertainty.

“You don’t have to be near the lighthouse for very long to realize how tough nature is out here,” Lene tells me during one of my visits to the lighthouse at Bovbjerg. Lene has been the daily keeper of the lighthouse and the adjacent café, which is run entirely by volunteers, since 2009. Today, Lene and I are sitting on the first floor of the café, sharing a cup of coffee and talking about nature. I have just told her about my gut-wrenching experience with the storm a few weeks earlier. “You have to show respect for the great powers of nature out here. Playing God will not get you very far. Respect and humility is the only option,” she says. This is a recurring theme in many of my conversations with the people in Lemvig. The feeling that nature is different here – stronger, wilder. That it demands respect. This representation of the coastal environments as particularly wild and unruly strikes me as more than just a matter-of-factly description. It seems to have become an integral part of the collective identity, and one that is used not only to highlight the uniqueness of the natural landscapes, but also that life out here is different from life elsewhere.

Next to the Lighthouse, in Ferring, a large summerhouse area is located in the dunes close to the sea. A well-off couple from Copenhagen owns one of the summerhouses here, and back when the house had to be built, they faced a dilemma: The architectural design of their summerhouse conflicted with the local building regulations. It was too tall. But this was the summerhouse they wanted, so instead of changing the design, they asked their contractors to excavate the building site and lower the house in to the ground, so that it would no longer exceed the regulations. In the end, the summerhouse was built. What the couple had not foreseen, however, was that lowering the base of the house in a sandy area with high groundwater levels multiplied the risk of flooding. If

187 Ibid., 69.
188 Personal interview with Lene, at Bovbjerg Fyr, the 13th of February 2020.
189 Ibid.
anything, the house should have been raised. Today, when it rains, electric water pumps are running day and night to keep the water out. As one of the neighbors diplomatically told me after recalling the story, “it is difficult not to have your own ideas with things like these, or when people build too close to the coast.” People that have lived out here for generations know that if you are not careful, “nature will answer back.”

Stories to similar effects were repeated often. German families, who visit the west coast and want to ascend the lighthouse during a storm, or fail to show the necessary caution when swimming in the North Sea, sometimes with fatal consequences. Or, stories about city-dwellers from places Copenhagen who are not used to the tough weather of the open landscapes out here. The local ranger in Lemvig, Jens, an energetic guy in his late thirties, described it as a form of “Københavneri” (a derogative term for behavior or attitudes associated with being from Copenhagen) when people in the cities become worried in the face of heavy rain or an occasional cloudburst. “When it rains out here, we put on a rain jacket,” as he says.

The area of Lemvig is squeezed in between the North Sea to the West and the inland waters of Limfjorden to the North. Living alongside unruly waters has been an integral part of life in the area for many generations. Fighting against the steady erosion of the coast and the increasing water levels in Limfjorden, while dealing with recurrent storms and floods, is inescapable when living this close to multiple coastal edges. Historically, Limfjorden has

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190 Personal interview with Kurt and Ingeborg, in their home in Ferring, 13th of February 2020.
191 Ibid.
192 Personal interview with Jens, the local ranger, in his municipal office, 29th of November 2018.
often breached its confines and flooded the main street in downtown Lemvig during storms, creating havoc on its way. “Climate change is not new to us. The climate here has always been changing,” Claus, the head of the municipality’s local planning and environment office told me during my first visit. A biologist by training, Claus has worked for the municipality since 2000. To people like Claus, who works with natural environments in this part of Denmark, climate change is old news.

These days, the municipality of Lemvig is dealing with multiple environmental challenges including land sinks, eroding coasts, rising seas, and increasing inlet waters in Limfjorden. Because of these multi-faceted environmental challenges, it is often difficult to distinguish global climatic shifts from periodic weather events and local environmental changes. In the short term, for example, the increasing inlet waters in Limfjorden contribute to a bigger immediate risks of flooding and submersion than do rising global sea levels. Global warming accelerate existing challenges, and make them even more pressing, but people in Lemvig are not necessarily particularly worried about the abstract threat of global warming: “It won’t be global warming that kills us”, Claus concludes. Having lived, for generations, in a changing natural environment with storms and floods, climate change does not feel like an extraordinary threat.

It is two days after the storm, and I have left my home early to go for a walk by the harbor front and take stock of the situation. When I get there, I am met by an unsettling sight. The storm has pushed so much water into Limfjorden that the entire harbor front is still under water now, two days later. The only thing separating me from the dark and chilling waters is a ~1m tall concrete wall. Had it not been for this new coastal protection wall running along the harbor front, called “Le Mur” (“The Wall”), the main street and all the surrounding houses would have been flooded too. Then it would have looked like the scenes in the pictures from the 1960s I saw a few days earlier in the library’s archive for local history.

193 Personal interview with Claus, head of the local planning and environment office, in his municipal office, 20th of November 2018.
194 Ibid.
But it is another image that comes to my mind this morning, overlooking the harbor. A photo taken by the Danish photographer Mads Krabbe in the wake of ‘Egon’, one of the most violent storms in recent years. A storm that lead to the evacuation of more than hundred people in Lemvig as the inlet waters of Limfjorden reached record levels, almost 2 meters higher than normal. Things would have gone much worse, however, had it not been for the new climate protection wall, which kept most of the surplus water in the Fjord at bay.

There is something chilling about the photo. On the one hand, the cars on the road going about their business as usual show how that climate mitigation measures, such as a sea protection wall, allow life to go on in a place like Lemvig and are necessary to keep local livelihoods afloat. At the same time, it reveals the fragility of the current situation. Endless water masses are waiting just on the other side of a feeble concrete wall. A little more water, a minor breach, and everything is swept away. It is only a matter of time before the current wall will no longer be able to keep up with the rising waters.

Standing on the harbor front today, five years later in February 2020, and seeing the waters reach the top of the wall, the idea of wall-building as a means of
addressing the global ecological challenges of the Anthropocene seems radically insufficient. What happens five, ten or twenty years from now? A little more than a year ago, I confronted one of the officials in the local office for environmental planning in Lemvig with that question. He gave me an interesting answer, one that resonated with the attitude of a now-former US statesman. If the need be, they are going to build a bigger wall.

Although the abstract threat of the global climate change seems to have little hold over future imaginaries in a place like Lemvig, people here are well aware of the ongoing need for adapting to an ever-changing changing environment. For more than a century, stone groins have been set up along the coast to help slow down erosion, while dikes keep waters at bay during storms. For generations, human communities have transformed the coastal landscapes in order to make them more durable, more habitable to human livelihoods.

It is not only the human communities that have transformed the natural landscape. The landscape has transformed human communities too. One thing I learned during my stay on the west coast is that you cannot understand the human histories here without understanding the natural histories of the landscape. A lot of people in Lemvig have been living off the land for generations through farming and fishing, and although the share of people employed in those industries has gone down in recent decades, political sympathies are still shaped by that generational experience. To really understand the town politics, therefore, you will have to pay attention not only to the cultural and political values of the human community, but also to the composition of fertile soils and healthy waters that have allowed the area to become one of agricultural prowess. Lemvig is one of the few
municipalities in Denmark today where the political party ‘Venstre’, the old agrarian party, still holds an absolute majority in the local parliament. As one of the opposition members of the local council phrased it to me during one of our conversations: “Venstre controls everything out here.”

Meanwhile, the presence of strong onshore winds and a flat open landscape have made the area a perfect location for the operation of wind power. Since the early 1990s, when the first windmills were erected, Lemvig has become a national frontrunner in the wind energy sector, and by 2015 the municipality produced more renewable energy from terrestrial windmills than any other Danish municipality. Moreover, living with the threat of unruly waters have forced the municipality to become an exemplar of climate adaption. The aforementioned climate protection wall on the harbor front, ‘Le Mur’, which was erected in 2012, has gained widespread recognition by winning design awards in innovation and sustainability. And in 2017, Lemvig joined a handful of other Danish municipalities in a 6-year climate project co-financed by the European Union called ‘Coast 2 Coast Climate Challenge’. Spearheading the Danish efforts in this project is a new climate science center, the Klimatorium, that has been built on the harbor front in Lemvig.

In recent years, the municipality of Lemvig has even started branding itself as a ‘climate municipality’, and in the newly adopted official vision for the future of the municipality, green transition and sustainability are core strategic objectives. These developments cannot, of course, be explained only by the experience of living with unruly natural landscapes. They are also part of a broader political and cultural history, which I will return to. For now, however, it is worth noting that the environmental politics of a place like Lemvig cannot be understood either without also taking the natural landscapes and their unruly histories into account.

In the Anthropocene, many of the landscapes currently inhabited by humans, even those that previously seemed durable, are beginning to erode. Formerly steady grounds now look more like the sandy shores of the Sabal palm. Unlike the palm trees, human beings are not

196 Personal interview with Arne, at his farm outside Lemvig, 22th of November 2018.

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habituated into living in landscapes of constant change. Humans tend to thrive in landscapes that remain stable, at least throughout their lifetime. Humans are attracted to sturdiness and longevity. It is worth emphasizing, therefore, that the advent of the Anthropocene signals not only the beginning of a new geological epoch, but also the end of what has been left behind, the Holocene. During the past ~12,000 years of the Holocene – a miniscule period in Earth’s 4.54 billion year-old history – earthly ecosystems remained remarkably stable and provided ideal circumstances for the development of human civilization. Everything we know and think of as human culture has taken place within that time span. Because of this limited epochal experience, most human beings, particularly in Western parts of the world, live in a dream world of permanent stability. Exacerbated by the “application of human inventions to the land – concretes, steel girders, plate glass”, humans have enforced “the illusion of a changeless world”, Haskell writes.

It is this imagined stability that is ending today. The Holocene is over. Things are changing anew. In a time where formerly steady grounds are turning out to be sandy foundations, human beings will have to learn, like the sabal palm, how to adapt amidst uncertainty, and how to become more receptive towards the environmental and ecological changes that are happening around us. Many humans are acutely aware of even small changes in social dynamics, but much less attuned to registering ecological changes. From the confines of an apartment in Copenhagen, where most waters still appear calm, it is all too easy to forget that the world is changing; that the past few years have all been among the hottest ever recorded; that since 1970, the populations of larger, vertebrate animals, such as tigers and rhinos, have on average declined by 60%; that the polar ice caps are melting six times faster than in 1990; that current political efforts against climate change put the planet on route to a staggering 4 degree Celsius rise in temperature by the end of the century; that millions of lives, both human and non-human, have already been destroyed or displaced due to wildfires, floodings and droughts as a consequence of global warming.

In order to respond, we will have to register and pay attention to these and other changes. We will have to feel them in order to respond appropriately. For people in Lemvig this might seem like old news. Like the palm trees on St. Catherine’s Island, responding and adapting to an unruly natural environment has been central to their development as a community. They have been responding to and adapting with an ever-changing natural landscape for generations. Storms and floods have forced them to react, when standing still becomes fatal. But the ecological and climatic crises of the Anthropocene are not simply

199 Haskell, *The Songs of Trees*, 64.
200 Ibid.
old news. The challenges facing communities around the world, like Lemvig, are not only more of the same-old. Because of the climatic and ecological changes taking place at a planetary scale, it is also wholly unfamiliar terrain.

While writing this – in isolation due to a worldwide pandemic whose origin some experts have connected to habitat changes caused by climate change – news has come out that temperatures in Northern Norway right now are 5-7 degrees higher than average for November.\textsuperscript{201} How will the average person react to such news? With a shrug of shoulders? Perhaps a momentary worry before they continue their day? The challenge here is not only that news of climatic changes in foreign places are difficult to relate to. Part of the underlying problem is also that many people, particularly in the West, are still living in the Holocene. Even if they recognize that global climatic changes are real and dangerous, they believe deep down that in the end things will be alright; that eventually the earth’s ecosystems will return to equilibria conducive to the continued flourishing of our species.

It is difficult not to feel the subliminal force of this fundamental belief: That the earth is inherently ours, and that it will continue to be here \textit{for us} throughout eternity. It is after all a belief that has been culturally reinforced, and internalized, in Western societies for centuries. Look to Christianity and you will find that the earth was given to Man, that it was created for us. Look to the enlightenment and you will find that nature is driven by dull mechanical laws, and that the natural world is little more than a theatre stage upon which free and active human beings get to act. Look to the industrialization, and the subsequent development of consumer capitalism, and you will find that if the natural environment matters for human endeavors, it is as a passive reservoir, as a resource that can be extracted, transformed, and exhausted in service of human desires for continued growth and expansion. What we are finding out today, across the sciences, is that none of these stories are true and never were. To the extent that they appeared to be true, it was due to an infinitesimally short period of geological anomaly in the history of the earth: the Holocene.

What we will have to learn, today, is not only that climate change is real and dangerous, but that we inhabit the earth alongside numerous other entities, beings, and

forces with lives, powers, and trajectories of their own, and that our relation to them matter for the continued conditions of livability of not only our species, but for the majority of life on the planet. The question is how we might come to recognize and to truly feel the weight of this lesson? In the foreword to one of her collections of poems, science fiction writer Ursula Le Guin suggests a possible strategy:

“I guess I’m trying to subjectify the universe, because look where objectifying it has gotten us. To subjectify is not necessarily to co-opt, colonize, exploit. Rather it may involve a great reach outward of the mind and imagination.”

Le Guin is inviting us to practice our imaginative abilities in order to become more receptive towards the universe and all its nonhuman inhabitants. “One way to stop seeing trees, or rivers, or hills, only as “natural resources,” is to class them as fellow beings—kinfolk,” she writes. Maybe subjectifying the universe, as a playful exercise of our imagination, will help us see things from their perspective and, in turn, be more receptive towards the climatic changes that are happening around us. People in Lemvig do this often, when they talk about the North Sea as if it has a temper and a will of its own. The unruly sea and its immense powers demand humility, and being receptive and paying attention towards its shifting moods and behaviors can be a matter of life and death.

During my fieldwork in Lemvig, I read Virginia Woolf’s novel *To The Lighthouse*, about which she has said that “the sea is to be heard all through it.” The quote reminded me of Lemvig, because the North Sea permeates everything here. It can be heard all the way through. From childhood memories about its unpredictable dangers; to the many livelihoods it has sustained through fishing; to the collective experience of recurring storms and floods; to the meetings in the local council about climate adaption; to the way people think about a distant phenomenon like global warming.

If the ubiquity of something as notorious as the presence of the sea sounds odd to you, let me suggest a trip to Bovbjerg lighthouse on a stormy day. Come back and tell me then that this tiny blue planet is ours. I dare you.

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203 Ibid.
The primary purpose of this chapter is two-fold. First, it aims to push theories of new materialism in a more explicitly political direction by bringing them into conversation with mainstream democratic theory on the concept of political participation. Secondly, it sets up the theoretical scaffolding for the following chapters on political representation (chapter 4) and political leadership (chapter 5) by starting to think more concretely about what it means to theorize nonhuman beings and forces as internal to politics.

The main question raised by the chapter is this: How and to what extent do nonhuman things, beings and forces participate in democratic politics? In order to answer this question, the chapter opens by surveying the contemporary democratic theory literature on political participation within liberal democracies, before turning the attention towards recent theoretical innovations by thinkers such as Jane Bennett, Noortje Marres, and Bonnie Honig. The core argument of the chapter is that while conventional categories of political participation such as exit, voice, and action highlight important and valuable aspects of a democracy, they need to be reconceptualized and expanded in light of the Anthropocene. More specifically, they must be supplemented by other concepts such as entanglement, mediation, and affecting that are better suited to account for the myriad of ways in which non-human entities participate in politics too.

The point here is not that nonhuman entities speak or act politically in ways identical to human beings – although differences here are often a matter of degree rather than kind – but that there is a more general need to extend the concept of political participation itself in ways that cut across human/nonhuman divides. This argument is simultaneously an epistemic one, which urges political theorists to rethink how they about studying politics by extending their analyses beyond just the human, as well as a more substantive argument about the different ways in which specific nonhuman entities and forces might come to take part in politics in a given time and place.
Political Participation: Exit, voice and action

In his book *Beyond Gated Politics* from 2005, political theorist Romand Coles argues that it has long been commonplace within contemporary democratic theory to view political participation through the framework of “exit and voice”. In writings such as Albert Hirschmann’s *Exit, Voice, and Loyalty*, democratic citizens are portrayed as being faced with a straightforward choice when political conflict arises within a political association: They must either *exit* the association, if the conflict turns out to be insurmountable, or they must participate in the association by using their *voice* to speak up -- either through direct action such as running for office, protesting, participating in public debate, etc., or through indirect action such as voting, joining a party, etc.

In practice, however, the option of exit is often foreclosed or severely restricted. For ordinary citizens in a modern democracy, leaving one’s primary political association, the nation state, is impossible without incurring overwhelming and potentially fatal costs. While the possibility of exit might be possible at smaller scales, such as when opting out of a local community or leaving a municipality, even this kind of exit raises a broader, more fundamental, concern in light of the Anthropocene: What does exit mean, today, in a world that is increasingly entangled, interconnected, and increasingly fragile to even small fluctuations far away in a complex network? What would it mean to exit a community over a conflict pertaining to the issue of global warming? There is no feasible way of opting out of facing the consequences of global warming. Most democratic citizens today are left with the option of taking part. They must, in other words, use their voice.

The most widely available way for citizens to voice their political opinion in liberal democracies today is through the act of voting. In the social sciences, empirical research on democratic participation tends to treat voting as the hallmark of democratic participation. If voter turnout is high, the level of democratic participation is high. The two sometimes come down to one and the same thing. There is theoretical backing for thinking this way about democratic participation too. The Austrian political economist Joseph Schumpeter famously argued that democracy is, at its core, a method by which people elect representatives in recurring and competitive public elections, who will then carry out their will. On this view, voting is not just the most widespread form of democratic participation, it is also the only normatively desirable one. This minimalist Schumpeterian conception of democracy has few, but notable, contemporary proponents, including the famous empirical political scientist Adam Przeworski. However, as many other democratic

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206 Ibid., 218.
theorists have argued, the concept of democracy should not be reduced, either empirically or normatively, to the act of voting in recurring elections. Even in representative liberal democracies a wide range of activities exist both inside and outside of formal parliamentary spaces that play an immensely important role for the well-being of a democracy. Those activities, say being part of a local party committee or taking part in a political debate, can meaningfully be described as acts of democratic participation too.209

One of the most prominent lines of critique against the minimalist conception of democracy comes from deliberative democrats, who emphasize the role that public debate and deliberation play for democratic politics. While theorists of deliberative democracy do not discount voting in elections as an important aspect of democracy, they add ongoing deliberation and public contestation as indispensable elements of any democracy. A well-functioning democracy depends not only on recurring elections, but on a proliferation of democratic spaces where citizens can voice their opinions and contest politics. Under the right conditions, participation in open democratic debate will lead citizens and politicians alike to become more reflexive and oriented towards the common good.210

However, even though these theories of deliberative democracy go some way in alleviating the concerns raised against the minimal conception of democracy – such as its elitism and its pacifying effects on the active participation of the citizenry211 – they remain too focused on the role of voice and human speech. On both views, politics is and always will be an exclusively human affair, since only human beings are capable of taking part in sophisticated political discourse and making reflective decisions about, say, where to allocate about next year’s budget. Animals, buildings, rivers, and bacteria do not speak or reflect in this way. In fact, many human beings too fall short of fulfilling the conditions of rational or reflective democratic participation in the sense laid out above. Does that mean they are not part of the political community? Or that they do not matter for politics? Certainly not, and with a little bit of theoretical work we can begin to see why it might be helpful to think of a concept like democratic participation in a more encompassing way.

211 For more on this critique, see for example Carole Pateman, Participation and Democratic Theory (Cambridge University Press, 1970); Benjamin Barber, Strong Democracy: Participatory Politics for a New Age (Univ of California Press, 2003).
First, let us consider a third dimension of political participation: The role of direct action. We can think here of public demonstrations such as parades, blockades, sit-ins, etc. that are not immediately or necessarily about voice and speech. Theorizing political participation through a lens of direct action resonates with, for example, Hannah Arendt’s famous conception of political power as inherently linked with people acting in concert. Contrasting it with work and labor, Arendt argues that action is the quintessential element of the political, because it is through action, and by coming together and ‘acting in concert’, that people disclose themselves to others and exercise their inherent human creativity and freedom; their capacity introducing something new into the world.212

For Arendt, however, political action remains inextricably linked to speech and discourse.213 We might push this action-oriented way of thinking about the political in a more radical direction by turning to a thinker like Jacques Rancière, whose conception of democratic politics views the disruptive moment when hitherto unaccounted people take to the streets as the quintessential, if not only, real political moment.214 Part of what is at stake here is whether direct actions, such as blockades or demonstrations, can be reduced to discursive or representational claims and therefore are simply just another form of voice. During the occupy and anti-austerity square movements that rolled over the western world in the years following the financial crisis in 2008, part of the claim made by protestors were not only that they were not being represented by current political leaders, but that the current system of representation as such did not allow for their representation.215 They were not only making political claims that could, in theory, be formalized and channeled into existing representative democracies; they were also providing a challenge to the system of political representation itself. Or in more Ranciérian terms, their public presence aimed to challenge, even disrupt, the very distribution of politics itself.

Much has been said about whether these movements succeeded in doing so, and whether it is even possible to make such an assessment while their consequences are still playing out.216 But it seems right to say that part of the politics these movements were engaged in cannot be reduced to simple political, discursive or representational claims, but remain to some extent inarticulable. An argument along these lines is made by Judith Butler

213 Ibid., 199–200.
214 Rancière, *Dissensus*.
216 For two diverging takes, see Wendy Brown, *Undoing the Demos: Neoliberalism’s Stealth Revolution* (New York: Zone Books, 2015) and Bonnie Honig, *Public Things: Democracy in Disrepair*, 1 edition (New York: Fordham University Press, 2017). Where Brown argues that these movements have largely failed to produce real change, Honig opts for a more open approach, treating the energies of these movements as still being in work.
in her 2015 book *Towards a Performative Theory of Assembly*. Here, Butler argues that people demonstrating in the streets are making more than a straightforward representational or discursive claim. The bodies on the street, in and of themselves, do something. The public presence and corporeality of bodies, whose materiality have hitherto been hidden away in the private sphere, provide a challenge to politics as usual.217 For our purposes, however, Butler’s analyses of social movements remain too couched in the theoretical language of discourse, signification, and symbolic representation, which prevents her from going far enough in thinking about the political relevance of the more-than-human world. That being said, theorizing political participation through material human bodies suggests an opening for thinking about how other material bodies, too, affect politics in ways that exceed speech and human language, even if she sometimes seems to want to resist this reading.

Both Rancière’s politics of dissensus and Butler’s emphasis on the political disruptions of material bodies suggests that there do exist incipient resources within contemporary democratic theory for how to think about political participation and action in less human-centric ways, which in turn might allow us to start thinking about the myriad ways in which all sorts of bodies, human and nonhuman, take part in politics. In order to really see this, however, we have to move beyond the age-old distinction between acting subjects and passive objects, and entertain what Bruno Latour calls a ‘profound doubt’ about the nature of action.218 Humans and rivers certainly do not act in the same way, and while their differential capacities must not be collapsed, “the self-evident distribution of roles must be replaced” by “a range of uncertainties going from necessity to freedom.”219 Such reorientation has profound implications for the way we think about the world, including politics. Human beings can no longer be assumed a priori to be the sole, or even most important, political actors. A myriad of agencies, human as well as non-human, each exhibiting differing speeds and intensities, impinge upon each other.

What and how particular nonhuman things and beings, say a storm, a virus, or a lighthouse, participate in politics will have to be investigated in specific context and particular cases. Therefore, in what follows, I draw on concrete examples of how nonhuman things, beings and forces come to matter for politics that come from the existing literature on new materialism, and use those examples to start theorizing more generally about the different ways in which material things and forces, human and nonhuman, participate in politics.

219 Ibid., 82.
When addressing the issue of nonhuman political participation, we should be careful not to approach it in too general terms. Not only are there an endless number of different beings and forces lumped together under the residual category of ‘nonhuman’, all of which exhibit various capacities for political participation; a river is not the same as a fox, which is not the same as a table, which is not the same as a hairdryer. The political efficacy of different bodies also depends on relations with many other things, and therefore vary across time and place. A river can rise to the level of political participant in one context, while remaining politically irrelevant in another. Just like humans.

One of the risks with Bennett’s theoretical emphasis on the vitality of all matter is that it could give the impression that everything is political all the time, rendering the concept of political participation analytically vacuous. We might say, instead, that everything has the capacity, or the potential, to become political, even if these capacities and potentials are very unevenly distributed. The interesting question is not the general one, ‘do all nonhumans participate in politics?’, but rather how specific, situated constellations of human and nonhuman entities become political at the order of event.

Human or nonhuman, political participation is a collective achievement that depends on a myriad of different entities. Take Bruno Latour’s example of gun-related violence in the US. Here it is sometimes discussed whether guns or people are the real problem: Is it guns that kills people, or people that kill people? The somewhat counterintuitive answer suggested by Latour is that it is neither. What kills people is a specific constellation of guns and people, the gun-people-nexus enabled in the American context. While this example risks simplifying matters a little too much, the underlying point remains intact: The capacity to participate in politics is not a stable character trait inherent to individual (human) beings and things. It is the emergent outcome of many related things coming together and reaching a level of public concern.

To make matters more concrete, let me turn to a few examples from the new materialist literature where nonhuman things and forces have become important political participants. Again, there is no simple model for all kinds of nonhuman political participation, just like there are many ways in which human beings can participate in politics as suggested by the theoretical disagreements between minimal, liberal, and radical democrats listed above. In what follows, however, I aim to reduce some of that complexity by distinguishing heuristically between situations where nonhuman things and forces disrupt...
politics in direct ways, situations where they anchor or orient politics in a democratic public, and situations where they mediate and co-shape the conditions of human participation in everyday settings.

Political Disruptions and the Force of Nonhuman Things

In *Vibrant Matter*, Jane Bennett uses the case of the Northeast Blackout in 2003 to illustrate the disruptive capacity of material forces. On August 14 that year, the Northeast of the United States, as well as the Canadian province of Ontario, experienced a massive power outage that lasted for several hours. To this day, investigators have been unable to pinpoint the exact cause that made the electric grid break down that day. What Bennett argues is that the blackout is best understood as an emergent outcome of a distinct combination of human and nonhuman actants whose combined forces exceeded that of each of the actants alone. Among the many actants that produced this emergent effect were the internal capacities of electricity itself, power plants, transmission wires, energy-trading corporations, consumers, and energy legislation. The Northeast blackout was, so to speak, the “end point of a cascade” including both voltage collapses and human actions.

Bennett’s electric grid is a quintessential example of what Deleuze and Guattari have called an ‘assemblage’. That is a grouping “of diverse elements, of vibrant materials of all sorts” that is able to persist and generate effects without any single center of control. The specific electrical grid of the Northeast Blackout was “a volatile mix of coal, sweat, electromagnetic fields, computer programs, electron streams, profit motives, heat, lifestyles, nuclear fuel, plastic, fantasies of mastery, static, legislation, water, economic theory, wire, and wood—to name just some of the actants.” Like other assemblages, the electrical grid was an intricate constellation of both human and nonhuman actants with differencing agentive capacities, able to produce unprecedented and emergent effects that resist easy explanation or prediction.

The central point here is that it is impossible to point to a single, individual source of agency that caused the blackout. A more conventional political analysis might, as Bennett suggests, point to the role played by the deregulation of the energy grid brought about by the Energy Policy Act of 1992, which allowed companies to buy electricity from power plant in distant locations, thereby increasing the pressure on transmission lines, making an overburdening more likely. This certainly was an important element in the outcome, but it cannot explain the blackout itself. Here an element of emergence is needed.

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223 Ibid., 25.
224 Ibid., 23.
225 Ibid., 25.
226 Ibid., 26–27.
too. On the day of the blackout, part of the electricity flow suddenly changed direction away from its intended path and started moving south-to-north. A phenomenon called loop flows. As Bennett writes, electricity “sometimes goes where we send it, and sometimes it chooses its path on the spot, in response to the other bodies it encounters and the surprising opportunities for actions and interactions that they afford.”

To fully understand a political event like the North American Blackout we cannot limit our analyses to human actors alone.

Bennet’s example of the Northeast Blackout illustrate that nonhumans, too, have the potential “power to startle and provoke a gestalt shift in perception….” Nonhuman beings and forces are active partakers in emergent and more-than-human assemblages that have the ability to affect outcomes in political ways. Recalling Ranciere’s definition of political action as an act that “disrupts in such a way as to change radically what people can ‘see’,,” the assemblage of the electrical grid, and all its human and nonhuman actants, acted politically:

“The electrical grid, by blacking out, lit up quite a lot: the shabby condition of the public-utilities infrastructure, the law-abidingness of New York City residents living in the dark, the disproportionate and accelerating consumption of energy by North Americans, and the element of unpredictability marking assemblages composed of intersecting and resonating elements. Thus spoke the grid.”

While the case of a spectacular blackout might seem like a rather selective example to illustrate the disruptive capacities of nonhuman things and forces, the advent of the Anthropocene is making it clearer by the day that this is not a rare exception. In many assemblages across the world, nonhuman actants of all sorts, whether it is in the case of storms, droughts, wildfires, or the spread of a contagious pathogen, are reminding us that they have the capacity to participate in and disrupt politics in spectacular ways.

**Anchoring Politics through the Contestation of Public Things**

Nonhuman things and forces do more than occasionally disrupt politics. They also help anchor politics and by doing so they serve an important democratic function. This is the argument made by democratic theorist Bonnie Honig in her book *Public Things* from 2017. Honig is not blind to the disruptive capacities of nonhuman entities, which can sometimes derail our world like in the case of a blackout, but she also wants to bring our attention to the capacities of public things to provide a sense of integration and adhesion to
a political community. In fact, she believes this ability of public things to be an essential part of a well-functioning democracy and one that has been overlooked in contemporary democratic theory, which has

"... focused for a while now on a host of other necessary conditions of democratic life: just procedures, free and fair elections, mechanisms of deliberation, the constitution of the demos, the security of territorial boundaries, the ethics of immigration, legitimation crises, or the need to rethink democracy in transnational terms."  

Public things are stable objects that people can contest, gather around, or fight over. By offering a sense of permanence and stability in a world of flux and contingency, they provide what Honig calls a democratic ‘holding environment’. Without the existence of public things – such as schools, roads, parks, power grids, prisons, libraries, and airports – democratic politics would be reduced to empty proceduralism. There would be “nothing or not much to deliberate about, constellate around, or agonistically contest,” Honig writes. 

The need for public things to stabilize politics and provide a platform for democratic action has become even more urgent in recent decades, where the proliferation of a neoliberal rationality has led to an increased privatization of public things in US and elsewhere. It is no coincidence that contemporary social movements of democratic resistance tend to gather around the contestation, defense, or reclaiming of public things. Either by occupying public spaces, such as parks and squares, reclaiming their very publicness; by defending public things from privatization or downright destruction, as in the case of gas pipelines going through indigenous lands; or in the case of food sovereignty movements, such as the slow food movement that uses the thingness of food as a way to bring attention to the politicality of the material infrastructure that surrounds contemporary food production. 

By moving from an emphasis on democratic citizenship to an emphasis on public things and their participation in politics, theoretical discussions move from “questions of orientation to receptivity, from subjectivity to objectivity, from identity to infrastructure, from membership to worldliness.” Asking questions such as ‘what public things need our care and concern?’ help turn our attention away from the abstract realm of symbolic politics and towards the finite realm of things.

What are, then, some of the finite public things that need our care and concern today, and how might we come to respond to their call? Here Honig offers the example of

231 Ibid., 13.
232 The concept of a ‘holding environment’ is one that Honig draws from the developmental psychologist Donald Winnicott.
234 Ibid., 3. See also Brown, Undoing the Demos.
236 Ibid., 28.
public payphones in New York City during the Hurricane Sandy in 2012, where floods, power outages, and broken cell towers led to a collapse of the mobile network. During this crisis public payphones, which were “normally treated as part of New York City’s ruined landscape, emerged suddenly to become communications lifesavers” and allowed friends and family to reconnect in times of great need.\(^{237}\) The public pay phones were there when people most needed them, despite having been neglected for years, as the rapid distribution of smartphones and its privatization of communication modes made them seem superfluous. This ability to show up when needed is not only a feature of these specific payphones, Honig argues, but a feature of public things more generally: “the thing that hides in plain sight, but when you need it, it’s there.”\(^{238}\) We can easily think of other examples here, such as public hospitals during a pandemic, or publicly managed water reservoirs during a drought. If access to these things become privatized, which they have in many places, they simply will not be there for people when they need them. Or rather, they will be there only for some people, namely the ones that can afford it when the crisis hits.

In the wake of hurricane Sandy, new political demands were made for ensuring better cell phone coverage during disasters, while few demands were made for securing and expanding the available of public payphones. Perhaps there should have been more of the latter: “Why not turn pay phones from relics of a lost past into the stable new infrastructure of a possible new future of public things?” Honig asks.\(^{239}\) If we do not defend and support the availability of public things, whether it is payphones, hospitals, or roads, they are not going be there when the next crisis hits and people need them – and there are only going to be more of such crises in the Anthropocene futures that lie ahead. In the absence of public things, we are not only going to lose the things themselves, we will also lose part of the foundation for a shared public world to gather around as democratic citizens.

Shaping Democratic Politics through Material Participation

The spectacular cases of disruptive infrastructure breakdowns or collective conflicts over public things are not, however, the only instances where nonhuman things and forces matter for politics. So do the seemingly ordinary material objects we engage with on a daily basis. The design of the material objects of our everyday co-shape the kinds of political participation that become available in their wake. This argument is made by Noortje Marres in her book Material Participation from 2012.\(^{240}\) Material participation is, she writes, “a

\(^{237}\) Ibid., 29.
\(^{238}\) Ibid., 30.
\(^{239}\) Ibid., 31.
\(^{240}\) Noortje Marres, Material Participation: Technology, the Environment and Everyday Publics (Springer, 2016).
distinctive mode of engagement, one in which everyday material actions, like washing or foresting, are put forward as useful and valuable operations upon matters of public concern.\textsuperscript{241}

Rather than grappling with nonhuman political participation in the abstract, Marres is interested in studying instances of material participation as situated and performative events. Because there are so many different nonhuman things and beings with differing agential capacities, it makes little sense to discuss the political relevance of nonhumans in general terms. There is no way of knowing a priori which forces will be most politically relevant, and what their political effects will be. Instead, we should study how specific entities become, or fail to become, invested with the capacities needed for public involvement.\textsuperscript{242} We must ask: “How are everyday things, technologies and settings invested with the capacity to engage?”\textsuperscript{243} In order to answer that question, Marres argues for the cultivation of a ‘radically’ empiricist spirit and insists on following “the circulation of particular objects, technologies and formats of participation among different settings and practices ... in order to examine what capacities for involvement they have and may enable.”\textsuperscript{244}

For example, Marres uses eco-show homes – homes intentionally re-designed to reduce carbon footprints – to investigate how different material things and devices facilitate different kinds of public participation and enable different kinds of social and democratic change around an issue like climate change. All eco-show homes are, by their very nature, meant to become sites of political participation, but the particular connections they make between material things and political participation differ depending on the specific constellation of human beings, things, devices, and technologies. Each eco-show home is “equipped with an array of devices for the measurement, documentation and monitoring,” and depending on the specific constellation of those material devices, they enable some forms of political participation while constraining others.\textsuperscript{245}

At one end of the continuum are “prefab” eco-show homes where the emphasis is put on technical innovations and material designs that rely on monitoring and performance optimization through automated processes such as self-closing windows and electronic sensors that reduce electricity use. These homes demand little to nothing in terms of the ecological behavior and sensibilities of its human inhabitants, why Marres dryly refers to them as “the change of no change.”\textsuperscript{246} At the other end of that continuum are eco-show

\begin{thebibliography}{26}
\bibitem{241} Ibid. p. x.
\bibitem{242} Ibid., 108.
\bibitem{243} Marres, \textit{Material Participation}. p. xi.
\bibitem{244} Ibid. p. xv.
\bibitem{245} Ibid., 126.
\bibitem{246} Ibid.
\end{thebibliography}
homes where families try to reduce their carbon footprint by experimenting with a
different kinds of simple living, while documenting their efforts on online blogs, such as
‘The Greening of Hedgerley Wood’ or the ‘Ration Me Up’ project. Here, the emphasis is
on sustainable behavioral changes and a more conscious interaction between human and
nonhuman participants. For example, in the Ration Me Up project, the material necessity
of having to carry water from a well in order to take shower makes visible the water used
for such activities; and the labor power required to bring it about.247

Different material designs, and the different relations between human and
nonhuman entities they enable, produce different forms of political participation, and these
differences carry important normative, and democratic, consequences. Take the prefab eco-
show homes of BRE and BedZED in Southern London. By relying primarily on
monitoring devices and automated processes, they invest “the domestic setting with
disciplinary capacities: a thermostat that does not go up beyond a certain temperature, a
smart meter that makes it possible to detect ‘some bad practice like opening a
window’...”248 The design of these homes are, in short, meant “to control behavior, so as to
produce measurable (and commodifiable) forms of ‘environmental’ performance.”249 While
these designs might help sell houses on a market with raising ‘green’ demands, their
environmental benefits operate behind the back of its human inhabitants and offer little in
terms of fostering a more general environmental consciousness. They have, in other words,
little democratic potential.

In the living experiments of Hedgerley Wood or the Ration Me Up Project, in
contrast, where the equipment of the home necessitates corporeal practices, such as
scooping water for a hot shower, the domestic environment facilitates

“the cultivation of moral sensibilities through embodied material practices. Small but
critical adaptations of the empirical equipment of the home then significantly modified the
normative effects of what it means to transform the domestic setting into an ‘engaging
environment’.”250

By working through and with the human and nonhuman inhabitants, the material designs
of these homes allow for a different kind of material participation, one that maintains the
“moral capacities to render subjects environmentally aware.”251 Moreover, the
documentation of these practices online, though eco-blogs, offer the potential for a politics

247 Ibid., 131.
248 Ibid.
249 Ibid.
250 Marres, Material Participation.
251 Ibid., 131.
of contagion that is entirely foreclosed in the pre-fab homes, where the impetus of change remains purely technical.

In the end, eco-show homes are, like all other constellations of human and nonhuman entanglements, materially and normatively unstable phenomena. Nonhuman political participation, and material participation more specifically, are deeply contextual and performative phenomenon that vary from setting to setting. Therefore, the first step here is recognizing, again, that the material objects of our everyday is participating in politics too. Only then can we start thinking about, as Marres invites us to do, whether some instances of material participation should be pursued “in the name of democracy”, while others should not.\textsuperscript{252}

\textbf{Beyond exit, voice and action: Entanglement, mediation and affecting}

Drawing on these three examples of nonhuman participation in politics – Bennett’s blackout, Honig’s payphones and Marres’s show homes – how might we go about rethinking our theoretical concepts of political participation, such as exit, voice and action? How to better account for the political relevance of nonhuman things, forces and beings in our political theorizing? Here I want to suggest three concepts helpful for thinking about political participation, concepts that emerge out of an engagement with new materialist thinkers like Jane Bennett, Bruno Latour and Donna Haraway. The first is the concept of \textit{entanglement}, which highlights the inherent entanglement of human and nonhuman forces and in turn problematizes the idea of exit and opting-out as viable strategies of political participation today. The second concept is that of \textit{mediation}, which emphasizes that all forms of individual political participation, human or nonhuman, rely on a range of other things and beings in order to make themselves heard, which moves our attention away from the elevated role of individual human speech as the primary condition of political participation. Third, and finally, I suggest the concept of \textit{affecting} as one that offers a more capacious notion of political participation than that of ‘action’, which too quickly bring discussions back to questions of human-like intentionality and agency. Instead, we must attend more closely to the symmetries that do exist between the many different ways in which humans and nonhumans sometimes do, sometimes do not, rise to the occasion and become political participants able to make a difference.

First, the issue of exit and entanglement. As suggested in the beginning of this chapter, the political strategy of ‘exit’ as form of (non-)participation has become practically impossible today. We live in a deeply interconnected and increasingly fragile world where small

\textsuperscript{252} Ibid., 135.
perturbations in one part of a complex global system, such as the transmission of a disease from a bat to a human being, quickly reverberate throughout, creating havoc on its way. The climatic changes happening at a global scale is going to affect everyone – at different speeds and intensities, but everyone nonetheless. There is nowhere to go, nowhere to opt out. But in fact, the impossibility of exit cuts even deeper, and extends all the way down through the ontological.

In the second chapter of *Staying with the Trouble*, Donna Haraway surveys the frontiers of the contemporary biological sciences. After centuries of talking about individual ‘units’, such as cells and organisms, that operate in an external ‘environment’, these very distinctions are beginning to break down. What biologists are discovering today is that critters of all sorts, human and otherwise, develop in and through their entangled relations with others; not as bounded individuals competing for survival within an environmental background that is itself stable. In contrast, individual organisms make their environments and environments make individuals in loopy sets of relations that make the distinction between individual and environment difficult to uphold as anything more than an increasingly crude heuristic. The atmosphere on earth did not pre-exist as a stable environment for the human species to eventually evolve in. No, the evolution of the human species actively transformed the atmosphere, which in turn transformed the evolution of the human species. “We are the atmosphere,” as Bruno Latour writes.

These insights have profound implications for the way we think about human societies vis-à-vis the rest of the world. Human beings and human culture are part of and deeply entangled with the natural world, not outside or separate from it, even if we do exhibit certain distinct traits. This is, in essence, the argument proposed by Latour in *We Have Never Been Modern*, that any strict distinction between ‘Nature’ and ‘Society’ is untenable; both concepts are, and increasingly so, shot through with each other. Latour’s argument draws echoes throughout the history of ideas via thinkers such as the early-modern philosopher Baruch Spinoza, and even further back to the pre-Socratic thinkers such as Democritus. But now it also finds backing in recent developments at the forefront of the natural sciences.

These arguments also matter for how political theorists should go about studying and theorizing politics, including a phenomenon such as political participation. If human societies and their politics are not an isolated realm, but one that is in constant exchange with a much larger world of nonhuman things, beings and forces, then we must also study

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255 Latour, *We Have Never Been Modern*.
256 For more on this connection, see the preface to Bennett, *Vibrant Matter*. 
politics in a more ecological way; or we risk losing sight of a lot of the things that matter. By focusing only on human beings and their ideas, values, discourses, and actions, we limit our analytical lenses to only one set of relevant political actors. A crucial problem with a theoretical concept like ‘exit’ is that it upholds the myth that political actors are autonomous, independent individuals that can rationally opt out of their political entanglements with others; humans or otherwise. We are not. We cannot. What is at stake today is the need for cultivating new and different ways of living together with both human and non-human others. It is time to opt in, and to pay attention to our troubled relations with the rest of the world and to push for change from within the entangled relations that makes us what we are.257

That brings us to the second issue, the role of voice and (human) language for political participation. Instead of a priori defining political communities as an assembly of human beings capable of human language, we might follow Bruno Latour’s definition of a political community more openly as “an assembly of beings capable of speaking,” without determining the limits and conditions of the particular kind of speech.258 This allows us to pay attention to the myriad ways in which more-than-human things and beings are also capable of speaking, even if they do not speak (in human language) themselves and therefore are in need of ‘spokespersons’ or ‘mediators’.

One way to approach this issue, then, as suggested by Latour in his book Politics of Nature, is by taking a closer look at how natural entities and nonhuman things are constantly ‘made to speak’ within political controversies.259 Take for example contemporary discussions about the proper relationship between climate science and climate politics. Here, it is becoming evident that science is an entangled part of the political realm and not external to it. Not only do there exist a widespread distrust in science among parts of the populace—as evinced by climate hoax groups on the political right—there is also a reverse trend, which relies not on distrust, but on too much faith in science. This latter trend is represented by two very different types of political claims about climate science: One that seeks to postpone action on climate change by noting that the current science remains uncertain, and therefore argue that we should wait until we have the ‘full picture’, and another that seeks to push immediate action on climate change by stating that the science is ‘absolutely clear’ and appealing to the widespread consensus in the scientific community about the existence of global warming.

257 I develop this idea of pushing for change from within complex ecological assemblages in more detail in chapter 5, under the heading of political leadership.
259 See chapter 2 in particular.
The conundrum here is that both of these claims are partially correct. The first groups is right to suggest that we do not have the ‘full picture’ of what climate change and its futures entail. Climate science is an incredibly complex field, and any single projection will always remain uncertain. But that also means that if we heed their advice and wait until we have the full picture, we will have to wait forever. Conversely, the second group is right to claim that there exists an overwhelming consensus within the scientific community that global warming is real and alarming. That does not do away with the fact, however, that there remains a wide range of uncertainty about what exactly the future realities of climate change entail and how bad they are going to be. Both because it is difficult to project exactly how complex climatic systems will eventually react, but also because of the inherent difficulties in predicting how human behavior around these issues will change even in the short to medium run. By suggesting that the climate science is ‘absolutely clear’ and all there is left to do is act, the second position short-circuits debate and fuels accusations of a climate hoax, because all climate skeptics have to do, in order to raise doubts, is point to the mere existence of scientific disagreement. Scientific disagreements will persist even around the most established scientific claims, because science does not provide the sort of bedrock certainty for politics assumed by both of these positions.\(^260\)

Therefore, a more realistic conception of science better suited to address our contemporary challenges must come to terms with the reality that climate science can be both well founded and remain up for debate. One of the primary insights coming out of Science and Technology Studies in recent decades is that, contrary to common sense, scientific facts are not external to the environments in which they are produced. Scientific facts do not speak for themselves, which is why scientists, to use an evocative term from Latour, have to be “spokespersons” for nonhumans.\(^261\) Whether it is the amount of CO\(_2\) in the atmosphere, or the existence of a new protein, nonhuman entities are ‘made to speak’ in humanly intelligible ways, only with the help of a long list of associates, including humans in lab coats, scientific instruments, and a surrounding academic community with peer-review processes and collegial debate. Science is, as Latour argues, simply and extraordinarily a complex mechanism for “giving world the capacity to write or speak.”\(^262\)

This does not mean that scientific facts can be construed freely in any way one sees fit, or that scientific facts are reduced to linguistic fictions. The construction of scientific

\(^{260}\) In fact, the pursuit of absolute certainty can itself come at the expense of collaborative politics. This conundrum is illustrated beautifully by anthropologist Corbin Entz in his master thesis *Wine is for drinking, water is for fighting* from 2017. Here Entz investigates the ongoing politics struggles over ground water reservoirs in Paso Robles, California and shows, among many other things, that insisting on scientific exactness about the amount of water in the reservoirs serve to make it more difficult for political parties to come together around a solution, even in the presence of shared long-term political interests.

\(^{261}\) Latour, *Politics of Nature*, 64.

\(^{262}\) Ibid., 66.
facts takes place in conversation with a material world that pushes back. If a scientific hypothesis is repeatedly undercut by its meeting with the materiality of the world, it will not last for long. The reason we are justified in believing the fact of global warming is not because it is true beyond doubt, but because even though it is the most challenged scientific proposition in the world it continues to survive being tested against the material world despite widespread efforts to prove it wrong and come up with alternative explanations that would leave us off the hook.

On the other hand, the conception of science does mean that there is no way to avoid scientific controversy altogether. It will always be possibly to question the construction of a specific fact and the particular ways and particular mediators through which it has been made to speak. The edges between science and politics are much more porous than commonly perceived. Both are places of ongoing contestation. Nowhere do we see this convergence of science and politics more clearly than in the case of climate politics, where scientists are leaving behind their labs and taking on roles as environmental activists, because they cannot know what they know and not do anything. Meanwhile politicians are almost daily articulating more or less well-founded opinions about carbon concentrations in the atmosphere and a warming climate. To use another phrase from Latour, we have moved away, irrevocably, from ‘matters of facts’ that are simple there and cannot be debated, to ‘matter of concerns’ that have to be constructed and never completely escapes controversy.

Why dwell on this here? Because it reveals that even if human beings are the only ones that speak in human language, the more-than-human world constantly takes part in political discourse and are made to speak in ways that are internal to politics: “Speech is no longer a specifically human property, or at least humans are no longer its sole masters,” as Latour writes. The point here is not only that nonhuman things and beings often speak if we learn how to listen, but also that they regulate and co-determine what can be said about them. Even though their voices must often be mediated or represented by human others, we are not free to speak about them any way they see fit. The nonhuman things and beings themselves push back, so to speak: They take part in the conversation. Limiting democracy to a collective of human beings capable of deliberation, neglects the myriad ways in which our political conversations are always already imbricated with the nonhuman world.

266 Ibid., 67.
What happens to the concept of voice, then, is that we have moved away from a cognitivist conception, which restricts speech to the immediate utterance of human language, to a much more encompassing notion of speech, which allows for different kinds of speech and modes of mediation, such as when speaking on behalf of some body. After all, even human beings require others to speak on their behalf in politics most of the time. Vital questions about political inclusion – such as who gets to speak, in what manner, on whose behalf? – are relevant not only among humans, but in relation to all sorts of nonhuman things and beings too. I return to these questions, which pertain directly to the issue of political presentation, in chapter 4.

Third, and finally, let us turn to the role of ‘action’ as a means of political participation. To begin with, we might note that an emphasis on intentional human action within contemporary democratic theory tend to hide, or at least brush over, many forms of political participation that are not the result of intentional actions carried out by human beings. Intentional or not, many nonhuman entities do participate in politics, often in non-linguistic ways. As the examples in the previous section illustrated, nonhuman entities of various sorts have the capacities to disrupt, stabilize, or co-shape the conditions of democratic politics. The ability to participate in politics, and to make a political difference, is not a fixed state of being reserved for humans. Participation is something that must be performed and enacted, and for it to reach the achievement of a political event, it requires many sorts of actors, human and nonhuman, at the same time. Political participation is a collective achievement.

Why, then, do we remain so hesitant to afford nonhumans the capacity for political action? Perhaps we would be helped along by adopting an alternative to the language of action proposed by thinkers like Arendt and Rancière, which too quickly brings us back to idealized notions of intentional human action. I admit that the conceptual alternative I offer here, that of affecting, might feel a bit awkward at first. But at least it allows us to recognize a basic feature of political participation: That the examples of nonhuman political participation presented above are not exceptional cases, but indicative of a more general ability of nonhuman things and forces to affect both human and nonhuman others in politically relevant ways. To participate politically, a given body must be able to affect politics in one way or another; that is to make a difference to a specific course of events. Conversely, an entity, human or otherwise, that is wholly unable to do so, is not a political participant. This means, on the one hand, that the list of potential political participants is extended almost indefinitely. Prior to empirical investigation of a particular political controversy, one cannot limit the range of potential participants to, say, human beings. On the other hand, it also means that the list of actual political participants are, in turn, limited
to those entities that make a difference for the specific case at hand. Only those entities who can be demonstrated to have changed the course of events should be counted as participants. Again, the range of this list cannot be determined in the abstract, but must be subject to empirical investigation of the specific case, just like the case with Bennett’s electrical grid, Honig’s public payphones, and Marres’ eco-show homes.

To make this more concrete, let us return to the Danish west coast. The interlude preceding this chapter offered a situated example from my fieldwork in Lemvig, where the North Sea emerges, at the order of event, as a powerful political participant. For generations, the North Sea has repeatedly risen to the level of political participant and affected a wide range of human and nonhuman others in Lemvig and co-shaped the political community. It did so with the breach of ‘Agger Tange’ in 1825, which cleared the passage between the inlet waters of Limfjorden and the North Sea, and turned Lemvig into the market center of the surrounding area. Again, with the storm and subsequent death of 20 fishermen in 1850, which initiated a spiritual awakening that still reverberates throughout the community today. And all the way up to the present day, where violent storms and floods, such as those in 2013 and 2015, are becoming more and more prevalent due to global warming and increasing inlet waters. In all of these instances, and in many others, the unruly forces of the North Sea have participated in the making of politics in Lemvig.

The list of nonhuman political participants in a place like Lemvig is not restricted to the grand and disruptive forces of the North Sea. As soon as one starts paying attention, the number of relevant non-human actors multiplies. Following Bonnie Honig’s attunement towards the democratic importance of public things, some of the most persistent participants in the local politics of Lemvig are things like country schools and health clinics. While these public things involve a great deal of human agency, they are also material things made out of brick and mortar, whose placeness matter immensely to people in Lemvig. A health clinic moving 30 kilometers to the south-east, for example, can make or break a political career and re-shape the contours of local politics, as it did in 2008 when it was decided that the hospital in Holstebro should be replaced by a larger, regional hospital in Godstrup outside of Herning. A leading national news outlet in the health sector described the popular pushback as nothing short of a ‘civil war’, and the local politician in charge of the decision received violent threats.267 The delicate situation resulted in another public thing entering the political arena: a new public highway, which would reduce the time of transport to the new hospital.

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Another example of a non-human entity rising to the level of political participant in Lemvig is the lighthouse at Bovbjerg. While lighthouses are not listed as one of Honig’s examples of public things, this particular lighthouse became a center of local debate in the early 2000s when the Danish state decided to sell it off to private stakeholders in order to cut costs. The consequence would be that the lighthouse, which had been there overlooking the North Sea for more than a century, would no longer be open to the public. In response, three determined women organized an action group that eventually amassed to a political movement. Partly as a result of the popular pressure, the municipality of Lemvig bought the lighthouse from the Danish state for 1 million DKK in 2007 and handed it over to a supporters’ foundation established by the action group. Today, the lighthouse is run as a self-governing institution with its own board of trustees, and the daily operations are co-financed by 600 (and growing) individual members of the supporters’ foundation, who pay a yearly donation. The lighthouse has a café that hosts regular cultural events, such as talks and art exhibitions, and is run by the more than 150 local volunteers. In both of these cases, public things take the center stage of democratic politics and provide material fixation points to debate and organize around. Without these material things to rally around, democratic politics would, as Honig argues, be emptied of much of the matter that matters to people.

Lastly, there also examples from Lemvig of how material designs and technologies configure the political participation of the everyday along the lines of what Noortje Marres calls material participation. This is evident, for example, around two of the issues that have taken up most space in public debates about climate change and private consumption: driving cars and eating meat. Both of these activities are integrated parts of the everyday in Lemvig, as they are in many other places. But in contrast to for example Copenhagen, where there is an ongoing transition towards plant-based diets, as well as a substantial amount of people living without cars, the same thing is not really the case in Lemvig. Some of it has to with conservative cultural imaginaries, often connected to ideals of masculinity and the local histories with agriculture and fishing, but these cultural factors are also reinforced by material infrastructures. Access to non-meat alternatives, for example, is very limited. Few of the town’s restaurants offer vegetarian alternatives, and the selection in super markets are sparse. Similarly, getting around without a car is extremely difficult, partly due to the hilly and open landscapes that makes bike riding a real struggle, and because of a lack of public infrastructure. During one of my fieldwork visits, I waited 2.5 hours for the local train after an interview in at a local farm, and many other places are not connected by public transportation at all.

Attention to these material landscapes are necessary to understand the kind of human material participation that becomes possible around climate politics for people in
Lemvig. Both in order to see why it might make good sense for people to do what they are currently doing, but also in order to locate real potentials for change. Asking people in Lemvig to reduce their car mileage without providing better public infrastructure is not going to be effective. Similarly, in order to provide people with the material conditions needed to make the transition away from intensified meat production requires facing not only the cultural underpinnings of agriculture and meat consumption in Lemvig, but also the lack of material access to non-meat alternatives, as well as providing material support the people who are currently employed in large-scale meat production. These are the people who stand to lose their jobs if these productions close down, and thereby function as a material barrier for the local community’s transition away from meat.

I write much more about these entanglements of agriculture, people, and soils in the interlude that follows this chapter. But the more general point is this: Simply appealing to people’s good conscious when it comes to personal consumption risks neglecting their material realities; their conditions for material participation. Transitioning towards more sustainable patterns of consumption in a place like Lemvig, and elsewhere, is going to require a much more wide-reaching reconstruction of existing material infrastructures.

What these examples Lemvig from suggest is that theories of nonhuman political participation – whether its Bennett’s insistence on the disruptive powers of nonhuman entities, Honig’s insistence on the relevance of public things to anchor democratic politics, or Marres’ emphasis on the material conditions of everyday political participation – can indeed help us make better sense of the local politics in a place like Lemvig. Paying attention to the ways in which nonhuman things and forces matter is important to understand the kinds of politics that become possible here. These arguments are not unique to Lemvig. Becoming better at theorizing nonhuman political participation is an essential part of understanding not only the conditions of democratic politics in the Anthropocene, but the ontology of politics as such.

Conclusion
The primary purpose of this chapter has been to show that it does indeed make sense to talk about the political participation of many nonhumans, although it requires moving beyond a human-centered emphasis on exit, voice and action, which has hitherto been central to contemporary theories of political participation. Contrary to conventional belief, nonhuman things, beings, and forces are not a static background to politics, but an integral and dynamic part of it. As political theorists, as well as democratic citizens, we must learn to pay better attention to the many non-human things and forces that surround us. Maybe
we will see, then, that we are part of a complex and increasingly fragile world of interconnected assemblages with emergent properties, where

“no one body owns its supposedly own initiatives, for initiatives instantly conjoin with an impersonal swarm of contemporaneous endeavors, each with its own duration and intensity, with endeavors that are losing or gaining momentum, rippling into and recombining with others.”268

This ontological horizontalization of the political playing field does not mean that human beings disappear into a swarm of indistinguishable agencies. A new materialist understanding of politics does not aim to erase the very real power differentials that exist among humans, and between humans and nonhumans. The fact that other things than humans have the capacity to participate in politics does not mean that all things matter equally all the time. On the contrary, “[p]ersons, worms, leaves, bacteria, metals, and hurricanes have different types and degrees of power, just as different persons have different types and degrees of power ... depending on the time, place, composition, and density of the formation.”269

Human beings and their intentions and actions matter, but they are not the entire story. What we should not do is assume prior to empirical analysis of a specific event or political assemblage that the primary sources of power always begin and end with humans. The advent of the Anthropocene has made it clear that human beings inhabit this planet alongside a myriad of other nonhuman forces that are speaking back and whose collective powers exceed our immediate control.

The political question remains, however, what to make of this insight. Considering that many nonhuman things and beings participate politically, how might their political presence be better accommodated within existing or future, democratic institutions rather than simply being relegated to an outside? What modes of political and legal representation might be suitable, if any, for including different nonhumans into our democracies? And how, in turn, should a more ecological and multi-species understanding of politics affect the way we go about promoting political outside formal institutions? These are some of the questions that motivate the following theoretical chapters on, respectively, political representation (chapter 4) and political leadership (chapter 5). But first, another reroute into the intricacies of the more-than-human landscapes of Lemvig.

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269 Ibid., 109.
Interlude II

Earthly Belonging:
Farming, Food, and Familiarity

It is a grey Thursday in late November 2018, and I am walking up a long farm driveway. My sneakers sink into the road with every step. When I reach the front door, I knock twice. Nothing happens. I knock again. Still nothing.

No way I am going to give up this easily. I have just spent almost an hour walking around aimlessly in the nearby landscapes, because the public train only leaves every two hours, and I did not want to arrive too early.

I walk around the left side of the house, and suddenly I hear muffled voices. “Is anyone there?” I yell.

A tall, bearded man with glasses comes out of the adjoining building. He has a puzzled look on his face.

“Who are you?”

“I am Mads. The PhD student from Copenhagen. We talked the other day on the phone. I am here to talk to you about your farm.”

“Oh, yes, of course. Hi Mads. I had completely forgotten about that. Give me a minute, and I’ll be there.”

He turns back into the house, and through the doorway, I can see him giving instructions to a younger guy.

“My son and I are working on a new office space”, he says when he returns.

“I can come back later if the timing is bad?”

“No, no. Please. Not at all. Let me show you around the farm first, and then we can grab a cup of coffee and talk over in the house. Okay?”
The man is Arne. He is the proud owner of an organic dairy farm just outside of Lemvig, which he has had since 1984. Between 2009-2013 and again since 2017, he has also been a member of the city council for the left-wing Socialist People’s Party. Among the locals, Arne is known for his strong opinions on organic farming and for his care and respect for the natural environment.

In the hallway to the cowshed, Arne takes a brief look at my sneakers, then hands me a set of sturdy rubber boots that I switch into. When we enter, I am instantly struck by the smell. Not a bad smell, per se, but my sensitive city-dweller nostrils are unprepared for its intensity. Arne is unfazed. He spends time here every day. The shed consists of a large open space separated into three different areas. One for milking, one for eating, and one for birthing. I count around 40 cows, perhaps more, lined up in cubicles along the wall opposite of where we are standing. There are currently 68 cows at the farm, Arne tells me. “Just about the maximum number of cows you can have, and still maintain a personal relationship,” he says.

Next to us is the milking robot, a large metallic machine with wires going in and out. It has been running for more than 15 years. The cows are milked between two and
three times a day, and from the computer interface on one of its sides, Arne gathers that cow no. 1021 is currently overdue. He walks over and swiftly picks it out of the bunch, then guides it through the maze leading to the milking machine. It steps into the machine by itself, where metal rails help keep the animal in place, while a robotic arm locates the udder via laser technology and start milking. The process does not take more than a few minutes. About 10 liters, I read on the computer screen.

I cannot help finding it all a bit odd. I do not know what I had expected, but this is certainly far from nostalgic images of family farms where members of the household would get up early in the morning to milk the cows. This seems so... machinic.

Even though it seems obvious when you think about it, many people do not know that for cows to keep producing milk, they have to give birth every year to a year and half. In order to avoid the calf from consuming its mother's milk, calf and mother are separated shortly after birth before they can form a lasting bond. Arne shows me a newborn calf, which was delivered by one of his cows only yesterday. It is alone in its fold. Perhaps anticipating my concern, Arne recounts a conversation he had with a person from the animal rights organization, ANIMA, who thought it was morally wrong and unnatural to separate mother and child at birth.

“IT is, of course, an intervention in nature,” Arne says, “but in all aspects of the production, I try as best as I can to fulfil the natural desires of my animals. Do they look stressed to you?”

No. They do not look stressed to me. In fact, the animals in Arne's farm seems to be doing all right. But is that enough?

Arne gets a call from Thise Mejeri, the cooperatively owned organic dairy company he is a shareholder in. He steps out to take the call and leaves me alone in the shed. I suddenly realize that I am being observed. I didn’t notice it when Arne was there, but now it is quite obvious. The cows are inspecting me. I must appear foreign to them. Perhaps as foreign as they are to me.
One of the nearby cows is looking straight at me with a curious expression, as if to say: “Who is this alien being in our home?”, and I am overcome by an unexpected sense of familiarity, a glimpse of recognition from somewhere I cannot pin down. Is this what Arne means when says he has a personal relationship with his cows? That he sees them and they see him? That they see parts of themselves in each other?

A minute later, Arne comes back.

“I have just received a delivery of cheeses from Thise. Do you eat cheese?”

I have told him I eat vegetarian, so he wants to make sure that my dietary politics do not extend too far for us to break bread.

“Yes. Yes, I do.”

Since the late Middle Ages, the landscapes around Lemvig have been occupied by small, independent farms, who first began cultivating the fertile argilliferous soils in the north, and later the meagre and sandy soils in the South. At the beginning of the 19th century, the town of Lemvig still played a minor role in an area of mostly independent farmers. That began to change, however, with the breach of Agger Tange – the old barrier of land between the North Sea and Limfjorden – in 1825. The breach opened a direct sailing route between Lemvig and the North Sea, and following the construction of a new harbor in 1857 previously local markets were extended to England, Germany and Norway. By 1879, the private railway construction began, which furthermore strengthened business routes to the south.270 The local historian Ellen Damgaard writes about the period:

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Everywhere you went in Lemvig during the years around 1880, there must have been activity; railway tracks being built, new roads being made, scaffoldings for new multistory town houses being hoisted, new walking paths and railway bridges, horse carriages with bricks from the tileworks or timber from the ships in the harbor.  

From the very beginning, livelihoods in and around Lemvig were closely tied to the area’s natural landscapes. Fertile soils allowed for livestock agriculture to prosper, while the proximity of the North Sea to the west and the Fjord to the north, sustained a thriving fishing industry. Alongside the increased industrialization and technological developments, such as the railway, the town of Lemvig flourished throughout most of the 20th century. In recent decades, however, the tides have started turning. The population peaked in the early 1990s with around 7,500 inhabitants in the town and 25,000 in the greater area, and since then it has been in steady decline. Recent figures show the municipality of Lemvig to have one of the steepest population decline in all of Denmark, particularly among young people. Like many other rural communities today, Lemvig is struggling to keep jobs in the area, while local neighborhood schools are shutting down, and health centers moving closer to urban centers. A sense of cultural erosion, and the feeling that the local community has come under threat in recent years from urbanization and centralization has been a persistent topic in my conversations with people in Lemvig. During this same period, the farming industry transformed dramatically. Helped along by technological innovations and increased specialization, the number of individual farms have decreased, while those that are left have increased their production exponentially. Since the early 1980s, the total number of Danish pig farms have declined from more than 50,000 to around 2,000, while cattle farms have went down from 40,000 to around 8,000. In 1985, the average number of pigs at single farm was around 200. By 2019, the number had increased to more than 4,000 pigs per farm—a twenty-fold increase. Less than half a century ago, it was still the norm to have many different animals, pigs, cattle, chickens, at a single farm. Today, pressures of specialization mean that 98% of farms have only one animal species. 

Within the last thirty years or so, the topography of the industry has changed almost completely. Arne’s organic farm with a few dozen cows is about as close as you get to a family farm today. And here, too, he has to make concessions with regard to the

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271 Ibid., 238.
272 The most recent population projection data from Statistics Denmark has Lemvig at the second highest depopulation rate out of 96 Danish municipalities. For the data, see Statistics Denmark, “FRKM121: Population Projections 2021 by Municipality, Age and Sex,” accessed July 5, 2021, www.statistikbanken.dk/FRKM121.
273 All of the data is from Statistics Denmark and can be accessed here: Statistics Denmark, “BDF11: Farms by Region, Unit, Type of Farms and Area,” accessed July 5, 2021, www.statistikbanken.dk/BDF11.
natural instincts and welfare of the animals in order to make itself profitable in an increasingly competitive food market.

In *Animal Machines*, first published in 1964, Ruth Harrison defines intensive animal production as a process of “rapid turnover, high-density stocking, a high degree of mechanisation, a low labor requirement, and efficient conversion of food into saleable products.” Through this process of intensification, animal life has, Harrison argues, become “cheap” to the factory farmer. The problem is not only the outright suffering and cruelty that takes place at many industrial farms, but also the fact that almost all natural instincts of farm animals are severely thwarted, such that the “animals do not live before they die, they only exist. There is no longer any warmth in this business approach to livestock rearing, many producers state, quite frankly, that they hate their stock.”

The word intensification is particularly apt here, because recent developments in the agricultural business cite a centuries long history of farm animals being “moulded to man’s purpose to produce for him just what he wants in ever faster and cheaper ways.” Thus, as Harrison regretfully recognizes, “it is unlikely that even under the adverse conditions it has to endure today, the inherent mechanism will immediate crumble. This will take time.”

Written more than fifty years ago, before the most recent innovations and intensifications of large-scale industrial farming, the book seems almost prophetic. Many of the developments lamented by Harrison – such as the strict confinement of their mobility, manipulation of daylight cycles, filthy living conditions, and an almost complete suppression of natural instincts – have only intensified and extended in recent decades. In *Eating Animals* from 2009, Jonathan Safran Foer argues that the global factory farming industry has “waged war ... against all of the animals we eat.” Tens of billions of animals are farmed and killed every year for the sole purpose of feeding humans. In order to keep up with ever rising demands for meat, contemporary farming practices have increasingly transformed into a

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274 Ruth Harrison, *Animal Machines* (Cabi, 2013), 35. The quote is originally from the agricultural magazine, *Farmer and Stockbreeder*, by Dr Preston of the Rowett Research Institute.
275 Ibid., 36.
276 Ibid., 180. Original emphasis.
277 Ibid., 181.
"...system of industrialized and intensive agriculture in which animals — often housed by the tens or even hundreds of thousands — are genetically engineered, restricted in mobility, and fed unnatural diets (which almost always include various drugs, like antimicrobials)."

Take the case of chicken. Some genetic strains of chicken, ‘layers’, are bred specifically to lay eggs while others, ‘broilers’, produce flesh. As a result, male layers who cannot produce eggs and therefore have no profitable purpose are killed at birth, while female layers are stuffed together in small spaces and exposed to artificial lights that shorten daily cycles in order to increase the production of eggs. Broilers, on the other hand, spend their entire lives eating and growing to the point of constant pain and deformation, before they eventually reach the point of slaughter. Similar stories can be told about large-scale hog farms, and although the picture is less bleak when it comes to cattle, animal welfare challenges are manifold here too.

In addition to immediate concerns about animal welfare, there are also the environmental impacts. Precise estimates vary, but the scientific consensus is that large-scale factory farming is one of the most significant contributors to global warming, while also connected to a wide range of other environmental challenges, including habitat destruction and biodiversity loss. The Food and Agriculture Organization (FAO) of the UN is in fact unequivocal on the topic, and argue that animal agriculture “should be a major policy focus when dealing with problems of land degradation, climate change and air pollution, water shortage and water pollution and loss of biodiversity. Livestock’s contribution to environmental problems is on a massive scale.”

On top of the environmental issues are a whole range of health-related concerns related to, for example, risks of new pandemics and the excessive use of antibiotics. One of the main sources of worry are so-called zoonotic pathogens, diseases that spread from nonhuman animals to humans. Back in 2005, a report from the World’s Health Organization (WHO) stated that the world was on “the brink of another pandemic”, and that a conservative estimate of the number of deaths would be somewhere between 2 million to 7.4 million deaths. As of January 2021, the global tally of COVID-19 related deaths has reached 2 million and is showing no signs of slowing down.

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279 Ibid. ‘War’ section, para. 3.
In my first student assistant job, not long after I started studying political science, I worked in the Danish Veterinary and Food Administration in Copenhagen. One of my regular tasks was monitoring monthly ‘key performance indicators’ (KPIs). Among the KPIs that consistently performed worst was the occurrence of diseases among livestock, and the subsequent use of antibiotics. Back then, it never really occurred to me to stop and think about what those red numbers in the excel sheets represented. Namely that we have created an industry where a certain threshold of pain, suffering and disease among farm animals is not only allowed and normalized, but more profitable than treating them ethically.

We are sitting in Arne’s kitchen and drinking pitch-black coffee accompanied by a slice of bread with white cheese. Our conversations feel homely.

“It is difficult to be a politician, and to talk and write in the right way”, Arne says in his local dialect. “But I know how to talk to and convince people without it becoming too academic.”

What Arne does not know about being a “real” politician, he knows about running an organic farm. He proudly tells me about his permacultural approach to farming, where each crop takes over for the last in a cyclical process and has done so for more than a century, all the way back to his grandfather. Conventional farmers, in contrast, follow a mono-cultural approach with a single dominant crop.

“We call it the rape desert”, his wife adds when she enters the kitchen.

“Or the wheat desert,” Arne chimes in. “But I don’t really want to speak badly about my neighbors, even if I don’t agree with how they do things. Agriculture is about bread and butter out here. I would much rather talk about all the good stuff we do.”
I ask him if he thinks it would be better for the local environment and its biodiversity, if his fields were left uncultivated and the area was set aside for wild nature. Denmark, after all, has one of the world’s lowest shares of wild nature; a staggering two thirds of its landscapes are cultivated for agricultural purposes.

Arne’s answer is no. Not necessarily:

“If I stopped cultivating my fields tomorrow, because of the composition of soil, it would most likely be overtaken almost exclusively by thistles and nettles. Just another kind of monoculture. Right now, my crops are providing a much more diverse landscape for local wildlife.”

To Arne, it is the manner in which a particular landscape, with its specific conditions, is cultivated that make all the difference. Therefore, it is also promising that more and more farms in the area are transitioning from conventional to organic farming. Not necessarily out of a concern for animal welfare or the environment, but because the demand for organic produce is on the rise. Times are changing, and more and more farmers are starting to notice.

“It is no secret that people in Lemvig are green because of the money, not because they worry about the environment,” Arne says. “But there isn’t necessarily anything wrong with that. It’s okay to earn money on doing the right thing.”

I tread lightly when I talk with people in Lemvig about agriculture. It can be a touchy subject. But since the local ranger talks publicly about the importance of showing respect for nature, I wanted to push him a little on the topic during one of our conversations. He had a prompt reply:

“Farm animals aren’t nature. They are part of a production apparatus that is very far from nature. If you take a pig from a farm and place it in the wild, it is going to die right away.”

While the willingness to write off millions of Danish farm animals as mere production apparatus appears cynical, the statement is not without insight. In fact, it seems right to say that today’s industrial farms have lost, or rather have left behind, a certain type of relation to nature. The model of large-scale factory farming has estranged farmers not only from

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283 Personal interview with Jens, the local, ranger in his municipality office on the 29th of November 2018.
their animals, but also from the products they eventually produce and sell. A few centuries ago, generations of farmers used to take their cues from nature, adapting to both its steady rhythms and its occasional ruptures. Today, on the industrial farm, nature is something to overcome. Daily cycles are shortened with artificial lights that speed up production, and diseases are kept at bay by feeding animals antibiotics.284

However, the “farming industry still profits on nostalgic mental images of the traditional family farm with a diverse range of animals and a personal relation to the production process,” as Harrison wrote in 1964. “Farm produce is still associated with mental pictures of animals browsing in fields and hedgerows, of cows waiting patiently in picturesque farmyards for the milking, of hens having a last forage before going to roost or sheep being rounded up by zealous dogs, and all the family atmosphere embracing the traditional farmyard.”285 But the reality of farming today is straying further and further away from that nostalgia.

The change is not only happening on the production side. Consumption too has followed a path of increased alienation. During my first research stay in the Lemvig, the former headmaster at the local high school, Lasse, put it this way:

“The average population has become wholly removed from nature. More than half of the population do not know that a cow needs a calf to produce milk. There is a need for an ‘extended general education’, which teaches citizens about the practical stuff and about nature. All that has to do with cows and trees.”286

Many consumers today are unable, or unwilling, to connect the meat cuts in the counter at the grocery store with a living, breathing animal. It is not entirely their fault either. The eco-philosopher Val Plumwood has suggested the fitting term ‘shadow places’ as a way of naming “all those places that produce or are affected by the commodities you consume, places consumers don’t know about, don’t want to know about, and in a commodity regime don’t ever need to know about or take responsibility for.”287 This seems particularly pertinent when it comes to our food. For example, meat bought in Denmark, even when locally produced, tie people in with soy production in South America, one of the main drivers of the deforestation of the rainforest.288

284 For more on this point, and the need to return to more regenerative types of farming, see also Vandana Shiva, Who Really Feeds the World?: The Failures of Agribusiness and the Promise of Agroecology (North Atlantic Books, 2016).
285 Harrison, Animal Machines, 36.
286 Personal interview with Lasse, at the local gymnasium, 23rd of November 2018.
Few people know much about where the food they eat come from and the shadowy places it entangles them with. In a country like Denmark, the food produced and consumed is one of the most tangible, and also one of the most opaque, connections people have to the ecological crises unfolding around the world.

It is a cold Saturday morning in February, and I am looking at a soccer field covered in a slush of snow, water, and mud. I signed up for the local soccer club shortly after I arrived in Lemvig. At Denmark’s most popular sport, soccer is a great unifier. It brings people together across societal divisions such as culture and class. As long as you know how to kick an inflated leather orb across an open field, you are accepted as part of the team, if not the community.

It is the first practice of the season and around twenty players have met up to play. We are a mixed bunch. Some have barely turned eighteen yet, while others turned forty quite a while ago. We separate randomly into groups of five, and a tournament is set up where all teams meet each other once. Playing conditions are far from ideal, and we sink four or five inches into the mud with every step. But spirits are high. The first practice of the season! Many have been waiting months for this.

When practice is over, warm meatball soup is served in the clubhouse. I get a disbelieving look from the woman behind the counter when I ask for a serving without meatballs. While we eat, the coach presents his visions for the coming season. The plan is to win as many games as possible, but also to have fun while doing it. The time spent together is at least as important as winning games. That and the drinking. Sharing beers after a game or practice is almost a sacred institution.

Today is no exception, and players take turns in buying rounds. The locker room conversations are different than I am used to in Copenhagen, and I notice people observing me every time the topic lands on something that might be controversial or politically sensitive: immigrants, feminists, gays.

One of the other players makes a joke about how uncomfortable I look during a conversation about migrants coming to Europe via the Mediterranean. Someone has just said, only half in jest, that “we might as well shoot holes in their rubber boats, before they make it to the mainland. I don’t see what they got to do up here.”

It is early evening and many beers later when we leave the locker room. A group of six or seven of us are heading to the local pub to get some food. On the way...
there, I swing by my apartment to drop off my training gear and eat some leftovers.

When I get to the pub, the others have started ordering food.

“What are you getting?” the person next to me asks.

“I already ate. I wasn’t sure if there would be vegetarian options here.”

One of the people from the adjoining table turns around.

“ARE YOU A VEGETARIAN?!” he shouts across the room. I have never spoken with him before, but I know he works at one of the local farms.

“Eerh... yes, yes I am.”

“I don’t get it. Don’t you like meat?”

“Yes, I do, but...”

Before I can say more, I am interrupted by one of the other players:

“Don’t worry, he is not one of those vegetarians that tell others what to eat.”

Decisions about food do not happen in a vacuum. They are deeply entangled with cultural norms and social expectations. How we eat, and what we consider food, says a lot about who we are, and who we consider to be our relevant others. Pigs and cows, not cats and dogs. Eating habits are primordially linked with a sense of community and with family bonds, why conversations around food often become complicated. It is in the family that people first develop their pallets, and where certain kinds of food become linked with certain kinds of memories. For someone like me, who has grown up in a secular but culturally Christian home, the Christmas dinner, where the extended family eats together, stands as one of the most central meals of the year. Two kinds of potatoes, white and caramelized, braised red cabbage, brown gravy, potato chips, and – of course – the Christmas duck. One of the biggest arguments I had with my ex-partner after becoming a vegetarian was whether we were going to serve Christmas duck for our imagined future children.

Decisions around food are tricky. Changing how we eat is not just about renewing our palettes, which is sometimes difficult enough, but also entails a kind of forgetting that can easily amount to a sense cultural loss. Often what we eat, and what we refuse to eat, cut all the way to our most basic sense of identity. Perhaps this is why I hear the same sentiments over and over again in my conversations with people in Lemvig, as soon as the topic falls on meat consumption:
“Eating less meat isn’t really part of the green agenda here.”

“Getting people out here to eat less meat because of the climate? That will never happen.”

“Reducing the amount of meat isn’t even on people’s radar.”

“You should have seen their faces when I suggested that the canteen should serve only vegan food.”

These statements speak to a sense of shared, collective identity that comes from living in a place where farming has always been a central part of life. Most of the people I talk to about the local eating habits refer to the existence of a sort of ‘this is the way we’ve always done things’ mentality. The one exception was a conversation I had with a student from the local high school, Maria, who told me that more and more of her friends are thinking about reducing the amount of meat they eat because of its climate impacts. “In my class, you are almost considered an outsider, if it is not at least something you think about”, she said, then added a disclaimer, “but we are also a mostly-girls class.” While Maria’s statement gives us reason to be hopeful about the future generations’ eating habits, it also underscores the point that the way we eat is deeply connected with questions of identity and belonging, and that different eating habits often sediment along divisions such as class, age, and gender.

Decisions about food cannot, however, be reduced to questions of identity. In Lemvig and elsewhere, decisions about food, and the issue of eating animals, are also material problems that have to do with livelihoods. According to estimates by the farming industry’s trade organization, The Danish Agriculture and Food Council, the agricultural sector is responsible for up to a fifth of all local jobs in Lemvig. The second highest share in all of Denmark. Even though the share of people employed in farming, fishing, and forestry has declined significantly in recent decades, the local community still depend on the agricultural sector in a material way. This view is shared by the local authorities, as can be seen in the recent debates over expansions of local hog farms. In 2016, one farmer received permission from the local authorities to double its production from 10,000 to 20,000 hogs a year. A group of more than twenty neighbors got together and wrote a

289 Personal interview with Gunvor, in her home, on the 21st of November 2018.
290 Personal interview with Benny, in his office at the local news media, on the 26th of November 2018.
291 Personal interview with Uffe at the local high school, on the 27th of November 2018.
292 Personal interview with Claus, in the municipality building, on the 20th of November 2018.
293 Personal interview with Maria, in her family home in Ferring, on the 13th of February 2020.
294 Only exceeded by Læsø Kommune, a small island community with a few hundred inhabitants. Data from Statistics Denmark, Statistics Denmark, “BDF307: Employment in Agriculture by County, Unit, Type and Working Time,” accessed July 5, 2021, statistikbanken.dk/BDF307.
complaint, citing both odor nuisances and potential health issues, but the reply from the authorities was unequivocal: The expansion lived up to all the legal requirements. In the local newspaper, the then head of the local environment and planning office, went on record and said:

"In Lemvig municipality, we have the view that the farming industry is an important source of income – we live on the countryside, and it is here that you build farms."\(^{295}\)

In recent years, the pattern has repeated itself. In 2019, a farm near Lemvig received permission to double its production, reaching a staggering 75,000 hogs a year, amid grave protests by neighbors. The protestors cited the national health authorities, who noted “potentially harmful steam, dust and aerosols from pig farms, which spread to the surrounding with the wind ... and is connected to a range of lung diseases, respiratory issues ... and constitutional symptoms such as headaches, fatigue, nausea, and concentration deficits.”\(^{296}\) In May 2020, a farm owner next to Klosterheden, a large forest plantation outside Lemvig, received permission to extend his farm with two new livestock buildings and slurry tanks. Again, neighbors protested. But as in 2016 and 2019, the outcome was the same: Permissions were given, and the farm expanded.\(^{297}\)

The farming industry is, as it has been for centuries, an integral part of the local community in Lemvig. In a time where they are struggling to keep jobs in the area, the role of the farming industry feel more important than ever. Not only because of the jobs it provides, but also because of the place nostalgic notions of farming occupies in the collective imaginary. When a certain way of life appears to be eroding, it can be tempting to attach oneself even more firmly to the soils that you have historically depended upon. The problem is that the old ways of belonging to that soil – those represented by nostalgic images of family farming – have long disappeared. What is left in its wake is an industrialized solely-for-profit world of factory farming that might still offer a vague sense of cultural belonging, but is no longer able to sustain a living world.

There is a more general story to be told here. A story of earthly belonging and what it means to belong to a place, to a particular piece of soil. In a time where educated elites are becoming less and less place-dependent, shopping seamlessly between Melbourne, Mumbai, and Montreal, people in Lemvig and many other rural communities across the world remain tied to the places and communities they grew up in. So much so that many people identify strongly with that place and could not see themselves living anywhere else. This is where they belong. That sense of belonging is an important part of the reason why the recent decades of globalization and urbanization have hit rural communities so hard. When jobs relocate, schools close, and young people move away, it is not only the community that is threatened, but an entire way of life.

A friend of mine from political science, who has lived all his life in Copenhagen, once asked me: “Why don’t they just move, if there are no jobs? Wouldn’t it also be good for the environment, if they moved to the cities and took up less space?” While the question came from a place of well-intentioned puzzlement, it represents an underlying problem. Many urban-dwellers today are wholly unable to imagine what it means to belong to a specific place. They might even find it slightly suspect. But it simply will not do to tell rural communities like the ones in Lemvig to ‘get with the program’ and leave their lands behind. Especially not in a time where political cleavages between urban and rural populations are as widespread as they are in many Western countries today.

What is needed, instead, is finding new ways of addressing the concerns and grievance if those who “rightly feel abandoned by the historical betrayal of the ruling classes and are clamoring for the security of a protected space,” as the French philosopher Bruno Latour puts it. This entails recognizing both the legitimacy and the inevitability of belonging to, indeed depending on, a piece of soil:

“Is it possible to make those who are still enthusiastic about globalization understand that it is normal, that is just, that it is indispensable to want to preserve, maintain, ensure one’s belonging to a land, a place, a soil, a community, a space, a milieu, a way of life, a trade, a skill?”

Every living being on earth depends materially, socially, culturally on access to specific territories and specific soils. For many human beings today, however, it is becoming

299 Ibid., 15.
increasingly difficult to determine what particular places and soils they depend on now that the food they eat is grown, harvested, and shipped along with many other commodities from the other side of the globe. From the places that remain hidden in the shadows, as Plumwood put it. Given the ecological and climatic crises we face, part of the challenge today entails developing new and more local forms of belonging, what Latour calls a return to Earth, that can help bring some of the shadowy places we depend on out into the open, and in turn help us nurture and sustain them.

However, as some of the stories from Lemvig also reveal, a return to the local is not without risks of its own. Attachment to the local often mesh too easily with a problematic attachment to a long-lost nostalgia about historical pasts and a valorization of cultural homogeneity. Tendencies that easily become intensified by feelings of political betrayal and the sense that one’s community and way of life is eroding. In Lemvig, there are traces of these dynamics both in the way some people relate nostalgically to the farming industry, in the xenophobic discourses around refugees, and in the preservation of conservative gender roles such as those evolving around food. When I asked Arne, the local farmer and left-wing politician, if he thought the local authorities in Lemvig should be given more political power against the national parliament, his answer was a prompt no. That would, he said, only give politicians in Lemvig “free reign” to promote local industries and beneficiaries, regardless of the consequences to everyone else, including the natural environment.300

Theory 3: Alternative cosmologies

Many human communities today depend, culturally as well as materially, on treating other species cruelly. Maybe one of the first questions in the search for a more ethical and ecological kind of belonging should be: How can we come to see the many nonhuman animals that we share space with as others who must be treated with care and respect? If we cannot get even this question right, it is difficult to imagine that we should be able to extend care and respect to the natural environment at large.

One strategy for answering this question is bringing people’s attention to the intelligent behavior of nonhuman animals. Recent studies on animal cognition have found that many nonhuman animals, including mammals, birds, and fish, exhibit various forms of intentional behavior and display a wide range of emotions including sadness and grief.
empathy and jealousy, joy and happiness. Pigs, for example, exhibit complex language use, react when being called, have favorite toys, and come to the rescue of others, human and nonhuman, in situations of distress. Fish are communal beings with long-term memories, who form complex social networks, engage in monogamous relationships, hunt in groups and fight for social prestige. Birds, too, exhibit levels of intelligence comparable to many species of mammals and even primates. New scientific studies are constantly being published, evidencing the human-like intelligence of an ever-expanding range of nonhuman animals. In 2013, one of the leading scientists within animal studies, Marc Bekoff, concluded based on a comprehensive meta study of scientific experiments on animal sentience that “after 2,500 studies, it’s time to declare animal sentience proven.”

There is, however, a deeper problem here. Pursuing the argumentative strategy that nonhuman animals are “as” or “almost as” intelligent as human beings risks reinforcing the underlying problem. Namely, that only what is human or human-like is valuable and must be treated with care and respect. Even if some, or most, nonhuman animals are able to reach this bar, it is unlikely that such a strategy could meaningfully be extended to include other forms of life, including plants, fungi and non-organic entities such a rocks or rivers. Part of the challenge, therefore, entails leaving behind the anthropocentric notion that human beings are the model other animals must measure up to; that humans are somehow at the top of the pinnacle of biological evolution. What is needed, in other words, is an overhaul of our limited ecological sensibilities that seek to expand both our understanding and practices of care towards other beings and species, including those that appear different to us, and even towards non-organic matter and things.

This is part of the reason why environmental scholars and climate activists alike have started turning their attention towards indigenous communities in the search for a more ecologically oriented ethical sensibility. We can, however, also find incipient resources for a cosmological reorientation in a place like Lemvig. Although centuries of

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306 Let me briefly address the risk of orientalizing Lemvig by turning it in to an ‘exotic’ place. As discussed in more detail in chapter 2, I do not think of Lemvig as an outside to the liberal-democratic capitalist Danish state. Rather, it is located at its very edges, which is exactly why it might be approached *bobb* as a place of difference, and as a place that is struggling with the very same problems that exists throughout the Danish society. In a sense, what I am trying to do here is approaching Lemvig through the lens of what Bruno Latour has called a “symmetric anthropology” (*We Have Never Been Modern*, 94) by showing that there do in fact exist incipient resources for a different kind of cosmology even within our own societies.
industrialization and technological progress have alienated people from the relationship they might earlier have had with the land, there are still traces of a different ways of relating to the natural environment. This comes out not only in the way Arne talks about his animals as intelligent and sentient beings, or in his insistence on a holistic, permacultural approach to growing crops. It also comes up in another and somewhat unexpected place, such as in my conversations with the local ranger, Jens, about his hunting practices. Contemporary hunting practices have not gone through the same process of professionalization and intensification as the farming industry, which means that most people that go hunting today do it for recreational purposes. Killing animals merely for recreational purposes is problematic in and of itself, but barring for a second such objections, there might be something potentially transformative in the way at least this local ranger thinks of hunting as a process of ecological attunement.

For Jens, hunting is a practice inherited from his father and one that entails an inter-generational transfer of knowledge about care and respect for nature and includes ecological know-how and cultivation of particular relationship to the natural world. For him, nature is not a static environmental background ‘out there’. Rather, it is something we live in, are in exchange with, and therefore something that must be negotiated with, particularly in a place like Lemvig. Hunting and farming are some of the ways in which humans have historically negotiated with nature:

“People in the big cities think of nature as something that must be seen and valued from the outside, through the window of a car. The important thing for me is that we can be in and with nature. That includes “using” nature, as we have done for generations through hunting and farming.”

The further you get from nature, Jens argues, the more you insist that nature is something that must be protected, and not used: “Out here we think of nature as something robust.”

While there is much to be said for this view, I cannot help thinking that his conception of nature is shaped by the immense violence that the natural landscapes in Lemvig, particularly the North Sea, have carried out against human communities here through generations. What is lacking, I believe, is the sense that nature is also often fragile, and that the way many human communities relate to nature today is bringing exactly that relationship of negotiation and use, which Jens likes to talk about out, of balance. I am more interested, therefore, in the inchoate elements of a different kind of ecological ethic, which appears when Jens explains that part of showing respect for nature involves not

307 Personal interview with Jens, the local ranger, in his municipality office, the 29th of November 2018,
308 IBID.
hunting certain animals at certain times, because they are in mating season, and killing them could threaten their continued species survival. Underlying such a practice seems to be a different kind of ecological sensibility that does not see nature only as robust, but is also informed by intimate knowledge of the needs of specific animals. One that aims to sustain the life of the forest including its nonhuman inhabitants by restricting human use. This sort of human restraint, and its commitment to the sustained survival of other lifeforms, seems closer to the kind of ecological ethic needed today.

Perhaps that ethic can be brought into clearer focus by turning our attention to other cosmologies, such as those of the indigenous Amerindian communities, which has received increasing academic attention in recent years. In *The Ends of the Worlds*, for example, Viveiros De Castro and Deborah Danowski describe how Amerindian mythologies cultivate a deep sense of care for the world by acknowledging all species as relevant others, who each see themselves as human:

> “Every existing being in the cosmos ... sees itself as human, but does not see other species in the same way. [...] This entails that we humans (Amerindian humans, that is) do not see animals as humans. They are not human for us; but we know they are human for themselves. We know just as well that we are not human for them...”

All entities in the world are different configurations of the same pre-historic human substrate and value is ascribed to all beings, including those beings that *appear to us* as non-human animals and plants. This might sound like a problematic case of anthropomorphism, but from the perspective of Amerindian communities that charge makes little sense. Anthropomorphism is the ontological starting point. Engaging in anthropomorphism is not only appropriate, it is a helpful way to try to grasp the basic connection we have with all other beings.310

Since the world is made up of an endless number of beings, all of inherent worth, Amerindian communities recognize, like the local ranger in Lemvig, that there is no way for humans (in the narrow sense of the word) to avoid leaving a footprint on the world, and that humans must both negotiate with and use nature. What differs, however, is that for the Amerindians, “the ground on which they leave their footprints is equally alive and alert”, which means that “one must always be very careful where one steps.”311 Even if nature appears robust, it is becoming increasingly evident today, as many indigenous communities have known all along, that nature is also highly sensitive and responsive to our human

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310 Ibid., 72.
311 Ibid., 71.
actions. The earth is made up of a multiplicity of other, living beings. That ought to make us tread more lightly.

The challenge here is not only recognizing the value of beings outside our human communities, but also to limit our own activities and ecological footprints. In short, we will have to change and scale down our current ways of living in order to give room for others. As Castro and Danowski suggests, perhaps we can find inspiration in the Andean motto: ‘To live well, not better’.312 This motto resonates, in curious ways, with my conversations with people in Lemvig. It seems to me that many people here are less concerned with living increasingly better lives, although these desires exist here too. What they want, first of all, is for their community and their way of life to survive. They want a place to belong.

312 Ibid., 76.
This chapter interrogates the concept of political representation within contemporary democratic theory and its practical application in existing liberal democracies through the lens of new materialist theory. Some of the central questions raised in the chapter are: To what extent can and should nonhuman entities be formally included into existing political institutions and decision-making processes as co-participants? Are non-human entities such as animals, rivers, and forests next in the line of democratic expansions?

Like chapter 3 on participation, the argument of this chapter operates at two levels. First, it seeks to expand the notion of political representation by highlighting the ongoing institutional efforts to include nonhumans, such as those that promote extending legal and political rights to nonhuman entities, as well as new parliamentary innovations that aim to take the interests of nonhuman entities into account in a more constitutive way. Secondly, it raises questions about the framework of representation itself, and whether the existing theoretical language of representation is not too limited for the kinds of transformations needed in the Anthropocene. In the end, the chapter argues that there is a need to pursue several different strategies for political representation of nonhumans at once, ranging from legal and parliamentary innovations to democratic experiments of a more aesthetic kind, which sees practices of representation as a means of cultivating new human-nonhuman relations of care and respect.

The chapter fits into the overall structure of the dissertation by moving away from the ontological considerations of chapter 3, regarding the political relevance of nonhumans, and towards the more practical-political and institutional implications of those insights. At the same time, it prepares the stage for chapter 5 on political leadership, which seeks to take these same insights beyond the formal frameworks of legal and parliamentary institutions and focuses on the more activist and grassroots dimensions of a new materialist reformulation of democratic politics.
Democratic Theory and the Concept of Representation

Borrowing the definition from Hanna Pitkin’s seminal book on The Concept of Representation from 1967, to represent something means to render it present despite its literal absence.\(^{313}\)

Thus, representation is at its core a paradoxical practice: It renders present, in some form or another, something that is currently absent. What I am interested in here, however, is not the general concept of representation, but the concept of political representation as it is currently practiced in existing liberal democracies and theorized within contemporary democratic theory. Not unlike a painting that represents an object by making it appear on a canvas, a political representative makes present, in one way or another, its constituents despite their physical absence – or at least, that is the claim made by the political representative.

Throughout the modern history of democratic theory, a central problem has haunted discussions around political representation, namely how to reconcile the ideal of democracy as popular self-government with the election of a small group of representatives that governs on behalf of the people? Is the practice of electoral representation a practical necessity of the modern world, or do mechanisms of political representation themselves carry important functions for a democratic society? Historically, most democratic theorists have tended to view political representation as a second-best alternative to more direct forms of democracy necessitated by the geographical expansion of the nation-state. This line of reasoning goes back at least to Rousseau, but has been reinforced in more recent accounts of democracy, such as those that emphasize direct participation or the communitarian role of democratic life.\(^{314}\)

In recent decades, however, there has been a new surge of interest in political representation that view representation not merely as a practical necessity, but as an integral and desired part of contemporary democracies. This shift was expressed clearly by David Plotke in his Representation is Democracy from 1997:

“Representation is not an unfortunate compromise between an ideal of direct democracy and messy modern realities. Representation is crucial in constituting democratic practices.”\(^{315}\)

Since the turn of the century, a number of democratic theorists have argued along these lines that political representation plays an important role in existing liberal democracies,


\(^{314}\) Pateman, Participation and Democratic Theory; Barber, Strong Democracy; Benjamin R. Barber, “Participatory Democracy,” The Encyclopedia of Political Thought, 2014, 2650–2654.

often pointing to the disciplining effects of representative institutions on public opinion-formation and subsequent political decision-making processes. The accounts tend to draw, often explicitly, on the work of Habermas, whose two-step model conceives of political representation as a sort of democratic buffer, a ‘rationalizing’ filter, that help ensure that the scattered and unruly demands of a fragmented civil society is channeled into more coherent forms before entering the legislative arena.316 Nadia Urbinati, for example, argues that political representation is “not only necessary but also worthy” as a part of deliberative democratic politics, because it provides a much needed process of “filtering, refining and mediating” that helps “depersonalize” claims and opinions.317 In stark contrast to earlier critics of political representation, Urbinati even believes that representative institutions might “encourage political participation” because its “its deliberative character expands politics beyond the narrow limits of decision and administration.”318

The central question in mainstream democratic theory no longer seems to be whether political representation can be reconciled with democracy at all, but under what conditions existing practices and institutions of political representation can be considered democratically legitimate.319 The shared assumption throughout these contributions is that in order for political representation to be considered democratic it must, in some specified way, remain responsive to the people being represented.320 That raises the two-fold question: What does it mean to be “responsive to”, and who are “the people”? Or, in other words, what is political representation and who gets to be represented? It is this dual conceptual openness that I explore in what follows, while factoring in the persistent presence and influence of nonhuman entities.

The Concept of Political Representation

First, let us take a closer look at the concept of representation itself. For many contemporary democratic theorists, the starting point for theorizing political representation

318 Ibid., 760.
319 Ibid., 761.
320 Urbinati and Warren, “The Concept of Representation in Contemporary Democratic Theory”; Philip Pettit, “Varieties of Public Representation,” in Political Representation (Cambridge University Press, 2010); Ian Shapiro et al., Political Representation (Cambridge University Press, 2010). Notable exceptions, however, include democratic thinkers such as Jacques Rancière, who sees the very disruption of existing regimes of representation as the core of democratic politics. See for example Rancière, Disenfranchisement.
is Hanna Pitkin’s seminal book on representation, quoted above, where Pitkin distinguishes between descriptive, formal, and substantive theories of representation.

Descriptive theories of representation focus on the immediate resemblance between the representatives and the represented. On this view, the normative standard for judging political representation is the extent to which representatives “mirror”, “correspond to” or, as Pitkin puts it, “stand for” those they represent based on a set of relevant characteristics. The underlying assumption here is that due to their immediate resemblance, the decisions of the representative will mirror those that the represented would themselves have made, had they been present. The guiding ideal of descriptive representation, therefore, becomes one of accuracy, such as the extent to which a parliamentary assembly is representative of society as a whole based on a set of specific criteria like gender, education, religion, etc. This kind of descriptive representation is indeed relevant to political representation. Having political representatives that resemble you might, for example, help promote feelings of being included in the democratic community. But as Pitkin notes, immediate resemblance is not the final word about political representation. Since there is no single defining criteria of resemblance, complete correspondence between the representatives and the represented is fundamentally unattainable. In some instances, it might even be undesirable to strive for descriptive resemblance, because the standards used to measure resemblance are political and often serve existing political interests or reflect historical biases. A purely descriptive notion of representation, therefore, points us to one relevant dimension of political representation, but it also leaves open a range of important normative questions about the nature of political representation.

The second group, formal theories of representation, can be split into two ideal-typical variations: The first one is an ‘authorization’ view, which defines representation in terms of the initial transfer of authority from those being represented to the representative agent. The other is an ‘accountability’ view, which defines the relation of representation as one in which a representative can in retrospect be held accountable for their actions by those represented. What makes both of these views formal on Pitkin’s account, is that they focus on the formal character of the relationship between the representative and the representative rather than the ongoing activity of representation. In both the authorization and accountability case, what defines the relation of representation is a formal relationship that exists either before the act of representing, as in the authorization case, or after, as in the

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323 Ibid., 75.
324 For an interesting example of this, see Shirreen Hassim, “Perverse Consequences? The Impact of Quotas for Women on Democratization in Africa,” *Political Representation*, 2009, 211–35.
accountability case. Certainly, both authorization and accountability are important aspects of political representation, and a political representative that is neither authorized by or accountable to those they (claim to) represent will seem initially suspect from a democratic point of view. But if we are concerned with the activity of representation itself, and the relevant criteria for judging that activity, and not just the formal character of the relationship, then formal theories of representation only take us so far.

Here we want to look instead at what Pitkin calls substantive theories of representation. These theories view representation as a kind of “activity, defined by certain behavioral norms or certain things a representative is expected to do.” Here, to represent means acting “for” someone, acting “on behalf of” someone, or as it is often put, acting “in the interest of” someone. The difficulty here lies in specifying exactly what that entails and what the relevant normative standards are. But we can begin by noticing how these substantive views differ from the other views of representation: Compared with formal theories, it is clear enough that even a representative who has been authorized in advance or can be held accountable after the fact need not always act in the interest of those they represent. Similarly, even representatives that resemble their constituency, based on some descriptive criteria, can act against the interest of that same constituency. On the substantive view, in contrast, for political representation to go well, ideally speaking, the political representative must continually be acting in accordance with the substantive aim of furthering “the objective of those he represents.”

Substantive views of representation, then, focus on how the act representation is carried out in ongoing political practice. There are several competing versions of the substantive theories, each of which emphasizes different aspects. Some of these versions can be teased apart based on the analogies they employ when naming the representative, such as ‘actor’, ‘agent’, ‘trustee’, ‘delegate’, ‘guardian’ etc. These analogies fall loosely along a mandate-independence continuum based on the range of autonomy accorded to the representative. In one end of the continuum, the mandate-end, are analogies such as ‘trustee’ or ‘delegate’, where the room for discretion and independent maneuvering is highly limited, and the representative is expected to operate more as substitute carrying out the (expressed) will of the represented. In the other end, the independence-end, are analogies such as ‘guardian’, where the representative acts on behalf of the represented, but maintains a large degree of autonomy and have little or no obligation to actively consult the

326 Ibid., 58–59.
327 Ibid., 112.
328 Ibid., 113.
329 Ibid., 116.
330 Ibid., 119.
331 Ibid., 144.
represented in any binding way, as is the case of more formal instances of ‘legal guardianship’. In between these two poles are more mixed versions that employ concepts such as ‘agent’ or ‘actor’, where the representative maintains a degree of discretion when taking action on behalf of the represented, while the latter maintains the authority and some level of control.

I introduce these distinctions here to show that the concept of political representation is indeed an internally complex and varied one, why the answer to the question “can nonhuman entities be represented in politics?” depends on the specific conception of representation employed. Some of the views of representation introduced above rule out the possibility of nonhuman political representation almost at the outset. For example, it is difficult to see how we might talk of descriptive representation when it comes to humans representing nonhumans; human beings certainly do not resemble or mirror, say, a forest or a river in any straightforward way. Similarly, formal version of political representation, such as the authorization view, initially have little purchase here, because the act of authorization, often achieved in human settings through means such as voting or expressed consent, has no immediate nonhuman equivalent. There are, however, plenty of examples of political representation in contemporary democracies that rely on neither descriptive correspondence or explicit authorization, such as when social movements (claim to) represent marginalized groups, or when political representatives invoke notions such as ‘the people’ or ‘the nation’. When we move towards more substantive views of representation, where representatives are seen as acting “on behalf or” or “in the interest of” its constituencies, there is plenty of room, conceptually and pragmatically, to start discussing how nonhuman entities could be represented politically and what that might look like.

Who is Being Represented?
Another question that has occupied contemporary discussions about political representation concerns not the nature, but the subject of representation, namely: Who is being represented?

One part of this question has to do with the ontological status of the represented subject. For example, who is represented when politicians speak on behalf ‘the nation’? The individual citizens, the citizens as a collective, or the imagined community of the

32 According to Pitkin the guardianship models falls out of the category of representation itself, because the representative has no obligation to consult the person he or she represents. However, I find it more illustrative here to think of it as a sort of ‘limit case’ of forms of political representation that emphasizes the autonomy of the representative. Moreover, it is certainly still the case that guardians can have substantive obligations towards those they represent, even if the represented themselves are not in a position to voice objections.
Questions like these are relevant, too, when discussing the subjects of nonhuman political representation: Should representation be restricted to seemingly bounded natural entities, such as a river or a single ecosystem; a collective, such as domestic animals or all national forests; or, perhaps, the imagined entity of ‘nature’ as such? While these are important questions and ones that will have to be addressed in ongoing political practice, very little can be said about them in general terms. They rely, to a great extent, on pragmatic and contextual concerns. It should be noted here, however, that these conceptual difficulties do not differ substantially from the conceptual challenges that persist in the case of political representation of humans: Are human individuals, collective groups, political interests or the ‘will of the people’ the appropriate subject of political representation?

Another part of the question, however, carries a more explicitly normative dimension and has to do with exclusions from political representation: Whose voices are currently present, and have historically been present, in the societal institutions of political representation? Whose views and interests get to be represented in the decision-making processes, and whose do not? Critical and feminist democratic theorists have long argued that existing institutions of political representation reflect, and often extend, historical and structural injustices. But these same authors also bring our attention to the fact that representative politics have historically provided a platform for new waves of democratic expansions, where political representation have been continually extended to hitherto excluded parts of the demos, such as women and people of color, although the realization of these representative aspirations remain an ongoing struggle. As Warren & Castiglione writes, representative politics is probably best viewed as a “two-way relationship, which can be used as much to exclude as to inc...

Battles about representation, about who gets to be represented and in what way, take place within and are central to contemporary democratic politics.

Drawing on the historical experience of democratic expansions, the appeal for including nonhuman beings into existing structures of political representation is sometimes couched explicitly in the language of expansion. One of the most explicit versions of this

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333 Shapiro et al., Political Representation, 2.
335 Dario Castiglione and Mark E. Warren, “Rethinking Democratic Representation: Eight Theoretical Issues,” Trabalho Apresentado No Centre for the Study of Democratic Institutions, University of British Columbia, 2006, 10.
argument is found in Robyn Eckersley’s *The Green State* from 2004, where she argues for the extension of political representation beyond humans by appeal to an ‘all-affected principle’:

> the opportunity to participate or otherwise be represented in the making of risk-generating decisions should literally be extended to all those potentially affected, regardless of social class, geographic location, nationality, generation, or species.336

In response to this expansionist view, some scholars have argued that the project of including nonhumans into representative institution is inherently futile, because contrary to speaking human subjects, mute objects are unable to elect people to represent their interests.337 But as Eckersley notes, even though

> many nonhuman others are not capable of giving approval or consent to proposed norms ... proceeding as if they were is one mechanism that enables human agents to consider the well-being of nonhuman interests in ways that go beyond their service to humans.338

As we have already seen, authorization via voiced consent is not the single defining element of political representation, not even among human beings. The question, therefore, is not whether it is possible to represent nonhumans at all, but *how, to what extent, and by whom*, the more-than-human world can and should be represented in democratic politics.

### Representing Nonhumans in Democratic Politics

In his book *Listening for Democracy* from 2014, Andrew Dobson invokes Nancy Fraser’s distinction between ‘affirmative’ versus ‘transformative’ strategies of political recognition to start a conversation about the democratic inclusion of nonhumans.339 Affirmative approaches are ones that seek to extend recognition to hitherto excluded groups while leaving the underlying system of recognition and its group differentiations intact. Transformative approaches, on the other hand, are ones that challenge the system of recognition itself.340 The distinction is by no means clear-cut, but in the context of nonhuman representation we can think of affirmative approaches as those that argue “for the consideration and recognition of nature because on the multiple commonalities or

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similarities between humans and their environment.”\textsuperscript{341} Such approaches leave “the categories ‘human’ and ‘nature’ in place, and bases the claim for recognition on the similarities between them – what they have in common.”\textsuperscript{342} Transformative approaches, in contrast, aim to uproot, or at least challenge, those very categories and the broader system of representation they enable.

Dobson uses the distinction to discuss various forms of recognition politics and their related modes of listening, but the distinction has purchase for our discussions here as well, because it allows us compare different approaches to nonhuman political representation that span from the decidedly affirmative to the radically transformative.

Affirmation and animal rights
Affirmative strategies are, as Dobson writes, often “couched in the language of rights.”\textsuperscript{343} Animal rights activists, for example, who seek to extend substantive legal rights and representation to nonhuman animals, tend to follow a clear-cut version of an affirmation strategy. In \textit{Animal Liberation} from 1975, Peter Singer argued famously against forms of human ‘speciesism’, which arbitrarily privileges human interests over the interests of all other species, comparing speciesism to a form of racism.\textsuperscript{344} Non-human animals experience pain and suffering too, and since there are no principled grounds upon which we can justify ignoring that suffering while recognizing human suffering, non-human animals should be accorded equal moral consideration, although not necessarily equal treatment.\textsuperscript{345}

In other words, we owe moral consideration towards nonhuman animals because they are ‘like us’ in their capacity for suffering. This line of reasoning is also pursued by contemporary animal rights organizations such as PETA (People for Ethical Treatments of Animals), who write on their website:

\begin{quote}
All animals have the ability to suffer \textit{in the same way and to the same degree} that humans do. They feel pain, pleasure, fear, frustration, loneliness, and motherly love. Whenever we consider doing something that would interfere with their needs, we are morally obligated to take them into account.\textsuperscript{346}
\end{quote}

For animal rights organizations such as PETA, taking nonhuman animals “into account” means, first and foremost, securing a set of basic inviolable animal rights and individual

\textsuperscript{341} Ibid., 147. The original quote is from David Schlosberg, \textit{Defining Environmental Justice: Theories, Movements, and Nature} (Oxford University Press, 2009), 133.

\textsuperscript{342} Dobson, \textit{Listening for Democracy}, 147.

\textsuperscript{343} Ibid., 148.

\textsuperscript{344} Peter Singer, \textit{Animal Liberation} (Random House, 1995).

\textsuperscript{345} Ibid., 29ff.

protection from harm and exploitation. They are pursuing, in other words, what the political philosophers Will Kymlicka and Sue Donaldson, in their book *Zoopolis* from 2013, call a “basic rights”-approach. Kymlicka and Donaldson are sympathetic towards the animal rights movement, but critical of their “basic rights”-approach, because they believe it relies too narrowly on pursuing a limited set of negative rights. Instead, they argue for embracing a more demanding ‘animal citizenship’ approach that focuses on the positive obligations human beings have toward different sorts of nonhuman animals qua their relational standing. This includes “obligations to design our buildings, roads, and neighborhoods in a way that takes into account animals’ needs, or obligations to rescue animals who are unintentionally harmed by human activities, or obligations to care for those animals who have become dependent upon us.” Like with human others, the obligations we have towards specific groups of nonhuman animals differ, depending upon the specific relations humans have with them. Not all animals must be recognized or included into our political communities and institutions in the same way. When it comes to domesticated animals, however, “whom we have brought into our society”, treating them as co-citizens, and ensuring their legal and political representation, is not only possible but, in fact, “morally required.”

To build this argument, Kymlicka and Donaldson draw on the work of political philosopher John Rawls. In order to be counted as a member of a political community an individual must, according to Rawls, fulfill three basic conditions: First, they must be able to communicate their subjective good. Second, they must exhibit an ability to comply with social norms. Finally, they must be able to participate in legislative processes. Many domesticated animals are, Kymlicka and Donaldson argues, able to meet all of these conditions. Take the first condition of being able to communicate a subjective good. Anyone who has ever lived with a domesticated animal know that they often communicate their subjective preferences in intentional ways: “They walk to the gate to indicate that they want to go outside. They meow in front of the fridge to ask for food. They nuzzle your arm to ask for affection.” This is true for companion species, such as dogs and cats, but it is also true for many farm animals.

Regarding the second condition, the ability to comply with social norms, domesticated animals are not only able to do so, they also contribute actively to community-building between their human companions. Kymlicka and Donaldson note, for

348 Ibid., 6.
349 Ibid., 61.
350 Ibid., 103.
351 Ibid., 108.
example, how domesticated animals “by virtue of being present, and carrying on their lives, [are] helping to shape their shared community with humans”, such as when “dogs act as an ice breaker for conversation” among people in the same neighborhood. From time to time, however, domesticated animals also refuse to comply with social norms in disruptive ways. Zoo or farm animals, for example, occasionally engage in acts of protest and dissent, including “work stoppages and slowdowns, destruction of equipment, escape attempts, and violence.” Domesticated animals are, in other words, both able to have a subjective good and communicate it in intentional ways, cooperate with human and nonhuman others, and when needed express their (lack of) consent.

Whether they are able to fulfil the third of Rawls’s conditions, the ability to participate in legislative processes, depends upon the specific institutional setup of representation. While nonhuman animals are unable to vote or engage in human forms of rational deliberation, their interests can still, as I argue in more detail below, be represented in a legislative process through, for example, party representation or different models of guardianship.

The implication of Kymlicka and Donaldson’s arguments is not that the basic rights approach promoted by animal rights organizations must be disregarded altogether. The animal rights movement is, however, at an impasse today with more and more nonhuman animals being bred into life-long confinement and exploitation. Kymlicka and Donaldson believe that their ‘animal citizenship’ approach might help solve that. Unfortunately, I am less optimistic. Even though their arguments are persuasive, the underlying strategy remains distinctly affirmative: it appeals to the likeness between human beings and a select group nonhuman animals. Despite what Kymlicka and Donaldson suggest, their account fails to explicitly challenge the normative hierarchy that underpin the categorical distinctions between sentient animals and the rest of the material world. An affirmative strategy to animal rights – whether couched in the language of basic rights of PETA or citizenship theory – has immediate limitations when it comes to the broader spectrum of nonhuman inclusion. It promotes the notion that only sentient beings, or beings with a certain capacity for pain and suffering, should be accounted political representation, thereby leaving the underlying hierarchy between sentient animals and the rest of the material world intact. Thus, it becomes difficult to extend the strategy to non-human entities that are less “like us”, such as the funghi, the plants, and the microbes that play vital roles for the well-functioning of earthly ecosystems, or to non-organic entities such as rivers or rocks. Here affirmation is insufficient. As long as the arguments for

352 Ibid., 115.
353 Ibid. If this sounds unconvincing to you, I suggest watching the documentary Blackfish from 2013, which details the active resistance of killer whales to their despicable treatment in Sea World’s “amusement” parks.
political representation of the more than human world remains couched in the language of human likeness, it will only take us so far.

This is not to say that we should stop pursuing affirmation strategies towards animal rights altogether. Despite the ambiguity of these strategies, they can be valuable, particularly in the short run, to win political battles. Many existing organizations, such as PETA, are currently doing an important job in pushing affirmative agendas when it comes to cases of animal cruelty and mistreatment. But affirmation strategies to nonhuman representation, such as the ones pursued by animal rights activists and theorists, cannot stand alone. The work of nonhuman inclusion must operate along more transformative trajectories as well.

*Between affirmation and transformation: The rights of nature*

Animal advocates are not alone in arguing for the extension of substantive legal and political rights to the nonhuman world. In the past decade or so, a new political movement has gained traction by arguing for the extension of legal rights and representation not to the animal world, but to natural entities more generally — sometimes referred to as the ‘rights of nature’ paradigm. Some of the earliest and most notable empirical examples of the rights of nature approach include nation-level efforts, such as Ecuador’s extension of constitutional rights to the natural environment in 2008, Bolivia’s ‘Law of Mother Earth’ in 2010, as well as a series of more local attempts in a range of American cities. While empirical examples are still scarce, the paradigm seems to have picked up pace in recent years. The Whanganui river in New Zealand, and the Ganges and Yamnaya Rivers in India all received the status of legal personhood in 2017, and in 2019 the city of Toledo, Ohio, followed suit by passing the ‘Bill of Community Rights and Nature’s Rights’ to ensure environmental project of Lake Erie.

However, the discussion about whether to extend rights to the natural environment is not a new phenomenon. In 1972, law professor Christopher Stone authored his now seminal article *Should Trees Have Standing* in which he argues for extending legal personhood to natural entities. In the article, which was later followed by a book length defense of the original claim, Stone argues that the history of legal representation is one of “successive

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356 Ibid., 1393.

357 In the updated preface from the third edition of the book, which followed the publication original article, Stone notes that the idea itself had already been suggested elsewhere, including in India.
extension of rights to some new entity” including, although imperfectly, entities such as prisoners, women, fetuses, and people of color. Various kinds of natural entities, including trees, rivers, and other ecosystems, might be the next in line. While the article’s argument received a fair amount of attention at the time of its publication because of an ongoing case between the Sierra Club and Disney enterprises, and has since gained status as a foundational text within the rights of nature literature, the position itself remains “on the fringes of mainstream environmental law.”

The ongoing climatic and ecological crises have, however, made Stone’s position relevant anew. Particularly relevant for the purposes of this chapter is how Stone’s arguments might help us start thinking about natural entities of many different sorts not only as formal rights holders, but also as entities that deserve more substantive forms of legal and political representation. A first step is to start thinking about what it would even mean for a nonhuman entity to be ‘a holder of rights’. According to Stone, three things must be in place:

1. The rights of the holder must be enforceable by a recognized public authority. A set of rights that is never enforced when breached amount to no rights at all.
2. When a right is breached, legal action should be taken on behalf of the rights-holder itself, not a third party.
3. In cases of legal compensation, economic relief should come to the benefit of the rights-holder themselves.

It is safe to say that there are currently very few natural entities, who are right-holders in this way. While legal action can be taken in cases of environmental harm, say the ongoing pollution and subsequent degradation of an ecosystem, the legal case has to be made in reference to some other human rights-holder whose interests have been harmed. And if the case is successful, the relief will be paid out not to the natural ecosystem, but to the human beings whose (financial) interests have been harmed as a consequence of the ongoing action of the human polluters. As it stands, natural ecosystems, and the environment more broadly, simply “have no standing in their own right.”

Stone’s arguments also bring attention to another important, and often overlooked, aspect of the fight for extending rights to entities beyond the human, namely its

358 Christopher D. Stone, Should Trees Have Standing?: Law, Morality, and the Environment (Oxford University Press, 2010), 1.
360 Stone, Should Trees Have Standing?, 4–5.
361 Ibid., 5.
transformational potential. As Stone notes, all former extensions of political rights to the previously rightless have, up until their point of institution, remained partly if not wholly ‘unthinkable’. New calls to extend rights beyond the current community of rights-holders always sound odd or frightening, if not downright laughable, at first. It is no surprise, therefore, that the current movement to confer rights to nonhuman entities is often met with resistance and ridicule: How could a forest possibly be a rights holder? Does anyone seriously believe that a river has political interests? How are mute and inanimate objects going to participate in public debates? Despite these knee-jerk objections, the juridical realm is already populated by inanimate rights-holders. Courts have become accustomed to the idea of treating, for example, a corporation as a legal entity, why it no longer seems ‘unthinkable’, even though it used to be exactly that. The practice of extending rights to hitherto excluded parts of the community is, in other words, always also an exercise in political imagination.

Yet, even if we grant that there is no reason why it should be wholly unthinkable to extend legal rights to natural entities, there are still many pressing normative and practical-political questions left open. For example, what kinds of rights should the natural environment have? To say that rights should be extended to natural entities does not mean that all natural entities must have all-encompassing rights, or that their rights should be similar to those of human beings. “To say that the natural environment should have rights is not to say anything as silly as that no one should be allowed to cut down a tree,” as Stone puts it. Moreover, it does not mean that all natural entities should have the same legal standing either. The specific rights will depend on the entity in question and its specific circumstances, which raises another set of questions, namely how to determine what rights specific natural entities should have, and how to assess when they have been properly breached? These questions are particularly pertinent when it comes to inanimate objects that cannot disclose their interests and desires through intentional behavior and language. Nevertheless, in everyday political practice, people constantly represent and enforce legal action on behalf of inanimate entities, such as a ‘nation’ or a ‘people’, that can hardly speak for themselves. Here I want to quote Stone at length:

“I am sure I can judge with more certainty and meaningfulness whether and when my lawn wants (needs) water, than the Attorney General can judge whether and when the United States wants (needs) to take an appeal from an adverse judgment by a lower court. The lawn tells me that it wants water by a certain dryness of the blades and soil—immediately obvious to the touch—the appearance of bald spots, yellowing, and a lack of springiness

362 Ibid., 2–3.
363 Ibid., 4.
after being walked on; how does “the United States” communicate to the Attorney
General?\footnote{Ibid., 11.}

The wager here is that these kinds of questions – what rights should the natural
environment should have? And how should its wants and needs be assessed? – are more
likely to pose insurmountable problems when raised in the abstract. In specific cases, say
that of a river or a forest, these questions remain complex but are quickly transformed in to
more tangible and practicable issues.

The more pressing problem, however, is how to ensure the ongoing monitoring
and enforcement of the rights of natural entities in practice. In his article, Stone argues for
the implementation of a so-called guardianship model that aim to treat “the legal problems
of natural objects as on does the problems of legal incompetents.”\footnote{Ibid., 8.} The idea is that the
legal guardian, usually a relevant non-governmental organization, would appointed to
represent a given natural entity in its legal affairs. The guardian would then be able to bring
injuries to the court, even ones that are not directly related to material human interests,
such as “the death of eagles and inedible crabs, the suffering of sea lions, the loss from the
face of the earth of species of commercially valueless birds, the disappearance of a
wilderness area.”\footnote{Ibid., 14.} In cases that end in monetary reparations, a fund could be set up
administered by the legal guardian, which would be used to repair the damages done to the
natural entity itself, not just to other humans. Reversely, in cases where nonhuman entities
cause harm to substantial human interests such as in the case of a flood, money from the
fund could go in the reverse direction to cover some of those damages.\footnote{Ibid., 16–17.} This raises a
number of practical challenges, such as how much responsibility to put on the nonhuman
dentities vis-à-vis human (in)action in the case of a flood, or the specific amount of
retribution that must be paid on behalf of the natural entity. But these are exactly the kinds
of difficult questions that courts are already dealing with on a daily basis, and ones that can
only be answered in concrete cases.

So far, however, the practical experiments with implementation of nature rights
have produced limited success. In cases such as Ecuador and Bolivia, who were the first
countries to grant extensive rights to natural environments, the new legal frameworks have
“not been able to slow their environmental degradation.”\footnote{Chapron, Epstein, and López-Bao, “A Rights Revolution for Nature.”, 1393.} As Erin O’Donnell and Julia
Talbot-Jones note in their case study of different attempts to extend rights to natural
entities, it is often a major practical challenge to ensure the implementation of a sufficiently
robust institutional setup that allow for ongoing enforcement. In the cases of Ecuador and Bolivia, where rights were granted to nature ‘as a whole’ without any institutional reforms to back it up, the enforcement of the new nature rights have proven extremely difficult. While some court cases have been won on behalf of the environment based on these new rights, the overall trend in both countries have continued to be exploitation and destruction of their natural habitats, including most notably the rapid deforestation of the Amazon rainforest through logging practices.369

Examples from Australia and New Zealand do however suggest that with the right institutional setup, ongoing enforcement of nature rights might be possible. In the Australian region of Victoria, a new statutory corporation was created in 2011 and given the “right, duty and responsibility to speak and make decisions on behalf of the rivers and water-dependent ecosystems”, which have managed to insulate “it from political interference.”370 And in New Zealand, where the Whanganui river was granted legal personhood in 2017, the new legislation both ensured statutory independence for the guardians of the river and created an independent fund that should be used to “support the health and well-being” of the river.371 In both of these cases, the granting of legal personhood was implemented through a guardianship model that entailed both financial support and institutional reforms in order to ensure the continued enforcement of the new legal framework. These examples suggest, first, that the push for nature rights will have to become more, not less, ambitious and aim not only for legal recognition of the natural environment, but for specific forms of institutional implementation that ensure ongoing enforcement. Moreover, the they sustain the hope that with the right strategy of implementation the nature rights movement can help win important political battles that can help curb the destruction of the natural environment.

That being said, there are still good reasons to remain skeptical of the political purchase of the rights discourse on its own. As pointed out, the granting of rights is deeply entwined with cultural perceptions about who are, and who are not, considered appropriate right-holders in the first place. Therefore, the nature rights movement will have to recognize itself as part of a broader cultural movement, which seeks to promote the inherent worth of the natural environment. Moreover, as the examples above suggest, the granting of rights to nonhuman entities only provide any substantial protection in so far as they are backed up by political and economic power that can ensure their enforcement. A more general problem with legal forms of nonhuman representation is that they tend to focus primarily on harm prevention, such as the negative rights of nonhuman animals or

370 Ibid., 6.
natural ecosystems to be protected from intentional human exploitation and intervention. As Kymlicka and Donaldson noted in the case of animal rights, negative rights only provide the extreme limits of what can be done to the natural environment without infringing upon the law. They do not promote, or at least do not ensure, positive representation of the interests of nonhuman entities. The question remains, therefore, how to take the interests and desires of nonhuman entities seriously in a more substantive way?

Towards transformation: Parliamentary representation, mini-publics and proxies

“The standard way to include excluded interests, politically, is simply to enfranchise them,” Robert Goodin wrote in 1996.\textsuperscript{372} In the case of nonhumans, “we ought to literally ‘enfranchise nature’ in order to secure equal political consideration for its interests.”\textsuperscript{373} Enfranchising nature might seem initially absurd, Goodin writes, because “whales do not talk; not to us, anyway,” and they certainly “do not mark ballot papers.”\textsuperscript{374} But, as I argued in chapter 3, voting and direct speech are not the only routes to political participation. Although many, but for from all, human beings in today’s democracies use their right to vote, very few get to speak for themselves in political matters. Instead, mechanisms of representation, such as parties and political representatives, are set in place to ensure that their interests are taken into account. The more pressing question, therefore, is not whether nonhumans can speak or vote in human ways, but what mechanisms of representation might be suited to bring their interests into democratic politics?

The most familiar way of addressing the problem of representation in contemporary liberal democracies is through the mechanism of political parties. Parties represent the interests of their constituencies and, in turn, represent the interest of the larger political community – although the specific interpretation of that claim is open to many different interpretations. In a more immediate sense, political parties represent the interests of citizens who vote for them. Thus, the simplest way to have to the interests of nonhuman nature represented in parliamentary politics is by having a significant part of the citizenry whose interests align with the interests of nature and who are voting accordingly.\textsuperscript{375} In recent years, particularly in Western Europe, there has been a significant rise in political support for ‘green’ parties, who have environmental protection as (part of) their primary political agenda.\textsuperscript{376} Most European countries now have green parties

\textsuperscript{373} Ibid., 840.
\textsuperscript{374} Ibid., 840–41.
\textsuperscript{375} Robert E. Goodin, Green Political Theory (John Wiley & Sons, 2013), 844.
\textsuperscript{376} Ferdinand Muller-Rommel, New Politics in Western Europe: The Rise and Success of Green Parties and Alternative Lists (Routledge, 2019).
represented in their national parliaments, in a few cases even represented in government, and as of 2019, the European Green Party gained a record high 67 MPs (11.4%) in the European Parliament.

Green political parties face, however, several institutional limitations that make it difficult for them to take into account the interests of nonhumans and the natural environment. These include the short-term temporalities of parliamentary politics, such as four-year election cycles of parliamentary politics that tend to limit the long-term vision of political decision-making. A limitation that is perpetuated by the structural pressures of fast-paced and short-sighted news cycles with media constantly on the lookout for the next big story, while holding an immense power over the ability of politicians to get their message across to the broader public. Moreover, since it is still only human beings who vote, and parties need votes to survive, the interests of natural entities only carry weight insofar as they align with (a subset) of currently living humans’ interests. In cases where this is not the case, or where they outright conflict, there is no one to represent the interest of a nonhuman entities in their own right.

For these and other reasons, both climate justice scholars and climate activists have argued in favor of a series of new democratic innovations that can help ensure that concern for the natural environment is represented in parliamentary processes in ways that exceed existing party politics. One suggestion, which has become popular in recent years, are so-called citizens’ assemblies where a representative sample of the electorate meets regularly over an extended period of time to discuss complex political issues, such as the ecological and climatic crises, based on inputs from external experts. These citizens’ assemblies work according to deliberate principles of open and fair debate, and the end-goal is a set of recommendations addressed to national parliaments and politicians. The motivation behind the assemblies is that these ‘mini-publics’ might help overcome some of the structural barriers already mentioned that keep parliamentary politics from reaching sufficient agreements on issues like climate change.377 Recent articles in *Nature* and *Science* point to deliberative mini-publics as a way to improve democratic participation and ensure popular support for a green transition, and a means to furthering smart and sustainable outcomes.378

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The citizens assemblies on climate change that have been held in recent years in France, United Kingdom, Denmark, and elsewhere show promising signs of democratic and deliberative engagement and are producing policy recommendations on climate-related issues that go far beyond current policies. But the lukewarm reception of these recommendations among the political establishment and the lack of implementation into parliamentary cycles have resulted in very little political action. This reveals one of the main weaknesses of the citizens’ assembly model: its efficacy depends greatly on the initial political mandate given to the assembly, as well as the receptivity among existing political parties, which constituted part of the problem to begin with.

Another suggestion, therefore, which aims to circumvent the inaction of political parliaments altogether, is the idea of a ‘constitutional wardship’ meant to provide a check on policies that have consequences for the natural environment. Robyn Eckersley, for example, has suggested the idea of an environmental defenders office to ensure that the interests of the environment and its non-human species would not be disregarded when making political legislation around climate-related issues. The idea is quite similar to that of an environmental ‘ombudsmand’, who would be able to check the legality of policies that seemed to come in to conflict with basic environmental concerns. Such constitutional mechanisms could be a helpful addition to existing parliamentary systems in the short run, but they remain at best add-ons to existing parliamentary systems. Many of the same critiques levered against a basic rights-approach, such as the one-sided emphasis on negative infringement and prevention of harm, can be made against these types of constitutional checks. What is still needed are more positive forms representation of the interests of non-human entities, also in cases where their basic rights are not in question.

To this end, Andrew Dobson has suggested the idea of climate ‘proxy representatives’, which is one of the most radical institutional innovations in the literature. The idea is to have a number of political representatives in parliament, appointed for example by relevant environmental organizations, that directly represent the interests of non-human nature in the day-to-day work. The proxy representatives should be able to take part in political debates and vote on behalf of the nonhuman entities relevant to a specific political issue. This would amount to political representation of nonhuman entities of a more substantive kind, where a representative is acting not (only) on the account of

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380 Eckersley, The Green State, 134.

381 Andrew Dobson, Green Political Thought, 4th edition (Routledge, 2007), 114.
some (future) humans interests, but on behalf of particular nonhuman entities themselves. Of the examples mentioned here, this institutional innovation seems to be the one most likely to transform parliamentary politics in a fundamental way. Not only would it promote a public debate about what it means to represent the interests of nonhuman entities like rivers and forests and who are best suited to do that representative work. It would also break, in quite a radical way, with the very notion that democracy is ‘government by the people’, where the people is restricted to human beings. While the work of proxy representation would be carried out by humans, the subjects on whose behalf they would govern, or rather co-govern, would in principle extend the originating sources of law-giving powers beyond the human realm and give voice to some of the many nonhuman entities co-inhabiting this world.

All of these institutional innovations – citizens’ assemblies, constitutional checks and proxy representatives – are exciting democratic innovations that could potentially help improve a pretty dire status quo and help transform current institutions of political representation. However, these innovations, too, are caught up partly in an affirmative strategy towards political representation. They seek to implement institutional tweaks that include nonhuman nature into already-existing institutions of political representation, but leave the underlying logics of representation and existing parliamentary politics mostly intact. Meanwhile, social movements and climate activists around the world are arguing today that the existing structures of democratic representation are fundamentally flawed, not only for nonhumans but for many human beings too. Moreover, even if the democratic innovations mentioned above are worthwhile improvements of the status quo, the political momentum for their implementation are not going to come about ex nihilo. There has to be a willingness within already existing political systems for these reforms. Because of the limitations of parliamentary politics described above, the momentum is unlikely to come from within the existing system itself. It will have to come from the people and powers – by which I mean more than just human powers – outside parliamentary structures too.

Political representation beyond parliaments: Social movements and non-electoral politics
What happens to political representation when we move beyond legal and institutional frameworks? It might be tempting, to draw an analytical distinction between direct and indirect forms of political participation and then maintain that representation is only relevant to the latter. But even in more direct forms of political engagement, such as social movements and public demonstration, the logics of political representation remain present. After all, these types of political participation, too, are often couched in the language of representation and “claim to be the representatives of women, gays, ethnic groups,
religious groups, the poor, the persecuted, the unborn, animals, and even ‘the Earth’. As democratic theorists such as Warren & Castiglione argue, the “standard answer, that representatives are elected, is increasingly inadequate.”

Practices of representation take place across many different political arenas and contexts today, both inside and outside formal institutions, and all these different types of representations have the potential to produce political effects of various kinds. This is the case, for example, with representations of nonhuman nature within social movements. Different social movements represent nonhuman nature, the natural environment, and climate change in different ways, and to different effects. For example, one of the dangers of social movements on the radical green left is that they tend to represent nonhuman nature, and the climate science, as a single unified bloc in the hope of motivating human action. “The science is clear” and “we must act now”, as the green social movement Extinction Rebellion writes on their official website. They are not entirely wrong, of course, but the insistence that all there is left to do is for humans to act, risks neglecting or at least downplaying the real and complex entanglements of human and nonhuman nature. Instead of bringing attention towards the cultivation of new, more ethical relationships between humans and their natural environments some discourses on the green left, often inspired by eco-Marxist thinking, re-relegate nonhuman nature and climate change to a stable background of ecological emergency upon which climate politics takes place. The only real actors are human beings.

This non-electoral representation of nonhuman nature can be contrasted with a different type of green social movements that Romand Coles and David Schlosberg have called ‘new materialist social movements’. Drawing on examples such as food sovereignty movements and local struggles over renewable energy, these authors bring our attention to how many of these movements “explicitly embodies an important shift in theoretical and practical articulations of the human relationship to the rest of the natural world.” These movements work not only towards immediate “adaptation or sustainability, but for a resilient and transformative ethico-material relationship with the natural world in which human beings and communities are immersed.” By working with, and within, their

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382 Castiglione and Warren, “Rethinking Democratic Representation,” 15.
385 See also the discussions of eco-Marxism in chapter 1.
387 Ibid., 22.
388 Ibid., 23.
ongoing entanglements with a more than human world, these movements aim to cultivate new ways of multispecies living, and in doing so, they are actively re-representing nonhuman natures, such as the local landscapes, soils and other material flows, as much more lively, co-creating, and indeed political entities.

The point here is not that these latter movements are more important today than the old social movements on the green left. The point is that the way nonhuman nature becomes represented is radically different, and allows for different kinds of political action. Where the first type of action is unified, fast, decisive, and human-only, the other is dispersed, slow, searching, and multispecies. As the apocalyptic futures of the Anthropocene become felt more acutely, it is important that we do not lose sight of the need for both types of work. Both approaches, the fast and the slow, the decisive and the searching, are needed to address the complex ecological challenges of today.

The Edges of Representation: Receptivity, Embodiment and Experimentation

The question of nonhuman political representation is, as we have seen, a complex and varied one in contemporary democracies. One that cuts across theoretical discussions of extending legal and political rights to nonhuman animals and ecosystems, parliamentary innovations that seek to include the interests of the natural environment, and discursive representations of nonhuman nature in extra-institutional social movements. Underlying all of these forms of nonhuman political representation, however, is another set of questions: Who are, in each case, the appropriate representatives of nonhuman entities? And on what grounds can someone – whether it is a climate science expert or a citizen engaged in green social movements – claim to speak or act on behalf of nonhuman others? While such questions are fundamental to political representation, they also bring us to the very edges of the concept of representation itself. They invite us to probe the underlying epistemological conditions of representation: What is it that makes someone capable of speaking or acting on behalf of someone else, or something else, in the first place?

A key issue here is that of receptivity. In order to act on behalf of some body, the representative must first be receptive towards the needs and desires of those they are meant to represent. This might seem straightforward in cases between human beings, where needs and desires can be disclosed through speech and human language. But even here, the representative must practice their capacity for receptivity in order to be able to listen carefully and eventually understand the needs and desires of others. This is no little feat even among human beings. As scholar-activist Romand Coles argues in his book *Beyond Gates Politics*, which draws on insights from his work with community organizing, giving marginalized communities a voice in democratic spaces, presupposes an ability to
listen attentively and becoming receptive to their situated struggles. In the case of political representation of nonhumans, where the linguistic channels of communications are foreclosed, the question of receptivity becomes doubly relevant.

Closely related to the issue of receptivity is that of care. Whether it is the painter’s representation of the minute details of a natural landscape, or the politicians claim to speak on behalf of a marginalized group, proper representation involves care. In her book *Matters of Care* from 2017, Maria Puig De La Bellacasa defines care as an inherently relational practice: “to care or not to care about/for something/somebody, inevitably does and undoes relation.” The same is true for relations of political representation. As in the passage quoted earlier, Stone believes himself better suited to represent the needs of his lawn than the Attorney General is to represent the needs of United States, because his lawn communicates its needs as desires in more tangible ways, such as when revealing a need for water “by a certain dryness of the blades and soil – immediately obvious to the touch – the appearance of bald spots, yellowing, and a lack of springiness after being walked on.” I am inclined to agree with Stone, but only because the relationship between Stone and his lawn, its soils and grasses, is one that builds on careful attention and corporeal proximity, even touch, in order to succeed. For Stone to interpret and be able to represent the interests of his lawn appropriately, he must already care about it and remain receptive towards the signals it sends him.

More generally, for nonhuman political representation to work, it requires that its human representatives are able to practice care and receptivity towards particular nonhuman others and become sensitive towards their different, situated needs. This sensitivity might not come easy in today’s world where many human beings have, particularly in highly industrialized countries, become both philosophically and materially alienated from much of nonhuman nature. But one of the ways in which scholars, activists, and artists alike have sought to cultivate such receptivity towards nonhuman nature is through a series of aesthetic experiments, or what I here call ‘embodied representation’.

In the 1980s, for example, environmental activist Joanna Macy and others convened people for a series of workshops they called “The Council of All Beings”. Each workshop worked as “a communal ritual in which participants step aside from their human identity and speak on behalf of another life-form.” The workshops entailed three phases: a mourning, a remembering, and a speaking phase. In the mourning phase, participants

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391 Stone, *Should Trees Have Standing?*, 11.
attune themselves to the suffering of other beings happening at the hands of humans, and reconnect with their “capacity to care.” 393 This phase includes rituals such as reciting names of endangered species at the rhythmic sound of a drumbeat, or taking turns in naming and placing stones representing recently extinct species.

After the mourning phase comes a remembering phase where participants are invited to (re)remember their embodied interconnectedness with the rest of the world by evoking bodily and sensorial memories. Through sounds and sensory movements, such as nosing, crawling, and wriggling, participants get to feel in their own body how the amphibian and reptile are “life stages still embedded in our neurological system.” 394 The mourning and remembering phases allow the participants to speak on behalf of nonhuman others with more authenticity and care, and therefore prepare them for the final phase, the speaking phase. In this phase, participants first let themselves “be chosen by” a specific nonhuman lifeform – such as an animal, a plant, or an ecosystem like a forest or desert – and begin to familiarize themselves with “its rhythms and pleasures and needs” before the formal council. 395

When the formal council convenes, a member of the human species is asked to take center stage, and the other participants get to address the human representative directly, airing their sense of betrayal, concern, or even anger on behalf of the beings they embody. Hereafter, the representatives of other life forms are invited to share gifts and wisdom with their human companion, which might help humans change their ways and move forward in a more ethical manner. For example: “I, Lichen, work slowly, very slowly. Time is my friend. This is what I give you, humans: patience and perseverance,” or “As Leaf, I would free you humans from your fear of death. My dropping, crumbling, molding allows fresh growth. If you were less afraid of death, you would be readier to live.” 396 When all life-forms have offered their gifts, the Council of All Beings formally concludes.

According to Macy herself, the practical effects of these experimental councils varied from context to context, but they also showed, time and again, an incredible ability to invoke human capacities for speaking on behalf of nonhuman others in deep, caring, imaginative and embodied ways. This tradition of embodied representation, as a means of cultivating more ethical interspecies relations, has been continued in new ways today by other scholars, artists, and activists. Leading up to the 2015 United Nations Climate Change Convention in Paris, for example, the French philosopher Bruno Latour and

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393 Ibid., ‘The Mourning’ section, para. 4.
394 Ibid., ‘Remembering’ section, para. 3.
395 Ibid., ‘Speaking for Other Life-Forms’ section, para. 3.
396 Ibid., ‘Speaking for Other Life-Forms’ section, para. 7-8.
others took part in a political and aesthetic experiment called “Theater of Negotiations” led by the directors Philippe Quesne and Frederique Ait-Touati.397

Here, a group of students from Sciences Po gathered to simulate the COP21-meeting in a renewed, multi-species format. Each student represented a different delegation, ranging from nation states to NGOs, interest groups, and lobbyists to scientific experts and nonhuman entities such as the oceans, the atmosphere, and an endangered species. The innovation of The Theatre of Negotiations lies in the intermixing of all these different types of knowledge and interests within political negotiations instead of, as per usual, keeping the governmental, non-governmental, scientific, and nonhuman spheres apart. For example, in response to the increased acidification of the oceans produced primarily by large industrialized countries, the Ocean delegation could respond:

“We consider unacceptable for our sovereignty what you, the delegation representing ‘United States’ or ‘Australia’ are inflicting on our domain. By opposing you, we are defining the limit of our territory and we are redefining the shape of yours.”398

This might seem like an odd form of ventriloquized political discourse, but maybe it is exactly this kind of creative stretching of our political vocabularies and imaginations that are needed in order to do the work nonhuman political presentation. And it is not merely an exercise in imagination, either, because the Atlantic Ocean does in fact have the material powers to redefine the political territories of a country like the US if nothing is done to remedy the increased acidification. Rising seas are already claiming great masses of land in places like Louisiana or Florida.

While creative simulations of embodied nonhuman representation, such as the Council of All Beings or the Theatre of Negotiations, are short-lived experiments, they serve as inspirations for more long-term political engagements. One example is the Danish civil society initiative ‘City of Species,’ which originated in Aarhus in 2017, and have since then spread to other cities, including Copenhagen, under the name ‘Assembly of Species.’399

Here ordinary citizens take on the responsibility of becoming political ambassadors for nonhuman species such as animals, plants, and fungi that live in the area. In the Aarhus branch, there are currently more than 25 species represented, including the red fox, the oak tree, the small tortoiseshell butterfly, and Satan’s bolete mushroom. The role of the ambassadors is not to be experts, but to be spokespersons who acts on behalf of specific

397 For a theoretical recollection of the experiment, see Latour, Facing Gaia, chapter 8. A similar project is currently being developed in Copenhagen by political theorist Lars Tønder. It is set to take place in 2022 with the help of the C art-writer-publishing collective Laboratory of Aesthetics and Ecology.

398 Ibid., 262.

nonhuman species in public matters: What kinds of issues would, for example, the specific species of a butterfly or a mushroom add to the public agenda in the city council? The species assemblies provide democratic inputs into formal political processes, such as public hearings, but they also host educational workshops and other outreach events in order to engage the broader public in these issues.

Another present-day example is the ‘Embassy of the North Sea’ project that began in 2018 and is running through 2030. The Haag-based project was founded by a Dutch research platform, who found inspiration in, among other things, Bruno Latour’s scholarly work and experiments with nonhuman representation such as the Theatre of Negotiations. The expressed goal of the Embassy of the North Sea project is the implementation of political and legal representation of the North Sea. Particularly interesting here is that they recognize that achieving formal representation of nonhumans requires a process of mutual learning. They must begin by learning to ‘listen’ to the North Sea, before they can learn to ‘speak’ with it, and eventually ‘negotiate’ on its behalf. Not unlike the council of all beings, the project is divided into three consecutive phases: a listening phase where the human participants with the help of science and experts will “explore the main ocean currents” of the North Sea and assemble new collectives of human and nonhuman entities; a speaking phase where these new collectives speak on behalf of the North Sea through acts of political activism and public outreach; and, eventually, a negotiating phase where the collectives try to transfer these political energies into more formalized forms of political inclusion, including the potential declaring of the North Sea as “an independent legal entity.” While the project is still in its early phases, it might work as a prefigurative example of the demanding and ongoing political, scientific, and imaginative work needed in order to promote and eventually ensure substantive political representation of nonhumans.

What all of these examples of nonhuman political representation reveal, in their different ways, is that speaking on behalf of nonhuman others, and making their voices heard in political negotiations, require a sensorial and embodied re-attunement. Promoting nonhuman representation cannot focus solely on affirmative attempts to include nonhuman nature into formal institutions, but must also engage in more transformative efforts to become more receptive towards the needs and desires of nonhuman nature in the first place. This work of sensorial attunement is an essential part of why political representation of nonhumans is so crucial.

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representation is so important in the first place: Relations of representation are not simple, unidirectional transfers of political authority, but also a relation of continued, mutual learning. To represent something, no matter if it is a human individual or an ecosystem, an endangered species or a river, requires familiarizing oneself with them and their specific needs and desires. Political representation is, at least when it is done right, always also a practice in exercising our capacities for care and receptivity. This is also why even relatively modest innovations of existing representative institutions, such as for example a green environmental defenders office, might turn out to fuel more radical transformations, because it inevitably opens up public discussions about how best to represent the interests of nonhuman nature.

Conclusion

In order to take the political relevance of nonhumans seriously, democratic activists and scholars alike must continue to pursue and promote affirmative strategies to nonhuman representation that aim to include non-human entities into existing institutions of political representation. For example by extending legal rights to nonhuman animals and natural ecosystems, or by ensuring parliamentary representation of the interests of nonhuman nature. But successful political representation also depends, both in the human and the nonhuman case, on ongoing relations of care and receptivity. Therefore, in addition to institutional innovations of existing democratic channels of representation, citizens and scholars must explore new ways of relating to nonhuman others beyond formal political institutions. These include more transformative forms of representation, such as the artistic and political experiments currently happening around more embodied forms of human representation of nonhumans. Such experiments explicitly challenge anthropocentric assumption of representation as a human-only affair, and aim to make us more responsive to the interests, needs and desires of nonhuman others by cultivating multi-species relations of care and receptivity.

This transformative political work involves new modes of embodied listening and being-present with nonhuman others, but it also requires thinking about how situated practices of multi-species care can come to expand and proliferate beyond its original contexts. Which bring us, finally, to the political questions of speed and scale: Can these situated practices of more-than-human care and receptivity come to scale? And if so, how will they be able to do so fast enough to address the complex ecological and climate challenges of the Anthropocene? These are some of the questions motivating chapter 5 on the role of political leadership. But first, we return to the landscapes of Lemvig.
Interlude III

Winds of Change:
Greening, Growth, and the Globe

It is November 2018, and I am on my way to my first meeting with Lars, the CEO of the local utility company. His name has come up several times during my first week of fieldwork. “You should talk with Lars,” people say, every time the topic lands on climate change. “He is the main guy behind the Klimatorium, the new climate science center that is going to be built here in Lemvig.”

It is a beautiful blue-sky morning, so I decide to walk from my apartment to the utility company. On my way, I pass by the place on the east side of the harbor where the Klimatorium is going to be built. For now, it is still an empty plot of land.

I arrive five minutes early for the appointment. Lars is in another meeting, and I am told by one of the employees it might take a little while. They kindly bring me coffee while I wait. I kill time by reading a magazine, which has a portrait article of Jakob Eileman-Jensen, the current minister of food and the environment, on the front page with the title ‘A Minister Who Knows About Water’.

Lars enters and greets me with a warm smile. “Good to see you! I am sorry for keeping you waiting.” He is coming straight from the other meeting with some local critics of the Klimatorium, which dragged out a bit. We relocate to a meeting room with a big conference table. The room is full of posters and flip-boards with materials about the Klimatorium. On one of the walls is a 3D-rendering of the architectural design for the projected building. Lars catches me eying it. “This is the winning design. It’s impressive, isn’t it?”
Lars has a lot to say, and our conversations flow effortlessly. He came to Lemvig about five years ago, when he was headhunted from a management position in an engineering consultancy firm to take over the local utility company. Having spent most of his work life in Aarhus and Copenhagen, he describes coming to the area as going twenty or thirty years back in time.

"It can seem a bit depressing out here," he says when the topic falls on the difficulties of maintaining local jobs. "The Klimatorium wants to change that, bring the area up to speed."

The Klimatorium intends to address several challenges at once. The official aim is to produce new knowledge and technological solutions that can improve climate mitigation and contribute to a green transition, while creating local jobs and attracting highly educated workers, a scarce resource in the area.

The business ambitions are crystal clear: "We want to be the world’s leading ‘climate manufacturer’. Today no one knows what a climate manufacturer is, but in a few years time there will be plenty of climate manufacturers around the world. If you act now, you can become a frontrunner."

It all sounds promising, and I am drawn in by Lars’s drive and contagious enthusiasm about the project. But while I am sitting there, I cannot help thinking about a recent study published by the National Academy of Science in the US. In the article, leading climate scientists are sounding the alarm and arguing that we are dangerously close to reaching a series of climatic tipping points, which could mean that life on earth, as we know it, is on the brink of collapsing. How can Lars remain this optimistic about the future in the face of what seems like imminent ecological disaster?

"Are you not concerned at all about the prospects of climate change?" I ask.
"No. I am one hundred percent optimistic. One hundred percent. Journalists are always baffled when I tell them this."

He pauses for a second, then continues:

"The world is not going to end. At least not in the next ten generations. We have a remarkable ability as human beings to adapt, and I am convinced that the drive for profit will lead us to the technical solutions we need. The market will solve it."

The idea behind the Klimatorium was hatched at a Danish climate conference in August 2015. Back then, few people thought the idea of an international science center in Lemvig would become anything other than a crafty idea on a piece of paper. But Lars and the local utility company had other plans, and over the next few years the idea started gaining momentum, helped along by the EU-backed climate mitigation project, the Coast 2 Coast Climate Challenge, where the Klimatorium was chosen as one of two milestone projects. With the subsequent creation of an ambitious architectural building design, the project had a concrete manifestation for people to rally around. Eventually, the municipality of Lemvig got on board and helped finance the first part of the building process together with the utility company. The construction process began in August 2019, almost exactly four years after the inception of the idea. Despite COVID-19-related delays, the Klimatorium building was completed in about a year, and hosted its official opening ceremony in December 2020.

In the beginning, the Klimatorium project met opposition among some of the locals. There were those who did not think that the local utility company should spend its members’ money on a climate project, while others simply did not believe the project would ever
materialize. When things first started rolling, however, and people started realizing that the project might attract local jobs and high-skilled workers, the opposition quickly disappeared. Today, the business sector is particularly excited about the project, and several local companies have already joined the Klimatorium project as paying members.

The declared objective of the new Klimatorium is to combine an ambitious climate agenda with creating local jobs and growth. By bringing together public sector agents, private companies, climate scientists, and civil society actors – the so-called ‘Quadruple Helix model’ – Klimatorium wants to help develop innovative technological solutions that address existing climate-related challenges. It already boasts of several projects produced by following the Quadruple Helix model. One of the most notable is a PhD project that used satellite data to tracks land sinks, which helps predict, and in turn prevent, damages to water pipelines and therefore saves costs for the local utility company. A prized example of how scientific knowledge is turned into profitable business. 403

These developments follow in the wake of the area’s adventure with windmills over the past three decades, which has helped pave the way for the Klimatorium. Although the official language has changed from ‘green energy’ to ‘climate change’, the underlying incentives remain intact. As Lars told me during our first meeting, he wants the Klimatorium to do in the climate sector what the Danish wind energy company, Vestas, has done in the renewable energy sector. He wants Klimatorium to become the next multi-billion-dollar success.

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of what is about to become a unique architectonic milestone for the city of Lemvig and its green agenda. The building is supposed to be finished in six months’ time, ready for the official opening in late August. I am baffled by the speed of it all. People in Lemvig often tell me that the distance between thought and action is shorter here than elsewhere. In this case, they seem to be right.

We put on our mandatory white security helmets and bright yellow vests before entering the site. Lars explains to me the thoughts that went into designing the building. The ground floor of the Klimatorium will be open to the public, and there is going to be a café as well as a lecture hall with room for up to 150 attendees. “We want to be able to invite people in and tell them about climate change,” Lars explains. On the first floor, employees from the local utility company and other members of the Klimatorium will have their office spaces, but a few desks are also set aside for students with an interest in climate science, who can apply for a spot.

On a clear spring day like today, the view over the still waters of Limfjorden is breathtaking. It is almost impossible not feel mesmerized. Not just by the view, but by the entire project. Its scale and ambition. An international climate science center on the harbor front in Lemvig – who would have thought! But somehow, I cannot shake the feeling that there is something oddly unsettling about it too. Building this close to a rising waterfront seems almost... too confident?
On our way back to his car, Lars repeats a mantra I have heard several times: “The Klimatorium is an attempt to think of climate change not as a threat, but as an opportunity.” For a long time, it must have sounded naïve, or at least overly optimistic, and in the beginning many locals were skeptical about the Klimatorium project. But there is a weight behind the words now, evidenced by the building behind us. The doubts have vanished.

“What matters is that you keep repeating and believing the story until it succeeds. If it seems impossible under the current circumstances, you must set things in motion that can change those circumstances. You must be willing to act despite the uncertainty. Things like these are eighty percent psychology and twenty percent facts.”

After a few seconds of silence, he adds:

“You can talk things into being true.”

The first windmills in Lemvig were built in the early 1990s, and in the decades that followed, windmills spread rapidly across the landscape. Now, about thirty years later, the municipality produces the most renewable energy from terrestrial windmills in all of Denmark, measured per capita and per hectare land. How did it happen? In short: Business. People in the area have learned, either on their own or through others, that the green agenda can indeed be a good business case. There are people in Lemvig who have earned a small fortune on being first-movers in the wind energy sector.404 Windmills are not only a good business case for individual investors, they also benefit the community. Every

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404 One of the major windmill investors in the area has repeatedly been listed among the top 100 richest people in Denmark, and his fortune is estimated to be worth more than a billion DKK.
time a new windmill is built, a share is paid out to the municipality and set aside for local projects, such as renovating community houses or funding new businesses. Over the years, it has amounted to a significant revenue stream in a place like Lemvig.

The public knowledge of the economic success stories around windmills have helped manifest the importance and value of the green agenda in Lemvig. They have seen with their own eyes that being green is not only good for the environment; it is also good for business. Today, government officials and elected politicians will not hesitate for a second before proclaiming that the municipality of Lemvig is a green municipality. As the head of the local environment and planning office, Claus, told me during our first meeting:

“If everyone just did like us when it comes to renewable energy, there would be no problem. In 2020 we will produce more green energy from wind power alone than the entire municipality consumes.”

The public support for windmills in the area is not unified, however, and there are recurring discussions about the construction of new windmills, echoing the phenomenon that has elsewhere been referred to as NIMBY (not-in-my-backyard). According to the local authorities, protests over noise and other types of nuisance related to windmills are usually spearheaded by summerhouse owners, who do not share the same commitment to the local area and the revenues produced by the mills. Nonetheless, I spoke with several people living permanently in Lemvig, who were also concerned about new windmills, particularly about the plans to build large ones close to the West coast, which they felt

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405 Personal interview with the head of local environment and planning, Claus, at his municipality office in Lemvig, November 20, 2018.
406 Ibid.
would risk ruining some of the most valuable they had: the natural landscape.\textsuperscript{407} Then again, there were also those who felt that windmills had become a trademark of the area, and that seeing them in and alongside the natural landscape made them proud.

What is without doubt is that the green energy adventure with windmills starting in the early 1990s has been a trailblazer for the broader environmental agenda in Lemvig. It has proven that working for a more sustainable future can provide several benefits at once, and that being green can in fact be accompanied with bringing jobs and money to the area. In the past decade, discussions have taken place in the city council over whether the municipality should keep focusing its environmental efforts on windmills and green energy, or if it was time to expand the green ambitions to other sectors and strive to become a ‘climate municipality’. According to Arne, the left-wing political and organic farmer introduced from interlude II, climate-related concerns have historically been met by fierce opposition in the city council on the account that energy policy and climate policy should not be mixed up.\textsuperscript{408} However, things have changed in recent years, and in November 2018 the city council unanimously adopted a new political vision for the municipality, which entails ‘climate’ and ‘green transition’ as part of its core strategic objectives.\textsuperscript{409}

Carlo, who works for the Danish Coastal Authorities and has helped promote the climate agenda in Lemvig, described the recent developments like this:

“\textquote{The climate has been invited in. The agenda has changed, nationally as well as locally. Today Lemvig wants to be a climate actor. They didn’t want that just five years ago.}”\textsuperscript{410}

Lars, the person behind the Klimatorium, is quick to identify at least one of the key drivers behind this change:

Lars: “Just a few years back, politicians in the local council were skeptical about the climate agenda. They wanted to keep doing what they were already doing well. They wanted to remain a green energy municipality. That has changed. Today, they want to be a climate municipality.”

Me: “Why do you think that is?”

Lars: “The Klimatorium.”\textsuperscript{411}

\begin{flushright}\textsuperscript{407} As the former headmaster of Lemvig gymnasium, Lasse, said after airing his dissatisfaction with the plans to build new offshore windmills close to the coast: “We must not forget the value of beauty.” Personal interview on November 23, 2018. \\
\textsuperscript{408} Personal interview with Arne, at his farm just outside of Lemvig, November 22, 2018. \\
\textsuperscript{409} “Vision for Lemvig Kommune 2019-2023” (Lemvig Kommune, 2019), http://lemvig.dk/Files/Files/%C3%98konomi\%20og\%20HR/Vision\%20for\%20Lemvig\%20Kommune.pdf \\
\textsuperscript{410} Personal interview with Carlo, at the National Coastal Agency in Lemvig, November 26, 2018. \\
\textsuperscript{411} Personal interview with Lars, at the local utility company in Lemvig, November 26, 2018. \end{flushright}
In 2015, a group of entrepreneurs and scientists affiliated with the American think tank the Breakthrough Institute circulated a political manifesto on how to best address the challenges associated with the Anthropocene, which they called *An Ecomodernist Manifesto.* The aim of the manifesto was to ensure the realization of what the authors call a “good, or even great, Anthropocene.” According to the manifesto, the tools for ensuring that are: capitalism and economic growth, liberal democracy and human reason, science, and technological innovation. In short, to achieve a good or even great Anthropocene and ward off the worst consequences of the ongoing climatic and ecological crises, humanity will have to promote, indeed double down, on the very dynamics that have brought about the Anthropocene in the first place.

Arguably, the most striking element of this ecomodernist vision is its unwavering optimism about the future and the promise of sustained human progress:

> We offer this statement in the belief that both human prosperity and an ecologically vibrant planet are not only possible but also inseparable. By committing to the real processes, already underway ... we believe that such a future might be achieved. As such, we embrace an optimistic view toward human capacities and the future.

In a time where climate scientists around the world are sounding the alarm and arguing that we are heading towards climate disaster, there is little alarmism or concern to be registered among the ecomodernists. Not only do they have faith that humankind’s “extraordinary powers” will eventually help secure a good Anthropocene through technological innovation and, if need be, large-scale manipulation of the global climate. They believe that it can and indeed will happen within the legal and institutional framework of already existing liberal, capitalist democracies.

This ecomodernist outlook is no fringe position. In fact, it might just be the most dominant and widespread political discourse on climate change in Western democracies. In the end of 2020, the Danish government presented their national climate strategy, which promotes technological solutions as the key to success. It entails investments in already

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412 The Breakthrough Institute, “An Ecomodernist Manifesto.”
413 Ibid., 7.
414 For a more thorough engagement with the manifesto, see chapter 1.
416 Ibid., 7 ff.
417 Ibid., 31.
existing technologies, such as the creation of large artificial ‘energy islands’ with off-shore windfarms, as well as less developed technologies like Power to X (P2X) and Carbon Capture and Storage (CCS). The underlying motivation is that the green transition must be combined with increased economic growth and domestic job creation. In fact, the Danish minister of Energy and Climate, Dan Jørgensen, has repeated time and again that the green transition cannot cost growth or jobs. If it does, other countries will not want to follow suit. Similar dynamics are present at the level of local climate change politics in a place like Lemvig. According to the local politician Arne, the main hurdle for pushing a more ambitious climate agenda in the local council is that the governing majority party, Venstre, believes that the fight against climate change should not cost anything. In a similar vein, it is not difficult to see the similarities between the ecomodernist attitude and the founder of the Klimatorium’s talk about technological progress, job creation, and economic growth. When it comes to the more practical application of the ecomodernist outlook, the manifesto pretty much endorses the Klimatorium’s business plan to the letter: “Accelerated technological progress will require the active, assertive, and aggressive participation of private sector entrepreneurs, markets, civil society, and the state.”

The problem is, however, that the ecomodernist outlook, and its emphasis on technology and economic growth has severe limitations. In fact, few scientists any longer believe that a livable, ecologically sustainable future for human beings on this planet can be squared with sustained economic growth. Green growth is not going to cut it. Neither are technological solutions, whether those already known or those projected into the future, going to save us. The most drastic technological ‘fixes’, such as those referred to under the umbrella of geo-engineering, are likely to end up doing more harm than good. Even the United Nations’ Intergovernmental Panel on Climate Change (IPCC), a relatively moderate institution when it comes to official policy recommendations, has stated that warding off even the gravest consequences of the ongoing ecological crises is going to require “rapid, far-reaching and unprecedented changes in all aspects of society.”

Nevertheless, change comes in many forms, and it would be too hasty to dismiss a project like the Klimatorium altogether on the charge that it is too ecomodernist and not

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419 Personal interview with Arne, at his farm outside Lemvig, November 22, 2018.
420 The Breakthrough Institute, “An Ecomodernist Manifesto,” 30.
422 For a more detailed discussion, see chapter 1.
quite radical enough. After all, if the history of windmills in Lemvig has taught us one thing, it is that change often overflows its initial intentions. When a few locals in the early 1990s first decided to invest in the first windmills, no one could have foreseen that a few decades later, the area would become not only a frontrunner in green energy production, but also use that momentum to take on other challenges related to climate change and embrace an identity as a climate municipality. We should be able to say, therefore, that politics-as-usual is radically insufficient to face the challenges ahead of us without dismissing the transformative potentials of an initiative like the Klimatorium too quickly. It is a tricky balance. The project is currently straightjacketed by technological optimism and myopic (albeit understandable) concerns about economic growth and local job creation, but it is still too early to say whether it can provide a platform for more far-reaching and radical movements for change.

The question to ask of initiatives on the climate agenda is not necessarily whether they are motivated by exactly the right intentions – whether they are ‘radical enough’ – but what kinds of change and transformations they might, potentially, give rise to. Despite troubled and less-than-innocent motivations, could a place like Klimatorium help push beyond politics-as-usual down the road? Might it, for example, help make the urgency of the ecological crises be felt more acutely in a place where that is otherwise not the case?

For people to be willing to fight for political change it has to make sense for them, which can mean many things including, but not limited to, material personal gain or an increased sense of belonging. But even before that, the very need for change, the notion that there is a problem to begin with, must be felt somehow. In his Facing Gaia lectures from 2017, Bruno Latour argues that becoming sensitive to a problem, which has hitherto been neglected or even actively dismissed, requires repeated loops of knowledge that must be travelled several times in order to really take effect.424 Think about “how many loops some of you had to follow before giving up smoking,” he says. “It is possible that you always knew that cigarettes caused cancer, but there’s a long way to go between that ‘knowledge’ and really stopping smoking.”425 Becoming sensitive to a problem, and eventually being able to take action on it, is “a slow, gradual fusion of cognitive, emotional, and aesthetic virtues thanks to which the loops are made more and more visible.”426

424 Latour, Facing Gaia, 139ff.
425 Ibid., 140.
426 Ibid.
With a problem as wicked as climate change and the ongoing ecological crises of the Anthropocene, the issue of sensitivity is particularly pertinent. If Latour is right that “it is only when humans see pollution falling back on them that they begin really to feel that the Earth is in fact round,” how can global planetary changes, such as changes in atmospheric compositions, the temperatures of the oceans, the slow degradation of soils, become felt and experienced in a local way? Questions like these are very much alive in a place like Lemvig. One of the people in Lemvig, Gunvor, who had been active in the environmental movement during the 1970s, expressed the problem in a particularly striking way:

“Back then we fought to keep toxins out of our sausages. Today, the fight is different. It exists at a different level somehow, which is both more abstract and more global.”

Or as the local high school teacher, Uffe, said during one of our conversations about climate change:

“What matters to people is what is close and immediate to them. Whether its preventing floods in the harbor or earning money on windmills. You have to be able to see a benefit to yourself.”

The same sentiment was expressed, in more general terms, by the local high school’s current headmaster, Bo:

“It has to make sense for people. They have to be able to see what is in it for them.”

In their daily lives, the most important question for many people remains: Why should I care? Or why should we care? Talk about global temperature projections and abstract threats is unlikely to cut it, if people have not already been through several loops of climate awareness. The first loop will have to begin somewhere closer to home. In Lemvig, like elsewhere, the goal is to find a local anchoring and then work from there. As Carlo, who works for the Coastal Agency and has helped push the local climate agenda, puts it:

“You can help push the green agenda in a place like Lemvig by speaking to other agendas that are more immediately relevant to people. It can be about,
for example, securing people’s livelihoods by preventing risks of floods, pollution, or poisonous substances, or about the prospect of personal gain, such as money, fame or recognition. But the climate agenda has to be anchored in concrete incentives for people.”

Even if this mentality puts a limit to what agendas can be pursued in the short run, it adds new loops that might, in turn, engender other loops. You are more likely to push for a reduction of meat consumption and agricultural reform, if you have already started eating more vegetarian for reasons of, say, personal health or animal welfare. Similarly, it is easier for a municipality to take action on climate change as one of their strategic objectives, if they are already, for other reasons, frontrunners in green energy. And so on. Loops engender other loops.

At the same time, however, given the state of the current ecological and climatic crises, we cannot avoid also raising pressing questions of speed and scale: How can and will local actions scale, and can they do so in time to face ecological challenges at a global level? I return to these questions in chapter 5 on political leadership. But it is worth noting here that the smaller loops in a place like Lemvig are assisted by other loops that are more global in reach and might help make the climate agenda felt more acutely. Several people in Lemvig mentioned extreme weather events as something that have helped further the local climate agenda. A journalist from the local newspaper, Benny, put it the following way:

“People out here have become more concerned about climate change after the storms [in 2013 and 2015] and the hot summer [of 2018]. Those kinds of things matter. That matters to people.”

Another reason to be hopeful is that when things first start rolling – when the winds of change begin blowing in the right direction – action can sometimes happen faster than anyone could have hitherto predicted. This is the case even more so in a small community like Lemvig where bureaucracies are smaller and the distance from thought to action shorter.

431 Personal interview with Carlo, at the National Coastal Agency in Lemvig, November 26, 2018.
432 This is backed up by statistical evidence from a Danish context. See Søren Damso-Svendsen, “How Weather Experiences Strengthen Climate Opinions in Europe,” West European Politics, 2020, 1–15.
433 Personal interview with Benny, at the Folkebladet Lemvig, November 26, 2018.
It is December 9, 2020, and I am sitting in front of my computer at my kitchen table. I have just tuned in on the video stream for the opening of the Klimateum. It was supposed to be a grand opening to the public, but the global corona pandemic has, as it has with so many other things, forced a change in plans. Instead, a small group of people close to the project has gathered in the new building. The rest of us must follow from home.

As the video stream pans around the room, I count around thirty people. Mostly middle-aged men in suits. A voice is coming out of the computer:

“I was not the most enthusiastic person when Lars first presented his idea. In fact, I did my part to shut it down... but Lars defended his ideas with all he had. And thank you for that, Lars. Otherwise we would not be standing here today.”

On stage is Jørgen, the former mayor of Lemvig and the current chairman of the Klimateum board. He has followed the project from its beginning, and like many others, he started out skeptical. Now that it is here, his enthusiasm is unequivocal:

“The new lighthouse here in Lemvig is already blinking and have done so for a while. So clearly that it can be seen on the other side of the planet in New Zealand, where they are currently building its twin.”

“The Quadruple Helix-model. Well, here in Lemvig we are still trying to familiarize ourselves with that foreign word. But it is clever, for sure. Only the imagination sets the limits.”

The final speaker of the day is Lars, the CEO of the Klimateum. He begins by recounting how it all began:

“We are challenged by where we are. We have water on all sides. We have rising ground water levels, and a North Sea that pushes in. More water in less time.”

“We have to think ahead.”

“We are about to take the next step. The task of becoming a modern utility company in keeping with the times has to happen through new knowledge.”

In 2017, the Klimateum was picked as one of two Danish milestone projects in the European Union’s Coast 2 Coast Climate Challenge. But there was still a long way
to go from idea to practice. The physical design of the building became a turning point. Only a few days after the winning design was selected in September 2018, a design magazine in the US was writing about the Klimatorium. The building helped make the concept of Klimatorium more concrete. It provided a material anchor for the vision. That, and the so-called Quadruple Helix model:

“Klimatorium breaks down siloes. That is what we call Quadruple Helix. It is a difficult word, but if you repeat it often enough, you can actually pronounce it.”

“It is pretty simple. The public is faced with climate challenges. Universities have the solutions, but usually they end up in an article that goes nowhere. (...) To make it work, you need private industry, and in the end it benefits civil society.”

“The central thing we do in Klimatorium is bring these parties together. It has to be facilitated, because it is often difficult to get the communication right.”

The ambitions of the Klimatorium extends far beyond the Danish border:

“Klimatorium is Denmark’s international climate center. Climate challenges are global.”

“A while ago we were contacted by people from New Zealand. The Māoris. They were looking for collaboration. They run 500-year plans to protect their waters and the climate. But they also have an eye on business. Otherwise it won’t happen.”

“They asked what we were doing in Denmark, and the Klimatorium was mentioned, although it was still being sketched out. Now they are building their own Klimatorium in New Zealand after the same recipe, the Quadruple Helix.”

After his speech, Lars announces to the audience that the Klimatorium has received a video greeting from their partners in New Zealand. The screen fades away from Lars and the Klimatorium in Lemvig, and is replaced by the soothing sounds and images of greenery and crystal-clear waters. A voiceover begins. The sound of an old man, speaking a foreign language. Subtitles come in handy.

“This is a celebration of life. Our spiritual voice reaches out to our ancestors, then comes back to us, your descendants. Today we pray for God, in the heaven above, to be near us. It is important that your strength, spirit, and compassion encompasses us all.”
The images of running water are replaced by the speaker, Rore Stafford, the director and Kaumatua (a Māori term for male elders) of the Wakatu Incorporation in Nelson, New Zealand. Rore is wearing a navy suit and an amulet around his neck.

“My greetings reach all the way to Denmark, to everyone one of you, to those who represent your community. We recognize this happy occasion, the opening of this new house made of ideals passed through generations, with a reserve of knowledge of international importance that will come to the benefit of the entire globe.”

“We live in a continually changing modern world. Let us make sure that we do not lose sight of the fact that all of us depend on unique water landscapes that sustains us.”

One after one, representatives from the Wakatu Incorporation and local officials from the city of Nelson appear on the screen to give their greetings to the Klimatorium in Lemvig, switching between Māori and Australian English. The Chairman, Paul, talks about the business side, about technology and collaboration around the world. The local mayor talks about her visit to Lemvig in 2018, which left her inspired and confident about the Quadruple Helix model.

Towards the end, one of the directors from the Wakatu Incorporation presents two ‘Kohas’ (special gifts) for the Klimatorium. The first Koha is a local Pakohe, a dark sedimentary rock also known as Argillite, with an inscription. The second Koha is a Pīrimana, a sea shell turned into a flute-instrument, often used at ceremonial gathering. They have prepared two identical sets of Kohas. One for the Klimatorium in Lemvig. The other for the soon-to-be Klimatorium in Nelson, NZ.

The images of running water and the Māori voiceover returns:

“I invoke the lifeblood of the preternatural. May the spirit and energy reach the people in Denmark. It is an honour to be part of your opening. Your building. Honor the heavens. Peace on earth. Good will to humanity. Amen.”

Suddenly, the stream is back in Lemvig. The audience is clapping. I have not moved an inch from my kitchen table during the past hour, but it feels like I have travelled between two places that could hardly be any further apart. Somehow, in an improbable partnership, they have become connected.
When problems are global in scale, the challenge of locating meaningful potential for change becomes particularly difficult. What does it matter what we do in a small country like Denmark when climate change is a global phenomenon? But even the most global phenomena become global only through the inter-stitching of an endless number of smaller, and often very diverse, local instantiations. As the anthropologist Anna Tsing has made it part of her lifework to study, global dynamics of capitalism are, despite their seemingly omnipotent character, decisively “patchy”.\textsuperscript{434} The global supply chains of capitalism are made up a diverse patchwork of local communities and economies that operate on the edges of capitalist dynamics, and often work in distinctly non-capitalist ways, involving no sustained accumulation of capital and wealth and without the ability to scale in any profitable way.\textsuperscript{435} Similarly, even if global warming is, as the name suggests, a global phenomenon, it is not a smooth, unified, and equally shared condition. Global warming is patchy too. Local consequences come and are felt with different frequencies and intensities, usually in ways that exacerbate already existing inequalities, and the solution needed to address them vary from place to place.

These points might seem banal, but they entail an important and often overlooked lesson, namely that the idea of a singular globe is a fiction. It can be a useful fiction, indeed, but it risks transposing the impetus of change into a utopia, a no-place, with no real possibility of action. Even if we can and sometimes must think globally, we still have to act locally, as the old activist slogan goes. Every action taken on the climate agenda can always be criticized for its provinciality, but there really is no alternative. Change must start local, because there is no other place to start.

The important question is how to make local actions resonate with and help promote other local actions in meaningful ways, in order to eventually address the global but differentiated phenomenon that is climate change and the ongoing ecological crises. Perhaps we can learn something about local processes of change and their ability to scale by looking to a place like Lemvig. One of the things that struck me the most, during my fieldwork, was how the local and the sense of community that exist here enable collective action. Ingeborg, a social anthropologist who lives Ferring just outside of Lemvig, described it the following way:

\textsuperscript{434} Tsing, \textit{Friction}; Tsing, \textit{The Mushroom at the End of the World}.
\textsuperscript{435} Tsing, \textit{The Mushroom at the End of the World}, 61ff.
"You have to make things happen on your own. No one else will do it for you. And it makes sense to do it, because it is your own area you are helping, and your own friends that you are doing it with."

"People feel a commitment to the local area. Which can help make things happen that could not happen in for example Copenhagen. There most people aren’t attached to their local community in the same way."

At the local level, things move all the time, and you are able to feel the small changes in a different way than the ‘big changes’ happening at a national or international level. I saw this play out in practice almost everywhere I looked. From the acceptance of having windmills nearby, because it benefits the local community, to the local initiative created to save the local lighthouse from being closed to the public, or the way that people have gathered around Klimatorium.

Part of the reason why the sense of community is so strong here is no doubt related to a feeling of being ‘far away’ from national decision-makers. There is a sense that people in the area have, for decades, been left to their own devices, and in turn been left behind in a competitive process of globalization with schools closing, health clinics moving away and jobs disappearing. It is more or less a collective truth among the locals that “no one from Copenhagen will save us.” They have to make things work on their own. If they are dissatisfied with something, they call the mayor and work it out amongst themselves. Several people even expressed sentiments to the effect that they were are willing to go right to the edge of the law, sometimes even across, to make things work locally.

Carlo, the engineer from the Danish Coastal Authority introduced above, offered the following insight when we talked about how to promote change on the climate agenda:

"Change cannot be controlled from above. You need to have people on board. (...) If central decisions from the parliament are going to be effective in the far edges of society, it requires that they are locally anchored. Otherwise people will resist.

This is another reason why change must start locally. Even in a geographically small and relatively equal country like Denmark, a common national agenda can be difficult to promote in a time where political cleavages have cemented and drawn rural and urban communities further apart. Change has to make sense for people in their local, daily lives. But change cannot end with the local. Neither is there any reason to think it will. A popular saying in Lemvig goes like this: ‘Lemvig is far away. But far away from what?’ Sure, the distance between Lemvig and the national parliament in Copenhagen often seem great. But

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436 Personal interview with Ingeborg, in her home in Ferring, February 13, 2020.
437 Personal interview with the local ranger, Jens, at his municipality office, November 29, 2018.
438 Personal interview with Carlo, at the National Coastal Agency in Lemvig, November 26, 2018.
Copenhagen is not the center of the world. For more than a century, Lemvig has been connected to places like Hamburg and Great Britain through trading routes, and today many of the climate projects in the area are closer affiliated with international collaborators than the national parliament. As Carlo put it, they sometimes have to “bypass the national level and go directly from the local to the international.”

Even a locally anchored project like the Klimatorium, which started in a small office at the local utility company in Lemvig, is entangled with the rest of the world. Its relations now extend all the way to the local Māori people in Nelson, New Zealand. Who would have thought? In the end, global action is but a composition of local, situated actions stitched together. The local is not simply local.

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439 Personal interview with Carlo, at the National Coastal Agency in Lemvig, November 26, 2018.
The Politics of Global Swarming: Democratic Leadership in the Anthropocene

This chapter investigates the role of political leadership today and argues for a new materialist rethinking of political leadership, which envisions leadership as an inherently demanding – and indeed ecological – accomplishment that dispels illusions of central control or quick fixes. Where familiar notions of political leadership, such as those underlying ecomodernist and eco-Marxist approaches to climate politics, rely on state and human-centered understandings of political leadership, a new materialist understanding sees political leadership as a much more multi-sited and anarchic phenomenon distributed across human and non-human agencies. Despite being more demanding, this new notion of leadership gives us reasons to be more hopeful about the future, because it theorizes political change as a complex and non-linear process. Even if the ongoing efforts to combat climate change are currently developing too slowly – which they are – the hope remains that the dispersed local struggles that exist on the ground today might come to resonate, pick up speed, and reach a critical mass faster than expected, which in turn might propel into being some of the sudden and far-reaching political transformations needed.

This chapter builds on the previous conceptual chapters by bringing the ontological insights of chapter 3 beyond the framework of formal institutions and mechanisms of political representation discussed in chapter 4, and towards the extra-institutional dimensions of a democratic politics of change. More specifically, it opens by surveying two ideal-typical approaches to political leadership around climate change, the ecomodernist and the eco-Marxist, and argues for the need to move beyond both of these human-centric approaches. As an alternative, the chapter offers a new materialist notion of political leadership that is developed both in conversation with new materialist literature – Jane Bennett’s writings on agentive assemblages, Rom Coles’ discussions of complex systems theory, and Bill Connolly’s theory of a politics of swarming – and by placing it in the
context of the ongoing political practices of communities around the world combatting climate change today.

The chapter concludes by drawing together all of these insights and suggesting a new ideal for political leadership in the Anthropocene modelled after Polynesian wayfinders, who navigated by remaining responsive to the cues from their surrounding more-than-human environments. The hope being that such an ideal can work as a counterweight to more conventional ideals of political leadership that tend to (over)emphasize the intentional actions of sovereign human individuals.

The gridlock of climate leadership: Ecomodernism versus eco-Marxism

Two ideal-typical approaches to climate politics continue to play an important role in the contemporary political discourse and action around climate change. The first of these emphasizes the role of existing liberal-democratic institutions and technological progress as the only feasible pathway to solving the climate crisis. We can call this the ecomodernist approach. The second one promotes, in direct opposition to the ecomodernists, direct and militant collective action aimed at overthrowing existing political structures, the end of capitalism, as the only realistic path forward. This is the eco-Marxist approach. Let us address each of them in turn.

Ecomodernism and liberal leadership

In the Ecomodernist Manifesto from 2015, a group of scholars and entrepreneurs outline their path towards solving the climate crisis and realizing what they call a ‘good’ Anthropocene. The core message of the manifesto is that the climatic and ecological challenges of today, and global warming in particular, can and should be solved through “knowledge and technology, applied with wisdom.” Absent “profound technological change” there simply is “no credible path to meaningful climate mitigation.” While the ecomodernists agree that today’s ecological crises pose a great challenge, they see no reason why should not overcome this one too – like we have overcome other challenges in the past.442

The ecomodernist manifesto embodies one of the most explicit defenses of a techno-optimist approach to the Anthropocene and its ecological crises – but they are far from alone in affirming some version of it. Ecomodernism have become the language of choice for many states as well as business leaders today when faced with the lack of meaningful political action on the climate agenda. It goes like this: Do not worry. We will be fine. Solving climate change without hampering economic growth is possible. By setting ambitious political

441 Ibid., 21.
442 For a more thorough engagement with the ecomodernists, and their manifesto, see chapter 1.
goals in 2030 or 2050 and funding research in green technologies, we are going to make it out of this mess
in one piece. No need to panic. Underlying this outlook on climate change is a particular understanding of what political leadership is and how it ought to be exercised, which draws part of its theoretical flat from a tradition of political liberalism running through thinkers like Mill and Schumpeter – perhaps even all the way back to Plato – and up to recent liberal theorists such as John Rawls and Jürgen Habermas. In *Political Leadership and Contemporary Liberal Theory* from 2007, John Horton notes that contemporary liberal theorists such as Rawls, Dworkin, Raz, and others have had remarkably little to say about the role of political leadership. As Horton writes, this absence is no surprise, knowing that liberal political theory have paid little attention to, if not explicitly displaced, the relevance of the everyday, non-ideal, operations of politics. The lack of interest in a messy concept like political leadership resonates with the secondary role ascribed to politics.

The ecomodernists are, in other words, extending a long-held liberal mistrust in politics, whether it is the politics of the state or the politics of the people. This does not mean that politically appointed governments have no role to play in combating climate change, but their job is primarily to provide the right conditions – the right legal-institutional framework – under which economic growth and technological innovation can thrive, while the sources of change and progress originate elsewhere. The role of politics becomes a matter of technocratic management more than one of political leadership. Following this logic, the ecomodernist manifesto puts a high premium on scientific knowledge and technical expertise with the words “technology,” “technologies,” “technological progress” and “technological innovation” appearing twenty-five times in as many pages. For the ecomodernists, the real leaders – the ones pushing the frontiers of progress – are the scientists and the entrepreneurs assisted by elected politicians. Not only does this reduce the emphasis on the political dimensions of leadership, it also turns political leadership into an elitist affair: If tackling climate change is the prerogative of scientists and entrepreneurs, assisted by a small group of political officials, there is little to no role to play for the average citizen in promoting change, except as a consumer of new green technologies. Citizens are left entirely to pursue their own conception of happiness within the legal framework and the incentive structure it provides.

Historically, elements of elitism has been a persistent part of the liberal tradition. Today, one of its most explicit expressions can be found in contemporary theories of

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444 For a more detailed discussion of this, see for example Bonnie Honig, *Political Theory and the Displacement of Politics* (Cornell University Press, 2016).
446 The Breakthrough Institute, “An Ecomodernist Manifesto.”
‘epistemic democracy’, which argue that (one of) the main justification(s) for democracy is its capacity for improving knowledge through democratic decision-making process.\textsuperscript{447} This has even led some proponents to suggest, along the lines of John Stuart Mill’s old advice, that citizens’ votes should be counted or weighed according to their level of expertise.\textsuperscript{448} This elevated role of knowledge and expertise is also expressed, although in more subtle ways, in liberal theories of ‘deliberative democracy’, such as in the writings of Jürgen Habermas. While Habermas emphasizes the relevance of the informal public spheres of civil society as important vehicles for contesting and providing inputs to the formal sphere of institutional politics and rational decision-making, this dual understanding politics relies on a hierarchical relationship; the scattered voices of civil society must be channeled into the political and formalized, eventually turned into legislation, as part of a due democratic process.\textsuperscript{449} The unruly disruptions of extra-institutional politics are disciplined by being subsumed under the conciliatory dynamics of rational decision-making. The justification for this disciplining relies, in part, on a belief in the rationalization of political opinion that happens in the giving-and-sharing of reasons that takes place in the deliberative-democratic process. The process is meant to weed out unreasonable extremities and facilitate a movement towards a reasoned consensus, even if such a consensus is never reached. This resonates with the concluding parts of the ecomodernist manifesto, in which the authors are invoking “liberal principles of democracy” to call for a reasoned dialogue, as opposed to extremism, when it comes to dealing with the challenges of the Anthropocene.\textsuperscript{450}

Summarizing, we can identify three important characteristics of a liberal conception of political leadership underlying the ecomodernist approach. First, it emphasizes formal institutions over political intervention; the role of elected politicians is to manage more than it is to lead, and to provide the right institutional conditions for technological progress, which includes supporting the role of science and the free exchange of economic markets. Second, it is elitist rather than popular, and emphasizes technical knowledge and scientific expertise as the primary vectors for change; societal progress happens at the hands of a small group of societal leaders made up of scientific experts, market entrepreneurs and government politicians, while the average citizen, and everyone in between, have little role to play. Third, and finally, it relies on a specific concept of human


\textsuperscript{449} Habermas, \textit{Between Facts and Norms}.

\textsuperscript{450} The Breakthrough Institute, “An Ecomodernist Manifesto,” 31.
reason and human capacities for rational decision-making that fuel believes about (sustained) technological and societal progress.

Eco-Marxism and post-Marxist leadership

The ecomodernist approach to climate politics can be contrasted with what I call the eco-Marxist approach. Where ecomodernists believe that the ongoing crises of the Anthropocene can and should be solved within the framework of existing liberal-democratic societies, eco-Marxists argue that solving the ecological crises requires a radical break with existing economic and societal structures.451 The central object of critique for the eco-Marxists is what Andreas Malm has called ‘the fossil economy’: A historically specific socio-economic constellation that has its origins in late 18th century Britain with the invention of the steam engine, which ushered in a transition from one type of energy source, primarily waterpower, to a dependence on fossil fuels, primarily coal.452 If you had access to capital and a steady flow of labor – which there was plenty of, because the factory, contrary to the waterworks, could move around freely – you could increase energy outputs simply by adding one more engine and burning more coal. The increased reliance on machinery that followed made employers less dependent on manual labor, and as a consequence the power balance between workers and employers shifted dramatically.453 This two-fold development – the possibility of infinite expansion and the machine’s remolding of social relations of power – planted the seed for the crises facing the planet today. With its continuing combustion of fossil fuels, fossil capitalism has placed the earth on track towards large-scale ecological breakdown.

According to the eco-Marxists, one of the main flaws of the ecomodernist understanding of the Anthropocene is that it wrongly places humanity as a whole as the driver of climate change, and thereby completely ignores the specific social and historical relations of power that lies at the foundation of today’s ecological challenges.454 What is needed, instead, is a head-on confrontation with the real problem, fossil capitalism.455 In a world where the richest 1 pct. has a carbon footprint 175 times larger than the poorest 10 pcr., we cannot afford not to draw a line in the sand, Malm argues.456 To maintain any hope of addressing the current crises, people must push for a radical polarization between the capitalist elites and everyone else. They must: “Dare to feel panic. Then choose between

453 Ibid., 222.
454 Malm and Hornborg, “The Geology of Mankind?”
456 Malm, *The Progress of This Storm*, 189.
the two main options: commit the most militant and unwavering opposition to this system, or sit watching as it all goes down the drain.  

Where the ecomodernist approach draws its theoretical fiat from a tradition of liberalism, the eco-Marxist approach resonate with a diverse theoretical tradition of political leadership that runs from Machiavelli over Rousseau to Marx himself, and find contemporary proponents in post-Marxist thinkers such as Jodi Dean, Alan Badiou, and Chantal Mouffe. While present-day post-Marxism entails great internal variation, it is still possible, as with the liberal conception, to identify a number of ideal-typical characteristics of a post-Marxist notion of leadership.

The first element that brings together many different strands of post-Marxism is a shared insistence on the identification of a single antagonism, such as ‘the capitalist elites’ versus ‘the people’, which must be pushed to its radicalization through (militant) popular struggle. The real problem for political leadership on the left today is that it has lost sight of that antagonism, thereby losing sight of what Jodi Dean calls “the communist horizon.”

Liberal democracy has, Dean argues, worked as a fantasy, a smokescreen, which has prevented people from taking part in the real struggle against the capitalist system. There is an urgent need to shift the perspective away from “the democratic milieu” and “toward militant opposition, tight organizational forms (party, council, working group, cell), and the sovereignty of the people over the economy through which we produce and reproduce ourselves.” Or, as Chantal Mouffe formulates it: “It is only when division and antagonism are recognized as being ineradicable that it is possible to think in a properly political way.” Consequently, the post-Marxist conception of political leadership is inherently anti-establishment. Where liberalism localizes political leadership primarily within formal institutions such as scientific labs and parliaments, the post-Marxist view has little faith that genuine change will come from within those institutions. They are, after all, the product of the system that created the problems in the first place. The impetus for change will have to be found and nurtured outside those institutions, for example in social movements that push for radical change.

Nevertheless, post-Marxist conceptions of leadership remain, at least in some formulations, quasi-elitist. Even though revolutionary politics are shaped outside formal institutions, among the masses of the people, it still requires frontrunners that can lead and

457 Ibid., 226.
459 Ibid., 21.
460 Ibid., 11–12.
unite them. Alain Badiou, for example, argues for ‘the vital importance of proper names in all revolutionary politics.’ While the revolution itself will have to be carried out by “the politics of the anonymous masses”, an avant-gardist front of extraordinary people are needed to “represent it.” Whether it is Robespierre, Marx, Lenin, Rosa Luxembourg, Che Guevara, or today perhaps Greta Thunberg, it is in the image of great individuals that the anonymous, ordinary individuals “unrepresentable as such, is combined and counted combined and counted as one” collective force.

Summarizing, we can identify at least three important characteristics of the concept of political leadership underlying the eco-Marxist project: First, it emphasizes a single antagonism over dispersed action; there is a need to come together as a single movement around an anti-capitalist project, which can help take down fossil capitalism. Secondly, it is inherently anti-establishment and, at least in a transitional phase, anti-democratic. Working through formal democratic institutions is not going to cut it; a much more militant, even anti-democratic, opposition is needed. As Badiou writes: “I am not sure that the word [democracy] can so easily be salvaged, or, at any rate, I think that making a detour through the Idea of communism is unavoidable.” Third, and finally, it relies – although to a varying degree – on the idea of avant-gardes that can lead the anonymous masses. For Badiou, this amounts to great individuals who can help unite the people, but we might also think of it, in less individualist terms, as the people on the frontlines of social movements, who have realized that ‘the climate science is clear’ and are ready to put their bodies on the line for the cause, even in the face of great resistance.

The ecomodernist and eco-Marxist notions of political leadership are unambiguously at odds when it comes to questions such as who and what is needed to lead us out of the current mess, particularly around issues such as the role of popular power versus formal institutions, and the need for democratic consensus versus militant antagonism. Despite their overt differences, however, both views reflect a more general lacuna in our thinking around political leadership. They share a number of theoretical assumptions about the nature of political leadership, which include a (latent) elitism and an understanding of political change organized around a hierarchical distinction between center and periphery. What matters to politics takes place either in the centers of parliaments and capitalist boardrooms, or in the large boulevards of social movements, not among the dispersed actions of ordinary people. Moreover, both understandings of political leadership are

464 Ibid., 250.
465 Ibid., 251.
466 Ibid., 249.
preoccupied with – or perhaps haunted by – the capitalist state, even as they seek to either restrain it (liberalism) or move beyond it (Marxism).

To truly move beyond the state, we will have to recover a different theoretical tradition of political leadership: one that is less individualistic, more dispersed, and more anarchically democratic. Some resources for such a notion of political leadership can be found in a diverse tradition of political thinking starting, again, with Machiavelli and even Marx, but this time moving over thinkers such as Dewey, Arendt, and Foucault. This is a tradition of political thinking that has been taken up by contemporary democratic theorists often referred to as ‘radical’ or ‘agonist’ democrats, including thinkers such as Jacques Ranciere, Judith Butler, Bonnie Honig, William Connolly, Michael Hardt, and Antonio Negri. To varying degrees, these scholars promote an understanding of democracy and political leadership that emphasize dispersed, contextual, and embodied local action as the locus of political change. Their work on democracy, and the emphasis on situated micro-politics, provides a fecund starting point for the (re)construction of political leadership that I embark on in this chapter. But, as I argue below, we will have to ecologize the underlying humanism of all of these notions of political leadership even further.

**Rethinking Democratic Leadership in the Anthropocene: Distributed Agencies, Complexity Theory and Swarming**

The advent of the Anthropocene entails a double movement: On the one hand, human beings have, through technological innovations, gained increased influence over the trajectories of earthly ecosystems. The activities of human beings today reaches into almost every corner of the earth, ranging from global and rapid changes in atmospheric concentrations to miniscule interventions in micro-bacterial DNA.467 The collective doings of human beings now bring about decisive changes at a planetary scale, which would have been unthinkable only a few centuries ago. However, the Anthropocene has also put the powerless of human beings at display. Earthly forces that exceed human powers many times over are threatening to make the planet unlivable for all sorts of human and nonhuman life. All of the sudden, “glaciers seem to be shrinking more quickly, the ice is melting more rapidly, species are disappearing at a faster pace than the majestic processes of politics, consciousness, and sensibility are progressing”, as Latour writes.468 In the Anthropocene, quite paradoxically, it is human processes that remain inert and passive, while natural processes develop with a hitherto unseen speed and unpredictability.

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This reverses the familiar, post-enlightenment picture of dynamic and creative human society contrasted with the predictability and inertia of a natural world governed by necessity and stable laws. The advent of the Anthropocene challenges both the bifurcation of society and nature, of the human and non-human, as well as the mechanistic understanding of non-human nature that underpins it. It dramatizes and intensifies what new materialist thinkers such as Jane Bennett, Bruno Latour, and Donna Haraway have been arguing for decades, namely that the social and the natural worlds are intimately intertwined, and that all sorts of non-human beings and forces outside human control play active roles in co-shaping the world. Human societies do not exist outside of nature, but are always-already part of nature, and today, in the Anthropocene, the reverse is evident as well; there is no part of nature today that is not entangled with human societies.

What does that mean for the role of political leadership today? For the new materialists, answering this question requires re-envisioning politics in a less human-centric and more ecological register. Here, we might follow Jane Bennett’s suggestion that human societies are, in fact, more like (other) natural ecologies than we tend to think. Instead of idealizing politics as a process of rational decision-making by deliberating citizens, we might think of democratic politics more realistically as a slow-moving, incremental, and often unpredictable process that eventually reaches a critical mass and propagates a decision, more like a process of fermentation than rational deliberation.

This suggests, for example, that informing people about the science of climate change is unlikely to be sufficient to bring about change. Cultivating new political sensibilities and responsibilities is not reducible to processes of rational choice or reflexive learning. Addressing the ongoing ecological crises is going to require working across multiple sites and at multiple layers, including the visceral registers of sensorial life, in a process that might be more analogous to a sort of slow brewing process.

Following this ecological understanding of politics, new materialists invite us to think about political leadership in notably different way than suggested by either the ecomodernist or the eco-Marxist approach. It is a notion of political leadership that drastically re-envisions both the nature, the site, and the dynamics of political leadership. Let me say something about each of these elements in turn.

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470 Bennett, “In Parliament with Things.”
The nature of a new materialist political leadership: Distributed agency

In *Vibrant Matter* from 2010, Jane Bennett develops what she calls a theory of ‘distributive agency’, which views agency not as a prerogative of a single (human) individual, but as a congregation capacity distributed across, and co-implicated with, a wide range of different agencies, human and non-human. While individual entities and their intentionalities matter, they do not operate in a vacuum, and the outcome of any action is inevitably tied in with the collective efforts of a myriad of counter-acting forces competing at once. Individuals never act alone, but always “depends on the collaboration, cooperation, or interactive interference of many bodies and forces,” why Bennett suggests that we talk instead of “agentic assemblages,” borrowing the concept from Deleuze and Guattari.471 Assemblages are “ad hoc groupings of diverse elements” that are contingently held together and function as a whole without being governed by a single center of control.472 One example of an agentic assemblage is a human body, which functions contingently, as a self-organizing whole, while being made of individual parts, such as the heart, lungs, guts, etc., with each their own individual propensities and intentionalities.473 A political community is another example, insofar as it too functions as a contingent but coherent whole, while being made up of multiple smaller parts that maintain their own characteristics.

The conceptual move from individuals to assemblages means that agency is “distributed across an ontologically heterogeneous field, rather than being a capacity localized in a human body or in a collective produced (only) by human efforts.”474 Consequently, an assemblatic understanding of agency challenges the view that political leadership is a human-only prerogative. Not only does political leadership, and political participation more generally, depend on a wide range of non-human things and technologies.475 Non-human beings and forces also play an active role in promoting, and inhibiting, forms of political leadership. Take the way in which emergent publics can arise around the threat of rising sea levels, or the near-extinction of an endangered animal. In these cases, nonhumans, whether it is the rising seas or the endangered animal, are not simply background variables, but active and constitutive elements of an assemblage that might, eventually create political change.

472 Ibid., 24.
473 If you are thinking, “well, isn’t the brain the control center of human bodies?”, then let me ask: Does your brain control the chemical decomposition of food materials that happens in your gut? Does your brain control the intake of oxygen that takes place in your lungs? Without each of these and many other functions, over which the brain has, at best, very limited control, the assemblage that is in your body would have a difficult time acting, at least as anything resembling a human body.
475 See for example Noortje Marres discussions of material participation: Marres, *Material Participation*.
The reorientation also challenges the persistent individualism of much of the literature on political leadership, which equates political leadership with the independent actions of a small group of extraordinary human individuals, whether those individuals are political officials, revolutionary leaders, star entrepreneurs, or scientific geniuses. No one acts alone, not even the most exceptional human beings. All instances of successful political leadership depends on collaborations with and support from forces outside individual control.

The sites of a new materialist political leadership: The edge of chaos

Instead of envisioning human societies as coherent wholes whose centers of control are located in state bureaucracies, new materialists highlight that in complex systems change tend happen not at the centers, but in the more loosely structured parts of a network, often at the very edges. In *Visionary Pragmatism* from 2016, scholar-activist Rom Coles draws on insights from complexity theory to develop a conceptual language for democratic theory that does not assume a priori that systems are “closed totalities whose goals, actors, sectors, components, political contestations, and so forth are thoroughly integrated in ways that are essentially uniform, homogeneous, and functional.” Instead, Coles sets out to investigate how insights from the natural sciences, such as Stuart Kauffmann’s work on complex systems theory, can inform democratic theory and political practice. The aim is not a “reductive political appropriation of insights from the natural sciences”, but to think creatively and metaphorically about how “interactive relationships, patterns of emergence, transitions, and intensifications that appear in complexity theories of physics, chemistry, and biology” can help develop our thinking about political transformations in a more radically democratic – and new materialist – direction.

I am specifically interested in how this reconceptualization of political change invites us to think differently about the role of political leadership today. Particularly relevant for this purpose is Coles’ discussions of ‘the edge of chaos’, the highly fecund zone of emergence that exists in some complex systems. In evolutionary biology, natural selection tends to favor so-called ‘subcritical’ systems. That is systems, or assemblages, that are able to combine a creative openness and dynamic flexibility in face of new challenges, while still maintaining relative stability. These systems flourish because they inhabit that space in between order and chaos where “emergent phenomena are most likely to occur” but without being overwhelmed by constant changes and fluctuations that would prevent

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476 Coles, *Visionary Pragmatism*, 119.
477 Ibid., 123.
478 Ibid., 134ff.
“new coordinative patterns ... from emerging and enduring.”\textsuperscript{479} Something similar is the case in democratic politics, Coles argues, where political cultures sometimes sway too far in either the direction of unhinged chaos or, more often, the direction of stymied order. The political equivalent of too ordered systems are those all-too-familiar political cultures that are unwilling to enter into any dialogue or experimentation with “different visions of transformative pathways and aspirations”, and therefore “tend to isolate and vitiate new ideas and practices within and among their organizations.”\textsuperscript{480} But political cultures, especially on the radical left, can also become too chaotic, resembling what Coles calls pure horizontalism, where “everyone can have an equal voice in everything at every moment.”\textsuperscript{481} Such cultures are equally unlikely to produce meaningful and durable change, because the system is constantly overwhelmed by a chaotic range of new inputs, such that “newness is repeatedly stillborn.”\textsuperscript{482}

The aim, then, is to cultivate “an ecology of different modes of democratic engagement” that utilize this particularly generative zone of creativity and transformation which exists at the edge of chaos. Three features are identified by Coles as particularly favorable for a democratic system to inhabit this zone: First, a high level of diversity among the subcomponents, which raises the chances of creative connections and emergent relationalities.\textsuperscript{483} Second, a high level of autonomy among the different patches of the system, and its subsystems, which allows for experimentation with new ideas while avoiding uniformity and control that stifle creativity.\textsuperscript{484} Finally, a high level of communicative inter-relationality between subsystems is needed to enable rapid learning across patches so that the lessons gained in one unit quickly proliferate throughout the system as a whole.\textsuperscript{485}

These insights, developed at the intersection of complex systems theory and democratic theory, suggest important lesson for a new materialist approach to political leadership. Since newness and change is most likely to come about in less ordered systems, we must be more attentive to the potential sites of political leadership that exist outside the formal-political spaces in which norms and hierarchies are often highly ordered. In other words, we must (also) look for, and indeed promote, political leadership at the edges. Combined with the insights from above, we ought to think of political communities not as total and coherent wholes, but as contingently made up of a myriad of systems within

\textsuperscript{479} Ibid.
\textsuperscript{480} Ibid., 136.
\textsuperscript{481} Ibid.
\textsuperscript{482} Ibid., 26.
\textsuperscript{483} Ibid., 125–26.
\textsuperscript{484} Ibid., 128–29.
\textsuperscript{485} Ibid., 141–42.
systems, assemblages within assemblages. Some of which, especially those further away from highly ordered centers, are more amenable to change than others. Promoting radical change, therefore, is not (only) a matter pushing a single political agenda, or antagonism, into the imagined center of existing politics, whether that center is perceived to be the boulevards of mass protests or the legislative process of the state. It is also about ensuring the conditions for and working actively to promote the numerous, diverse, and communicatively interconnected spaces of creative political experimentation that exist along the periphery of existing societies and might bring transformative practices into the world. Instead of focusing on a single central antagonism that must be radicalized in order to install a new counter-hegemony, new materialists emphasize the need for locating and promoting multiply sites of conflict and struggle, small as well as large, thereby dramatically extending the range of sites relevant to political leadership.

The dynamics of a new materialist leadership: Swarming politics

In Facing the Planetary from 2017, William Connolly investigates how local, small-scale role experimentations can help promote and sustain vibrant democratic coalitions pushing for large-scale systemic change through what he calls a 'politics of swarming.' In short, role experimentations are experimental practices that, in Connolly’s words, “stretch out creatively to other connections and movements as they … work on the visceral registers of cultural life.” They begin locally in the communities one knows best and work out from there. Role experimentations can be many things, from writing an opinion piece, hosting an art event, publishing a scientific article, joining a social movement, giving a public lecture, switching to renewable energy, starting a reading group, beginning to sort your waste, making your workplace serve less meat, speaking up against practices of discrimination, volunteering in a local organization, joining a collective, promoting (re)cycling, planting a kitchen garden, to developing an app for food sharing, and so on. The aim of such role experimentations are, as Connolly writes, to “invite potential allies in multiple subject positions” to join you, in the hope that it “may prepare us to embrace more adventurous collective activities when opportunities arise.”

Here is a brief example from my own life: About five years ago, I stopped eating meat. I had just returned from a six months in the US and during the stay, my then-partner had been living with a new roommate, who had been eating vegetarian for years. That encounter created the igniting spark for us to stop eating meat. The spark would not have

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487 Connolly, Facing the Planetary, 125.
488 Ibid., 126–27.
489 Ibid., 128.
caught on, however, had it not been for several other factors, including an already existing concern for the meat industry’s contribution to the ongoing ecological crises, and the fact that I had already tried living several months without eating meat when I travelled around India some years earlier. But it did catch on, and initiated a process of change that I had not anticipated. Very quickly, I began to lose my appetite for meat almost completely, and I no longer had to make a conscious effort to avoid meat; the desire subsided. Changing my routines and habits had, quite literally, changed me. It also led to new lines of inquiry. What started as an attempt to reduce ecological footprints, later became infused with an ethical concern for animal welfare and a fascination for the complex worlds of animals – something that, to be honest, had never really been a conscious concern for me. Thus, even these small changes in habits, small role experimentations, very rapidly changed my perception, receptivity, and sensibilities towards the world and its non-human inhabitants in ways that I could not have foreseen.

In the context of a politics of swarming, what is important is that these role experimentations do not happen in a vacuum. I have never had more engaged conversations about the current state of the climate, the social and biological dimensions of food, and the mesmerizing worlds of the animals and plants, as I have since I stopped eating meat. It is not just talk either. Among my closest group of friends, the number of vegetarians has multiplied over the last couple of years to the point where, today, it is often the carnivores of the group, not the vegetarians, that find themselves having to excuse their strange eating habits. The tables have turned.

These changes happen in the larger context of a Danish society, where cultural perceptions of climate-friendly eating habits are shifting rapidly. This is not, however, a story of uncomplicated or linear progress. Experimenting with and trying to change people’s habits and perceptions are often tied to issues of identity, privilege, and loss. This remains obvious in the case of eating meat, where strong and often passionate opposition to vegetarianism and veganism is not uncommon. As any vegetarian or a vegan will know, the decision to not eat meat is often perceived by others as a silent provocation if not a personal attack. As suggested in Interlude II, such reactions are often themselves part of complex assemblages of deep-rooted habits, beliefs, inequalities, and feelings of loss and disempowerment that do not warrant simple answers or easy blame.

Even though the case of my personal vegetarianism is a minor everyday example, it suggests at least two provisional insights for the prospects of democratic leadership today. First, cultivating new forms of generous receptivity requires working at multiple layers of consciousness, including the visceral registers of sensorial life. Merely informing people about the destructive consequences of neoliberal capitalism is unlikely to bring about change by itself. Cultivating new sensibilities cannot be reduced to a process of rational
choice or reflexive learning. It is more consonant to a form of brewing process that relies on a multiplicity of bodily and sensorial experiences. In the example above, key ingredients included corporeal travelling and cross-cultural fermentation, random encounters with inspirational individuals, new taste experiences and cooking practices, books and new factual knowledge, and a broader context of climate change and looming disaster, and a changing cultural perception of meat-eating. Secondly, even small-scale local action happens in an assemblage of complex networks of other human and non-human actants, and therefore might create ripple effects that resonate in other parts of the network. In the Anthropocene, perhaps more than ever, local of practices of experimentation are political. Thus, we should not limit our conception of politics, or of democracy, to something happening only at the scale of the nation-state, in parliaments and through parties. Addressing the issues of climate change and neoliberal capitalism means working simultaneously on multiple sites and at multiple scales.

Admittedly, such local and small-scale role experimentations might seem like a tiny concern in a world where the arctic is burning, whole islands are disappearing, and the rate of animal loss amounts to a sixth mass extinction. Indeed, as Connolly admits, each individual role experimentation is radically insufficient to meet the challenges of climate change and neoliberalism capitalism. However, we should be careful not to give in to such objections too quickly, because due to the scale of challenges we face today, such objections are likely to apply to almost any action taken. Importantly, the aim with these role experimentations are not only the local initiatives themselves, but the creation of numerous small spaces of friction, change, and movement that might, under the right conditions, combine and resonate in ways that could lead to change at a larger scale:

“You multiply sites and scales of political action through swarming movements, moving back and forth between creative role experimentations in churches, worksites, consumption localities, investment, universities, research, teaching … [and] you return to electoral engagements once the movements have crystallized; and you accumulate these disparate energies and creative insights until a citizen movement becomes possible across world regions.”

Such processes are by no means destined to succeed, and they are unlikely to follow a linear process of accumulation. They might require long periods with limited resonances and few results, until they eventually reach a critical mass of aligned forces that jolt themselves onto the larger political scene; not unlike what we have seen, historically, with democratic movements pushing for radical change, inclusion and recognition.

490 Ibid.
491 Ibid., 125.
Non-human leadership: Scouts and swarming

One way to develop the idea of a new materialist political leadership even further is to continue down the rabbit hole of the Anthropocene, displacing the very notion that self-organization, deliberation, and collective decision-making processes are reserved for humans alone. Here, we might turn to the world of honeybees. Studies conducted during the past century reveals that this species lives remarkably democratic lives.492 When a beehive, after a long winter, must renew itself, it is not the Queen’s prerogative to decide whether the beehive should move to a new place; rather, the decision is a collective one that includes the entire colony. The process begins in the late winter when rising temperatures improve the bees’ working conditions. After an initial process in which there is no clear consensus about the proper course of action, a majority of the bees begin to agree that it is time to move to a new place. This prompts about two-thirds of the bees to leave the old beehive and move to a nearby tree branch, while the remaining third stays back and work on the old beehive. Here, the swarm of bees await so-called ‘scout’ bees, who search the surrounding area for potential new hive sites. To begin with, the scouts usually disagree about which new site is better, but through an exchange of input and experiences — one they communicate to the other bees through complex dances that indicate the position and qualities of a given site — a majority slowly begins to form in favor of one of the sites. When the decision-making process reaches a critical threshold, and the level of agreement is robust enough to occasion a decision, the swarm of bees leaves behind their temporary home and start working on their new hive.

Despite its majoritarian flavor, and even though it would be naïve to transfer the lives of bees directly to the struggle against climate change, this nonhuman example provides us with an interesting model for how to conceptualize and inspire a new radical democracy. Not only does the honeybee case dismantle the idea that democratic deliberation is for humans only, it also shows that here too change happens at the edges where small shifts in behavior, initiated by the scouts, can have profound impact on the overall structure and development of the system. The process embodies a type of democratic leadership that is not about hierarchy and centralized control, but about cultivating conditions for decentralized ‘scouts’ who can work as catalysts for change by experimenting with and sharing experiences about new ways of life.

While existing political systems can help this process of experimentation along by facilitating opportunities for exchanging experiences, and by not insisting on homogenizing imperatives such as economic growth and surveillance, the process itself cannot be

controlled from above. Not only are democratic systems too complex to be governed this way, it also risks stifling the very real democratic potentials and energies that already exist and thrive in the local communities and initiatives, which are currently fighting for a better and more sustainable world this very moment.

A New (Materialist) Democratic Leadership in Action

A new materialist reconstruction of political leadership is not only a conceptual exercise. It can also help us better identify, understand, and promote the actual instances of transformative democratic leadership that exist around politics of climate change today. In fact, many of the most promising eco-social movements today are committed to and organized around radically democratic or even new materialist principles. By cultivating new connections that cut across traditional social and cultural divisions, these political movements aim to develop a better and more practical understanding of the consequences of climate change. Although their efforts sometimes appear unorganized, even anarchic, it is the dynamic and open-ended character of the movements that is essential to creating a sense hope, which secures political engagement among a heterogeneous group of participants, even when (or especially when) the political victories appear small and insignificant in a larger picture.

Consider for example *Ende Gelände*, an international climate justice movement formed in 2015 around a mass blockade of an open-pit brown coal mine in Germany. The movement promotes civil disobedience and direct collective action as appropriate means for fighting climate change, and operates through a highly decentralized network of action groups, so-called ‘fingers’, each consisting of numerous smaller affinity groups. When carrying out direct action, the tactical purpose of the finger system is to have all parts of the network operate autonomously. As a participant in one of the movement’s recent demonstrations put it, in hierarchical organizations “there’s one mind making decisions. Here at Ende Gelände, we have thousands of minds making decisions.” The tactics have proved highly efficient, for example when in 2016 the movement brought together more than 4,000 protesters in a demonstration that temporarily shut down the open-pit coalmine in Hambach, one of the biggest individual sources of CO₂ emissions in Europe.

The finger system also serves as a mechanism of democratic inclusion, which allows for a high degree of ideological heterogeneity to exist within the same movement without losing sight of the shared objective. Instead of insisting on a single shared ideological framework, the movement relies on an intersectional approach, where the

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different affinity groups that make up each finger include both anarchist, Marxist, feminist, liberal as well as mixed gender, all women, queer groups, and so on. It is in part due to this openness and inclusivity that Ende Gelände during the last few years has become a platform for a wide range of different groups and individuals to come together around the issue of climate change. As both scholars and activists point out, the movement provides a much needed space for practicing democratic forms of collective resistance, experimenting with, and building knowledge about new modes of democratic organization, and for sharing stories and hopes of a different world.494

Another case for assessing the potentials inherent within these horizontal and inclusive forms of democratic movements is the events that took place in Greece in the wake of the global financial crisis of 2008. Following a series of protests in the immediate aftermath of the crisis, the popular protests culminated in 2011 with the ‘Occupy’ movements in Greece, where hundreds of thousands of citizens entered the streets and took over public spaces, most notably the Syntagma square of Athens, which alone attracted more than 100,000 citizens. These movements too, were organized horizontally without a centralized structure of authority or stable borders, but with numerous decentral points of collective action, including the spontaneous formation of self-managed time banks, solidarity medical clinics, libraries, eco-communities and other affinity groups.495

Some scholars and activists alike are quick to point out that the occupy movements did not bring about the large-scale changes of the Greek society they had hoped for, and that even though these movements assisted in bringing the left-wing party SYRIZA into power in 2015, things still have not changed for ordinary citizens in Greece. While this is true, rather than faulting the movements for what they have not done yet, it would be more correct to say that the political energies of the Occupy movements are still in action, even if these energies have taken on new forms today. Since the days of the square protests, several hundred new social cooperatives have started operating all over Greece. Between 2011 and 2015, the number of self-organized solidarity clinics rose from one before 2011 to more than 50 operating clinics, and the number of solidarity kitchens rose from three before the crisis to more than 20.496 In other words, many of the spontaneous meetings and connections that were forged during the days of the square movements are still very much alive and have disseminated out into the broader Greek society. Whether they have succeeded, therefore, is not a simple question to answer.

496 Ibid., 142-44.
Democratic leadership on the edge

It is not only in the boulevards of capital cities that change is on the move today. Democratic leadership and experiments with new environmental practices are already happening in many other places, too, and we need to become better at recognizing them, in order to start thinking about how their work might be promoted and extended.

In a place like Lemvig, for example, the recent history shows that democratic leadership around ecological issues exists here too. Take the case of Cheminova, a multinational chemical manufacturing company that produces chemicals, primarily for the agricultural sector, and has a large production plant located outside of Harboøre in the municipality of Lemvig. In the latter half of the twentieth century, the company became known in the general public primarily because of its complicity around ‘Høfde 42,’ a toxic waste site located on the western coast. During the 1950s and 1960 Cheminova dumped tens of thousands tons of toxic chemicals into the sea and ground at Høfde 42 with dire consequences for the local environment. Today, the locals are fighting a battle with the Danish state in order for the area around Høfde 42 to be cleaned up. A battle that has become more pressing now that new investigations of the area have shown that rising sea levels, as a consequence of global warming, might worsen the current situation and increase toxic leaks. In December 2020, more than a hundred million DKK was set aside on the national budgets to clean out a number of “generational pollutions,” including the one at Høfde 42. While this was an important victory for the locals, who have led this fight, it is far from the end of it. Several areas, such as the old Cheminova factory ground remains, and the fight continues.

One of the many interesting things about the Høfde 42 story is that public sentiment has changed dramatically since the 1960s. In the early years, local opposition was very limited, in part because Cheminova generated a significant amount of local jobs and provided for many peoples livelihoods. Today, however, there is widespread agreement among the locals that what happened as Høfde 42 was an ecological scandal, and that collective pressure must be put on political decision-makers and the Danish state to take responsibility for what happened. According to Jens, the local ranger in Lemvig, you would

497 The company that runs the chemical plant is today called "FMC Agricultural Solutions", who acquired Cheminova back in 2015. However, the plant it is still generally known as “Cheminova,” why I use that name here.

498 Jens Østergaard and Flemming Hojgaard Madsen, Fisk kan ikke tale: en fiskers kamp mod Cheminova forurening, ed. Henrik Bugge Mortensen, 1. udgave (Forlaget Rebild, 2017). EN: "Fish don’t speak: A Fisherman’s fight against Cheminova.”

be hard-pressed to find anyone here, who thinks what happened at Høfde 42 can be justified. And although it has taken many decades to reach this point, it raises an important question for the current situation around global warming: Will a similar shift in sentiment take place with regard to global warming and the ecological crises? If so, how fast will it be?

One immediate difference between the two challenges, which provides cause for pessimism, is that whereas toxics in the local soil make up a close and corporeal threat, the threat of climate change appear often appear distant and abstract. But today many things are happening on the climate agenda in Lemvig. In the previous chapter, *Interlude III*, I told the story of how the success with windmills and green energy since the early 1990s provided the pathway for a new international climate science center, the Klimatorium, that aims to bring together academic research, private companies, public actors and civil society in the search for new marketable solutions to climate change. The story of how the Klimatorium came about represents a story of change that has continually exceeded its own intentions and evolved in ways that few people expected at the outside. Today, the Klimatorium project has collaborations on the other side of the globe, with the Māori people in New Zealand.

Meanwhile, the project remains straight-jacketed by the context in which it had been conceived: To address the perils of globalization and urbanization that have been felt in a place like Lemvig during the past decades where jobs have relocated, local schools and health clinics have closed, and the young and educated are moving away. The vision of the Klimatorium is to simultaneously address ecological challenges and promote local job creation and growth. This is both a strength and a curse. On one hand, it provides material reasons for locals to support the initiative and answers the question: Why should we care? On the other hand, it limits the resonances between an initiative like the Klimatorium and the eco-social movements in streets of Copenhagen. To build real connectivity between the local efforts in Lemvig and the green movement in Copenhagen it is going to require recognizing how easily such connections are short-circuited by feelings of political betrayal and having been left behind in a process of increasing centralization. Instead of faulting local efforts in a place like Lemvig for being ‘insufficient’, we must recognize that even small-scale efforts often exceed themselves and grow in ways we could not have expected. Importantly, they provide reasons for people to get involved where they currently are, and ways for people to start feeling, in a material way, the relevance of the climate agenda.

These brief stories from Lemvig, some of which have been elaborated in more detail elsewhere in this dissertation, raise a number of important perspectives for our

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500 Personal interview with Jens, at his municipality office, November 29, 2018.
understanding of politics in the Anthropocene, and for the role of democratic leadership. They remind us that there exist vibrant local communities and democratic energies, even in places that are often overlooked by mainstream social theory, that are actively working against the destruction of our shared ecosystems and towards a more sustainable future. Part of what democratic leadership entails today, for activists and scholars alike, is locating and supporting such local processes of change where they already exist, in Lemvig and elsewhere, in the hope that they might intensify and come to proliferate.

At the same time, however, these stories also highlight some of the challenges that exist when trying to mobilize communities around climate change and ecological politics. Before people are willing to ‘hit the streets,’ the issue at stake has to be of material concern to them in an intimate, perhaps even corporeal, way. While it is easy for people to see why it should concern them if their drinking water is contaminated, it is less obvious why it should matter that the global temperatures rise by two, three, or five degrees. But it does matter. It matters for the existence of not only our own species, but life on earth as such. In order to make that mattering felt and seen, however, it is going to require both a different approach to political leadership, as suggested here, as well as a whole new understanding of the relationship between humans and nature in the Anthropocene than the one promoted by both the ecomodernists and eco-Marxists.

Conclusion

In her recent book, *Influx & Efflux*, Jane Bennett describes our conventional notion of intentional human action as one modelled after Zeus: “I, Zeus am free; my thunderbolt is powered solely by a sovereign will. My acts are surgical strikes, without collateral damage or reverberations that touch me.” Like the leader of the ancient Greek gods, human beings are seen as making, through the power of their sovereign will, intentional decisions to act that “appear as bolts from the blue, interventions thrown down from above.” In many ways, this Zeus-like notion of sovereign human action echoes with existing ideals of great leaders as ones that operates above the fray while being “impervious to outside influence,” and whose unwavering strategic decisions appear as lightning bolts from above. What I have tried to sketch out in this chapter, with the help of new materialists like Bennett, is a very different landscape of political leadership that requires a very different kind of political leaders. It is one in which there is no way to step outside our ecological entanglements, and where human action and political leadership unfolds in the midst of complex, dynamic, and more-than-human assemblages.

502 Ibid., 109.
503 Ibid.
Instead of Zeus, maybe a better ideal for political leadership today is the Polynesian wayfinder.\textsuperscript{504} For thousands of years, the Polynesians made long voyages across the open waters of the Pacific using traditional navigation techniques transferred down via generations. Polynesian wayfinders navigated by taking from their natural surroundings, such as the paths of the planets and stars, the rhythms of the ocean’s waves and currents, the colors and temperatures of the atmosphere, the shape of clouds, and the presence of other animals.\textsuperscript{505} Rather than isolating themselves from outside influence and making decisions from above, they remain responsive to all the more-than-human forces and flows around them, and with that responsiveness they were able to travel across the seas.

Unlike Zeus, there can be many Polynesian wayfinders. Among today’s navigators we might count, for example, of the community organizer, who works incessantly to build political capacities in marginalized communities and fosters new bonds of relationality across lines of difference; the teacher, who teaches students about the dangers and multi-species injustices of an increasingly warmer world without losing sight of the openings and possibilities of cultivating new and different futures; the activist, who blows up pipelines, closes down coalmines, occupies company lobbies, or takes to the street in order to remind everyone that this is a fight worth fighting; the farmer, who refuses to let the pressures and conventions of factory farming alienate him from his land and his animals, and insists on finding new and more sustainable ways to produce plant-based protein to help feed the growing number of human beings on the plant; the artist, who seeks to entangle human others in the fight for a more ethical multi-species world by addressing them at the more affective and visceral registers of aesthetic experiences; and the list goes on. In the end, we must all become little scouts and wayfinders, for we will all have to practice new and more responsive ways of navigating the unruly waters to come.

The Anthropocene is a storm of storms. Going directly up against its powerful tides will most likely lead to wreckage. Instead, we must learn, like the Polynesian, to ride the waves, slowly inching our way in the right direction, despite the majestic forces constantly trying to push us off course. Sometimes the waves will be so high that the room for maneuvering diminishes, as in the most recent surge of the COVID-19 pandemic, which saw a shoring up borders and short-circuiting of national relations of solidarity.\textsuperscript{506} But that only makes it the more important that in the relative peace in between surges, where the waters momentarily calm down, we will have to work even harder to build new

\textsuperscript{504} Thanks to Rom Coles for pointing me in this direction during a workshop on an earlier version of this chapter.


relational capacities and begin to prepare ourselves and our societies for the storms that inevitably lie ahead.

Despite the hubristic name of our new epoch, the future of the planet is not in human hands alone. It never was. Any promising conception of political leadership today will have to start from the recognition that the world is co-inhabited by an endless range of other beings and forces whose agencies impinge upon, co-extend, and interpenetrate with our own. This is why the political task of today, *sine qua non*, is one of careful composition: We must begin, in the places and communities we are a part of, to compose, slowly and with care, new and more sustainable conditions of livability together with our human and non-human others. There is no other place to start.

The upshot of this is that democratic energies today must be focused in multiple directions at once. We must keep fighting the particular, local struggles, while pushing them to resonate with other such efforts elsewhere. Without the particular struggles we will never get started, but without the resonances we will never succeed. Many of the problems facing communities today are global in their reach: Destructive practices of multi-national companies, rising atmospheric concentrations, unregulated financial markets, and oceanic acidification cannot be solved by isolated local efforts. Local processes of democratic change will have to affect and resonate with other local efforts in order to eventually change systems that operate at larger scales – not unlike like the dancing honeybee scouts that eventually change the trajectories of the entire swarm. Understood in this way, a new materialist notion of political leadership is both more *demanding*, because it gives up any illusions of central control in favor of a more multi-sited, incremental approach. But it is also more *hopeful*, because it insists on the improbably possibility that seemingly slow and incremental processes might eventually gain momentum, reach a critical mass, and become able to initiate changes of hitherto unbelievable speed and scale.
Postlude

Playing with Fire:
Three Stories for a Multispecies Resurgence

It is March 2020, and about a week ago the Danish prime minister went on national television to declare a society-wide lockdown due to a new variant of corona virus. I saw the press conference alone in my apartment and suddenly felt very far away from home. The timing could hardly have been worse, as I am in the middle of doing field research on the west coast of Denmark. But viruses never come at the right time, I suppose. Then again, the appearance of this new virus does seem oddly appropriate for our times; the continued and relentless destroying of natural ecosystems around the world was always bound to come back to us in unforgiving ways, was it not?

I have not seen anyone else since then except for the one time I went to the grocery store, and I am beginning to feel the gravity of the situation. Yesterday, I read the news stories from Northern Italy, where they have been struggling with the virus for a while. This is not going to blow over anytime soon.

Today, I have decided to make a trip out to Klosterheden, a forest area nearby. Maybe a walk in nature can help take my mind off things. It is a 10km ride, so I decide to go by bike. Per usual, I have forgotten how windy it is out here. There are no bike paths on the road leading out of Lemvig and large industry trucks pass me by at close range with alarming speed.

Before reaching the north-western corner of the forest, I turn left off the main road and suddenly, next to the road, are pile after pile of old fishing nets in all sorts of vibrant blue and golden colors. It looks like a scene from one of the human-altered landscapes in Edward Burtansky’s Anthropocene photo series.507 This must be the

507 See https://www.edwardburtynsky.com/projects/the-anthropocene-project
home of Plastix, a local company that upcycles old and used fishing nets that would otherwise have ended up in the oceans into new and reusable 'green plastic'. Here is green capitalism in all its poetical motion: a human-made problem turned into a marketable product.

I make another right, and turn onto to the gravel road leading into Klosterheden. Large fir trees are towering on each side of the road, guiding me deeper into the forest. About a kilometer down, I get off my bike to walk around among the trees for a little while.

The more time I spend between the trees, the more details I notice. What first appeared like a wild and unmanaged forest is starting to look like something else,

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"Green plastic" is their concept. For more, see https://plastixglobal.com/
Klosterheden is a large forest and heath area located close to Lemvig. Its landscapes have been formed by the last glacial period almost 15,000 years ago and contain mostly meagre and sandy soils with little agricultural potential. Since the end of the 19th century, the area has been managed by the Danish state as a tree plantation producing timber for local industries. Today, the forest is increasingly used for recreational purposes and has around 200,000 human visitors each year. Meanwhile, the forest is home to many nonhuman animals, including larger mammals such as beavers, foxes, badgers, and deer; birds such as ravens, ospreys, and kingfishers; fish such as pike, trout, and roach; and various insects, including the rare three-horned dung beetle.

Like forests elsewhere, the ecological well-being of Klosterheden depends on complex multispecies relations that include but cannot be reduced to human activities. Its ecological sustainability depends on what Anna Tsing calls *multispecies resurgence*, that is “the

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remaking of livable landscapes through the actions of many organisms.” While human actions and plans are important, perhaps more than ever today, they remain one among many historical actors. To study the life of complex ecosystems like forests, and their role in the futures of the Anthropocene, we will have to approach them as a “multispecies field of histories.” Multiple histories with very different speeds and rhythms, human and nonhuman, come together in the forest, and only in places where human ways of life have “aligned themselves with the dynamics of multispecies resurgence” have they been able to sustain themselves over time. Through her own engagements with the declining Satoyama forests of Japan, Tsing shows how even small “changes in the species mix have social consequences for both humans and non-humans.” Thus, if we want to prepare ourselves for futures of environmental change, we need to know more about the complex ecologies that other beings and organisms help sustain.

Klosterheden, too, is a place of complicated and contingent multispecies histories. In what follows, I tell three different stories from Klosterheden, each of which reveals valuable lessons for practicing a multispecies democracy at the end of this world. First, the story of the forest as a landscape of ongoing war. Then, the story of the forest as a multispecies landscape of co-existence. And, finally, the story of the forest as a landscape in between resurgence and disrepair. Running alongside these three stories are snippets of one of my encounters with the forests of Klosterheden on a clear and sunny day during the spring of 2020.

Story I: The Forest as a Landscape of War

Klosterheden is a landscape full of histories of war. In the North-Western corner of Klosterheden, for example, lies an old aerodrome that housed several thousand German refugees in the wake of the Second world war. The Rom Camp, as it was called, existed between 1945 and 1948. At its highest around 9,000 refugees – primarily women, children, and elderly from Eastern Germany – resided in the camp, almost twice the amount of 

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513 Tsing, “A Threat to Holocene Resurgence Is a Threat to Livability,” 51.
people living in Lemvig at the time. The decision to house refugees at the aerodrome in Rom had originally been made by the occupying powers, but when the Germans capitulated in May 1945, the Danish authorities took over the responsibility for the camp. The initial objective was straightforward: Get rid of the refugees as quickly as possible. That task turned out to be more difficult than first anticipated. The post-war refugees had nowhere to go. Germany was in ruins. Meanwhile, all contact between the refugees at the camp and the Danes living nearby were criminalized to prevent any lasting bonds from forming. Neither the refugees nor the Danish authorities were particularly happy about the situation. In 1946, one of the German refugees described the situation to a local newspaper: “Like the Danes are unwilling hosts, we are unwilling guests.”

The story of German refugees in Denmark after the Second World War is a hidden and often overlooked part of Denmark’s troubled past. Today, there are no visible remnants left except the old aerodrome, which was used by the German forces during the war. As the historian Inger Bjorn Knudsen writes, the story of the refugee camp at the edge of Klosterheden raises a question that lingers on to this day: “Did the Danish authorities treat the refugees of war in a humanitarian and ethically defensible manner?” This question echoes throughout the present moment, especially in the wake of the recent 2015 European refugee ‘crisis’, where Denmark quickly closed its borders. In light of the ongoing climate and ecological crises and the futures-to-come, where there might be hundreds of millions of climate refugees, the question of how to show solidarity with human others, even in times of perpetual crisis, is only going to become more relevant.

Klosterheden is also home to another hidden story of war. A different kind of war. One led not against other humans, but against nonhuman natures, or at least the parts that appear to be in conflict with particular human interests. Although humans depend on these natures, they have continually waged war against them. In The Arts of Living on a Damaged Planet, Anna Tsing and her co-authors describe the bleak contours of that war in the following way:

Industrial campaigns exterminate impurities, undermining the coordination’s that make life possible. Plantations grow monocultures, or single crops that deny the intimacies of companion species. Modern dairy and meat farms raise a handful of supercharged breeds. A new kind of monstrosity attacks us: our entanglements, locked and concealed in these simplifications, return as virulent pathogens and spreading toxins. Industrial chemicals weave their way through our food webs; nuclear by-products sicken us not just through our human cells but also through

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516 Ibid., 5.
517 Ibid., 71–72.
518 Ibid., 5.
As the quote suggests, one of the main drivers behind this development are so-called *plantation ecologies*, which are “simplified ecologies designed to create assets for future investments and ... kill off beings that are not recognized as assets.” In the plantation, complex organisms are simplified and standardized in order to increase the speed of reproduction and make them fit the rhythms of the market. By removing individual organisms – such as a single species of grain or tree – from their native ecologies, plantations seek to turn organisms into manageable resources. Through this process of simplification and removal, the very conditions of multispecies resurgence are systematically undercut.

It gets worse. Not only do plantations challenge multispecies resurgence, they actively cultivate the conditions for what Tsing calls Anthropocene *proliferation*, that is “the unmanageable spread of plantation-augmented life in the form of disease and pollution.” Because of their simplifications, plantation ecologies are “incubators ... for pests and diseases, including fungal pathogens.” Tsing offers the example of Ash dieback: In recent years, a deadly and seemingly unstoppable fungus has spread across the European continent, to the point where Europe might eventually lose all its Ash trees. How did it happen? In short, because of a contemporary tree nursery trade that ships hundreds of thousands of young trees, soils, and microorganisms across the world for plantation purposes. The global nursery trade provides new opportunities for “fungal pathogens to meet close relations from other regions and discover new prey,” and in these encounters, new virulent forms are produced, some of which turn out to be disastrous. This might not have been a problem under previous circumstances, where trees and plants were also occasionally attacked by pathogen, but the speed and intensity of the plantation is changing the rules of the game. When processes of disease proliferation happen at a more natural pace landscapes eventually adapt and recover, and over time pathogens become less effective. In the plantation, however, where new and identical bodies of pretty are constantly supplied, deadly pathogens proliferate and refuse to slow down. As new markets spread and speed up, so do their ecological ramifications.

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520 Ibid., 51–52.
521 Ibid., 59.
522 Ibid., 60.
523 Ibid., 52.
524 Ibid., 60.
Ash dieback is not only a catastrophe for the trees themselves, it is also a problem for the many lifeforms that depend on them. Ashes are great ecological collaborators, and when they die, so do many other species, including “insects, lichens, fungi, mollusks, and birds.” Here is another central feature of plantation dynamics: As their destructive effects begin to materialize, they produce cascading effects that ripple throughout several interconnected ecological assemblages. When the world turns into a plantation, multispecies resurgence is undercut, and so are the ecological conditions of livability on the planet.

Klosterheden, too, is part of this long history of man-made war against nonhuman natures. From around 1880, the Danish state began acquiring large parts of the heath landscape and gradually turned the area into a plantation forest with the aim of creating jobs and producing timber to local industries. In the beginning, mostly pine trees were planted, and later came spruce and fir. Over the next half a century, the plantation forests expanded continually while the diverse and plant-rich heath landscapes began to recede. With the retreat of the heaths followed the disappearance of other species, including the beautiful Black Grouse that has never returned to Danish landscapes. By the end of the 1960s, the heath landscapes had almost completely disappeared. Then, on a hot and dry summer day in 1968, something strange happened. Nature intervened. Suddenly, as if by divine intervention, a fire broke out in the middle of the plantation. Because of dry conditions, the fire spread rapidly and burned down an area of more than 250 hectares of planted forest. The fire kept ravaging for hours until, eventually, the build-up of intense heat produced a local thunderstorm. Almost as quickly as it had started, the fire was over again. Nature had done its job. The heath was saved. The area that burned was never replanted, and today it makes up one of the biggest heath landscapes in Klosterheden.

From 1971 and onwards, the official management guidelines for the forest have included a section on the value of preserving diverse natural landscapes, and a large section of the forest’s heath landscapes have been listed as protected areas. The forests of Klosterheden are, however, still run as a plantation, and the signs of human management remain visible throughout. A quick satellite view from above reveals the orderly distribution of the forest into square-like sections of managed trees (see below).

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525 Ibid., 58.
527 Ibid., 20.
528 Ibid., 16–17.
529 Ibid., 17.
530 Ibid., 18.
In recent years, however, the plantation has gradually moved towards a more multispecies type of cultivation. In the official document outlining the management strategy from 2004, the national Danish Nature Agency writes that the area is on the brink of a transformation “from plantation to forest” and that they consider Klosterheden a “near nature” plantation. The motivation behind this transformation is not only a matter of values shifting in favor of nature protection and preservation in recent decades, it is also a matter of business. “The incentives are clear,” the agency writes. A more varied vegetation can help secure the “quality, stability and health” of the forest and its trees. Even plantation managers are beginning to realize that multispecies resurgence is not only good for the forest, but a requirement for managing a sustainable business in the ecological sector.

I continue down the gravel road for another kilometer, before I reach my destination: Møllesøen. The beautiful lake in the center of Klosterheden, which has been named after the old corn mill that burned down in 1889, but can be dated back to the early 15th century. The area around the lake is listed as protected and is home to rich and varied animal life. If you are lucky, you might even spot one of the beavers that were set free in Klosterheden in the early 2000s to improve the forest ecology.

531 Ibid., 20.
532 Ibid.
I don’t see any beavers today, but instead I go for a hike around the lake. I have the path mostly to myself, and the fresh air and calming sounds of the forest do me well. As I walk, sunrays fall in between the trees and light up the forest floor in a beautiful, diffractive green and brown pattern.

Walking among the trees, I am reminded of all the incredible beings that live here, whose intertwined relations make up the more-than-human sociality of the forest. From the birds that lighten the forest with their tireless singing and help new trees survive by dispersing their seedlings, sometimes burying them in the ground as future food stocks. To the fungal networks, whose intricate underground webs connect the forest’s vegetation and facilitate the transfer of water, energy, sugars, and various types of information needed for their mutual survival. To the trees themselves, these long-lasting creatures who turn sunlight and carbon dioxide into energy and oxygen, communicate via electrical impulses and chemical signals, and unlike our ephemeral human selves can stay put in the same place for centuries, sometimes even millennia.
On my way back from the lake, a father and a child pass me by on their mountain-bikes. They are going fast and seem to be having fun. There are other people here, too, that have come to enjoy the serenity of the lake. Among them an older couple, who is smiling and holding hands. They remind me of a conversation I had recently with Jens, the local ranger in Lemvig, who told me that there are people, often older people, who are afraid to go for a walk in the forest now that the grey wolf has returned to the area. Just recently, a wolf was spotted around these parts of the forest.

In Klosterheden, as in many other places in Northern Europe where the grey wolf has returned in recent years, the renewed presence of this fascinating animal has raised an important question for our times: Who is the forest for?

Story II: The Forest as a Landscape of Multispecies Worlds

If the Anthropocene is an epoch in which conditions for multispecies resurgence are systematically undercut, we might think of the Holocene, in contrast, as an epoch in which human activities managed to co-exist alongside other living beings. For thousands of years, even if humans temporarily overworked their surrounding landscapes by exhausting soils and cutting back forests, these natural landscapes would, when later abandoned, recover over time. In the Holocene, as Tsing writes, “every time farms were abandoned, forests took back the land”533 What is happening in many places around the world today is that more and more natural landscapes and their ecosystems are pushed beyond their points of resurgence and towards new equilibria with different, often impoverished, conditions for multispecies life. But it is not game over yet, and the situation is not as simple as the Anthropocene-Holocene dichotomy suggests. Many Holocene landscapes of multispecies resurgence still exist, and their continued survival depend on ongoing collaboration between many different species. Some species are better at sustaining multispecies life than others; they are what we might call “companion species”.534 One of Tsing’s favorite examples of a companion species is Matsutake mushrooms. Not only do Matsutake help trees grow even in landscapes ruined by human activities, they also consistently defy human

533 Tsing, “A Threat to Holocene Resurgence Is a Threat to Livability,” 54.
attempts to grow them in controlled laboratory settings. They are both good companion species and anti-plantation at same time.

There are no Matsutake in the Klosterheden. But there are many other companion species. Two controversial animals stand out to me, as they help sustain the multispecies ecologies of the forest, while repeatedly coming into conflict with humans. The first one is the beaver. Beavers had been absent from Danish landscapes for more than two-thousand years after being hunted to extinction during the late Bronze Age because of their meat and fur. In 1999, however, eighteen beavers from Northern Germany were re-introduced to the forests of Klosterheden, and today there are more than two hundred beavers spread across the extended area. This is a familiar pattern: After beavers were historically hunted to the brink of extinction in many places around the globe, populations have rebounded manifold during the last century. Even though populations still remain a fraction of their historic levels, they are one of the most successful stories of the modern conservation movement.535

Since their re-introduction in Klosterheden, however, the presence of beavers has continuously created tensions with nearby human communities. The first conflict arrived within a month: a small group of private willow trees had been smashed to smithereens overnight, almost 20km from where the beavers had initially been released. Between 2005 and 2020, the compensations for damage done to private property by beavers rose from 180,000 DKK to 1,000,000 DKK, while the number of individual cases has reached around 80 a year.536 If anyone thought these critters had any intentions of being told what to do, or where to be, they were wrong. Beavers have a life of their own, and it is one that persistently refuses to bend its desires to human whims. Seen from the perspective of a forest’s more-than-human ecologies, however, beavers are far from a nuisance. Beavers tend to create a mess of neatly ordered forests, thereby opening up landscapes to more diverse vegetation and wildlife. Environmentalist journalist Ben Goldfarb, the author of the book *Eager*, describes beavers as ecological Swiss Army knives capable of “tackling just about any landscape-scale problem you might confront.”537 They are, in other words, great companion species, and ecologists believe that they have, indeed, improved the biological diversity of Klosterheden’s forests.538

538 Nielsen, “I 2500 år var bæveren uddød i Danmark: Nu deler den for alvor vandene.”
Despite their benefits to the multispecies ecosystems, the presence of beavers remains a controversial topic among the humans who have to co-exist with them. Why is it so difficult for humans to live with the beaver? Occasional damage to private property is part of it, but is this sporadic nuisance really sufficient to explain the passionate opposition to these animals some people have? Or could it, as Goldfarb suggests, have something to do with the animal’s utter disregard towards human desires for control and order? In their role as self-appointed ecosystem managers, beavers “create apparent chaos: humbles of downed trees, riotous streamside vegetation, creeks that jump their banks with abandon.”

Despite the immediate disarray to the human eye, these wild and chaotic forest landscapes sustain the “profusion of life-supporting habitats that benefit nearly everything that crawls, walk, flies, and swims.” This is probably why the beaver has become an important image for the rewilding movement today: They not only help rebuild damaged natural landscapes, they also challenge human-centric desires for order and control while reminding us that wild natural landscapes, such as forests, are home to many other multispecies worlds.

The story of the beavers in Klosterheden resonates with the recent history of another of the forest’s controversial animals, namely the Eurasian grey wolf. Like the beaver, the grey wolf has only recently returned to Denmark’s rural landscapes. It has done so on its own accord, travelling up from Northern Germany in the end of 2012. Since then, at least 11 individual wolves have been identified in Denmark. In Klosterheden, wolves have been spotted occasionally since, and as of February 2021 a male wolf identified as ‘GW1430’ seem to have made the forest area its long-term habitat.

The grey wolf, like the beaver, is a great ecosystem manager. Because of their role as top-predators, wolves play an important role in regulating the interactions between plants, plant-eaters, and medium-sized predators. A striking and oft-cited example is from Yellowstone National Park in the US, where wolves were reintroduced in the mid-1990s. Despite their small numbers, the wolves’ presence changed the dynamics of other animals, in particular grazing deer, and in turn changed the whole ecosystem of the park and produced what is sometimes called trophic cascades: old trees grew back in places where that have hitherto been over-grazed by the deer, and the diversity of animal life proliferated. Among them beavers, who helped extend the ecological effects further. Even

539 Goldfarb, Eager, 20.
540 Ibid.
rivers benefited from the presence of wolves, because the new trees helped solidify their banks and prevent erosion.544

Despite their potential ecological benefit to multispecies life, however, wolves, like beavers, routinely come into conflicts with humans and often produce fierce, sometimes even violent, opposition.545 A primary source of conflict has to do with one of the wolf’s basic instincts: It kills animals. Two common anti-wolf arguments are that wolves habitually impinge upon human property by attacking farm animals or by reducing relevant hunting game.546 In Denmark, a member of the parliament for the center-liberal party, Venstre, recently formulated his opposition to the grey wolf in a particularly striking way: “We use a lot of resources on building wolf fences, when the problem could be fixed with a few grams of lead.”547 He later had to track back on the statement, and at that occasion modified his position to: “In conflicts between wolves and humans, we side with humans.”548

How much damage to humans do wolves actually do to human property? Based on experiences from other countries in Europe, estimates suggest that a single wolf kills on average 1-2 free-ranging farm animals like sheep and goats a year, and that as soon as effective prevention measures are installed, numbers drop drastically.549 The cost to private property of these attacks are usually subject to public compensation, and the total expenses vary somewhere between 1,000 and 6,000 DKK per wolf per year.550 In aggregate economic terms, then, wolves killing farm animals are a negligible challenge. And when it comes to hunting, too, recent studies suggest that wolves have little impact on the population of relevant hunting game, such as deer, because they primarily kill very young, old, or weak individuals.551

Another common source of conflict is the fear of wolves attacking humans. During one of my conversations with Jens, the local ranger in Lemvig, he told me that some people in are afraid of the wolf when they go for a walk in the forest.552 While Jens believes this fear should be taken seriously, he also sees it as part of his job to inform people that “it

545 There has been more than one case in Denmark of humans taking wolf-matters into their own hands.
550 Ibid., 4.
551 Ibid., 25.
552 Personal interview with Jens, at his municipality office, 29th of November 2018.
is not as dangerous as they seem to believe.\(^{553}\) He is right. In one of the most extensive studies of wolf attacks on humans, published in 2002, the authors conclude that compared with other large carnivores, the wolf is one of the “least dangerous species” for humans.\(^{554}\) During the twenty years leading up to the report, there had only been eight well-documented cases of non-rabies wolves attacking humans. Nevertheless, wolves have historically posed a threat to humans, which might explain the persistence of what the authors of report call a cultural fear of wolves.\(^{555}\) As the term suggests, negative reactions to wolves have to do with more than just its physical presence and the actual risk of danger. It is not unusual, for example, that debates about wolves and their presence become proxy debates for issues that have to do with political divisions between urban and rural communities. Surveys routinely show that people in rural areas, especially farmers and hunters, have more opposition towards the wolf than do people in the cities.\(^{556}\) A simple explanation could be that because people in rural areas live closer to the wolf they are more afraid, but it is not that simple. Many people in the city also express fear of wolves, but the fear itself does not necessarily produce animosity towards wolves. Rather, as the Danish Nature Agency writes in their official wolf management report from 2014, it seems that “the real discussion is not so much about the wolf, as it is about other and bigger questions, such as the perception ... that people in cities, far away (from the wolf), takes decision about the wolf on behalf of rural communities.”\(^{557}\) The wolf has, in other words, become “a symbol of negative outside influence of local issues.”\(^{558}\)

The re-entrance of wolves in a place like Klosterheden, therefore, highlights and perhaps even exacerbates real and existing social and economic divisions between rural and urban communities. According to Jens, the national debate is becoming increasingly polarized: “Either people think the wolf deserves to be shot and killed, or it needs to have its own untouched enclosure.”\(^{559}\) His own experience is that “the further people get away from nature, the more they start insisting that nature is something that must be protected at all costs.”\(^{560}\) What is at stake in our relation to the wolf, then, is not only rural and urban divisions, but also different and competing conceptions of nature: Should nature be kept wild and protected at all costs, or is it something that must be managed in accordance with human needs? That might not be, however, the right question. In a recent talk, John Linnell – one of the world’s leading experts of wolf-human relations – distinguished

\(^{553}\) Personal interview with Jens, at his municipality office, 29th of November 2018.
\(^{555}\) Ibid.
\(^{557}\) Ibid., 19.
\(^{559}\) Personal interview with Jens, at his municipality office, 29th of November 2018.
\(^{560}\) Personal interview with Jens, at his municipality office, 29th of November 2018.
between three different types of questions raised by the presence of wolves. One is the ecological question: Can the wolf live with humans? Although this has not always been the case, ongoing conservation efforts have made it increasingly evident that wolves can make a sustainable living alongside humans. In light of this development, another question arises: Can humans live with the wolf? This question has turned to be a remarkably difficult one in many contemporary societies, particularly in the context of political divisions between rural and urban communities. But maybe the real question for multispecies relations in the Anthropocene is another one. The one that Linnell calls the question of co-existence, namely: How can humans and wolves learn to live with each other?

Answering this third question requires ongoing conversations and compromises between the relevant humans and non-human others. In many places, this is a new debate. In a country like Denmark, for example, where two-thirds of the natural landscapes are cultivated land, people are not used to making compromises with or having to limit themselves on behalf of wild nature. Whether it is coastal erosion threatening their houses, or the wild animals of the forest threatening their property, many people expect natural landscapes to bend to their whim. In a recent survey, less than a third of the respondents thought that “the wolf, as a species, has a right to exist in Denmark.” But the choice raised by the presence of ‘problematic’ species, like the beavers and wolves in Klosterheden, is not a binary choice between a right to exist without human interference or the complete removal of a species. Here, Linnell and Jens agree: Multispecies co-existence is about finding new ways of living-with and alongside each other. Both beavers and wolves provide important functions for the ecosystems of which they are part of. Maybe it is time that we, humans, learn to give room to others and begin practicing our own capacities for multispecies companionship.

On my way out of the forest, I make a final stop. I walk off track for a bit and quickly reach a darker, denser section of the forest. It is chillier here, where the trees block the sunlight and the moistness from the ground cools the air. I am starting to lose my sense of orientation, no longer sure exactly which direction I parked my bike in.

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561 The webinar titled “The Recovery of Large Carnivores in Norway” was hosted by the Oslo School of Environmental Humanities on 14th of April 2021.
I am surrounded by trees in all directions. Those odd creatures that I encounter every day, but rarely pay any conscious attention to. I cannot live without trees, yet I hardly know anything about them. I have once read that even tree experts do not know how trees get water from their roots and all the way up into their highest branches. Available scientific explanations, such as capillarity, transpiration, and osmosis, only take the water so far. The remaining distance is a mystery. Trees, even in their most mundane everyday activities, challenge human desires for scientific knowability. They are full of hidden stories.

Amidst the darkness of the forest, an image comes to my mind. One I saw the other day while researching about Klosterboden. It is a photo from a wildfire in 2013, which was started by a wood-chopping machine. In the photo, two firefighters are trying to put out the fire. The air is thick with smoke, and all you can see are burned branches on the forest floor, one firefighter in front, and another in the background almost disappearing into the smoky orange haze. It looks like a post-apocalyptic landscape.

The image takes me further back, to a few years ago, during the Californian wildfires of 2018. A video of a father and his son caught inside their car in a violent wildfire,
and only narrowly escaping death. I remember watching it while sitting alone in my university office in Copenhagen and suddenly feeling the full, gut-wrenching weight of it all. On a clear spring day in March, forests are magnificent places of human rest and relaxation, and provide home to many wondrous multispecies worlds. But forests around the world are also, increasingly, in their ongoing entanglements with human beings in the Anthropocene turned into horrifying places of fiery ruin.

I am starting to feel cold, so I walk back in the direction I came from. After a little while the sunlight returns and the air warms again. When I finally reach the gravel road, I can see my bike parked a little further down the road.

On my way out of the forest, I come by the older couple again. They look calm and happy as they walk, still holding hands. Then I am overtaken once more by the father and the child on their mountain bikes. They are racing each other to the car. The little boy gives his absolute all, but the father with his longer and more powerful strides beats him effortlessly.

Story III: The Forest as a Landscape of Ruin and Repair

Humans cannot live without trees. Unfortunately, many trees around the globe are under threat today because of human activities. Some species, like the Ash, are threatened by new and rapidly proliferating pathogens. Others, such as the trees of the rainforest, by industrial farming and relentless clear-cutting. One threat, in particular, is becoming more and more visible today: Fire. In an increasingly warmer world, wildfires are spreading across the globe.
Despite their apparent horror, the ecological complexities of fire-forest relationships are interesting to think with. Even though wildfires can, and often have, fatal consequences for all sorts of multispecies life, fire is not necessarily a bad thing from the perspective of a forest ecosystem.

Through ages, fire cultivation has been used across many cultures to actively renew local ecosystems. This has also been the case in Klosterheden. Before the advance of modern technology, its meagre and sandy soils were not suited for continual farming. When the land had been cultivated for four to six years in a row, it needed several years to recover. Farmers would then plough the ground and set the heath on fire, which helped replenish the soil’s nutrients. When the landscapes had been left uncultivated for several years, the process could be repeated. But the more recent history of Klosterheden also entails an ongoing relationship with fire. As mentioned above, a spontaneous wildfire saved much of the heath landscapes back in the 1960s, and in 2013, the forest was hit by another large wildfire. In the latter case, the cause of the fire was distinctly human: a defunct wood-chipping mazing had set ablaze the forest. After considerable fire-fighting efforts, the fire was eventually brought under control without any major human costs. Again, like in 1968, the verdict from the Danish Nature Agency was unequivocal: the fire would strengthen the diversity of forest and its animal and plant life. The fire had mostly cleared out old timber and thereby provided space for a more varied vegetation, which would in the long run improve the life of the forest.

The moral of these stories is not that wildfires are, on balance, a good thing. Many wildfires, such as those currently ablaze in California, Turkey, and other places around the world, often cause havoc and ecological disruption beyond repair – especially in a world that is growing hotter and drier by the day. Under the right conditions, however, fire is not always a fatal threat to a forest. Even in the face of repeated fires, trees and forests have bounced back and proved incredibly resilient. Unfortunately, the conditions of this resurgence are under pressure from multiple sides today. Among the primary culprits are global warming. A warmer world means not only more frequent fires, but also longer and

563 Gary Ferguson, Land on Fire: The New Reality of Wildfire in the West (Portland, Oregon: Timber Press, 2017); Daniel Mathews, Trees in Trouble: Wildfires, Infestations, and Climate Change (Berkeley, California: Counterpoint, 2020). As Mathews points out, the number of wildfires is not unprecedented in a historical perspective, but after a century with very few fires, today’s forests are entirely unprepared for the intense fires of a warmer world.
more intense fires.\textsuperscript{567} Intensity matters for resurgence, because larger and more intense wildfires, sometimes called ‘megafires’, have a higher risk of damaging trees and soils in irrevocable ways, making forest recovery impossible. Moreover, the climatic changes of global warming in itself reduces the possibility of forest recovery, because native trees have evolved their capacities for survival in a (colder) climate that is now disappearing. When global temperatures change gradually, as they have before in the Earth’s history, forests have time to adapt, and trees and their seeds travel elsewhere, sometimes with help from companion species such as birds. When temperatures rise rapidly, as they do today, forests are unable to adapt quickly enough. Therefore, even a single wildfire can be the triggering event that irrevocably pushes a struggling forest beyond its ecological conditions of survival.\textsuperscript{568}

Another less obvious culprit is human management of forests. In the pine forests of California, for example, a combination of human fire exclusion, logging and replanting practices have turned previously fire-resilient forests “into dense forests with a different mix of tree species that can more easily burn at high severity.”\textsuperscript{569} Efforts to suppress forest fires throughout most of the 20\textsuperscript{th} century have, absurdly, made some forests more not less vulnerable to wildfires – what is sometimes called the wildfire ‘paradox’.\textsuperscript{570} It works like this: When small and less intense fires that used to be part of a forest ecology are prevented, new trees take up the spaces in between larger ones and increase the forest’s density. When trees stand closer, it is easier for fire to spread, not only horizontally but also vertically via so-called ‘ladder trees’ that bring fire from the ground up into the crowns of larger trees. Thus, trying to prevent all wildfires have the tragic result that when a fire eventually comes along that cannot be prevented, it burns much longer and much more intensely, and with graver ecological consequences than if fire had been allowed to run its natural course all along.\textsuperscript{571}

Meanwhile, human logging and replanting practices have focused on optimizing timber outputs and in turn produced dense, homogenous forests without any durable


\textsuperscript{568} See Mathews, Trees in Trouble. Ch. 2, “Inferno”.

\textsuperscript{569} Ibid. Ch. 1.


\textsuperscript{571} See also Mathews, Trees in Trouble. Ch. 1, “A Loaded Atmosphere”.

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resistance to external threats, including fire.572 Here is another instance of Tsing’s plantation: When forest ecologies become simplified in the aim of profit, they lose their capacities for resurgence and are unable to adapt in the face of adversity. Once again, the logics of the plantation and the climatic crises of the Anthropocene come together in aggravating and increasingly fatal ways. This time through the vector of fire. To fight back against these ecological simplifications, humans must attend to the conditions that previously allowed for multispecies landscapes to adapt and recover even in the face of threats like new pathogens and increasing wildfires. In Californian forests, for example, that task involves primarily two things: First, active and selective ‘thinning’ that can help reduce the density of forests by removing ladder trees and infected or dead trees. Secondly, ‘prescribed burns’, either by burn crews or by letting wildfires burn, that prevent larger and more violent fires from forming later. For once, fighting fire with fire seem to be working.573 In California, therefore, part of the solution to the wildfire paradox is quite simple: let (more) fires burn. That is however, easier said than done, especially when fires threaten human dwellings or destroy forests in irrevocable ways. Here, like in many other places, short-term desires continue to trump long-term sustainability.574

In other forests around the world, the dual challenges of repair and resurgence are different. In the cooler forests of west Canada, for example, sustained fire depression might be the better option, at least for a while. In the still relatively temperate climate of Klosterheden, the threat of wildfires is still marginal, although increasingly long and dry summers, such as the one in 2018, are slowly changing that situation. The challenges will look different depending on the ecological conditions of specific forests, and therefore also require different solutions. The remaining unmanaged forests that still exist today in a place like California, for example, have had to find their own ways of adapting to the coming and goings of fire, why they are less vulnerable to wildfires and other external threats than human managed forests. Therefore, efforts restore the world’s forests today are likely going to require at least one thing that has proven to be remarkably difficult for humans: Scale back on human management and make more space for wild and unruly natural landscapes with their own capacities for fighting back through multispecies resurgence.

574 For more on this point, see Mathews, Trees in Trouble. Ch. 12, “Future Forests”.
Unmanaged does not mean untouched, however, and many forest ecologies around the world today depend on their ongoing entanglements with human activates. Here is a real dilemma for our Anthropocene times: Continue managing forests like before, and they will, quite paradoxically, see more frequent and less controllable wildfires. Withdraw completely to leave nature to do its own thing, and the trajectories of past failed management and the future dynamics of global warming will run their own fatal course. In the Anthropocene, complete human withdrawal from natural landscapes is no longer an option, if it ever was. Humans have already done too much damage and set in motion forces that will reverberate throughout the planet’s foreseeable futures.

Leaving vulnerable human-managed forests alone with fire today is not going to cut it. Restoring natural landscapes and their Holocene resurgence is going to require careful attention to the many nonhuman beings and forces we are sharing worlds with, and the formation of new intra- and interspecies alliances. People in particular places will have to start figuring out how to compose new lives together with all kinds of human and nonhumans others in landscapes that have been irreversibly affected by human activities. In a place like California, that will involve learning to live with fire – or getting out of its way in time. In a place like Lemvig, it will involve learning anew how to live and co-exist with the unruly forces of the rising North Sea, with the many domesticated animals already brought into society through the farming industry, and with the disorderly beavers and wild wolves that shape and sustain the multispecies landscape of the local forests.

Among the most vital – and still open – questions for multispecies life in the Anthropocene are, will enough humans learn to give room and share space with other nonhuman species and forces even when it goes against immediate human interests? Will they find it in themselves to respond to degraded multispecies landscapes with renewed care and begin enlisting companion species, whether it is the Matsutake or the wolf, as allies in their fight for a more sustainable multispecies world?
Conclusion:
The Extended Edges of the End

Throughout this dissertation, I have argued in favor of what I call a new materialist theory of democracy for the Anthropocene. I have shown both what new materialism is, and how it can help us think about the contemporary conditions of the Anthropocene in new and constructive ways. By now, I also hope to have answered, perhaps less explicitly, a more general question: What is a theory of democracy?

The answer suggested here is that any convincing theory of democracy must be able to say something about at least three essential features of democracy: First, it must say something about how it understands the nature of politics, and who counts as relevant political agents – we can call this the ontological component. Second, it must say something about the democratic institutions that follow from its ontological conception of politics, and who ought to be included in these institutions and how – we can call this the institutional component. Third, and finally, it must be able to say something about the myriad, multi-sited forms of politics that take place outside formal institutions and not only complement, but also occasionally transform, existing democratic institutions – we can call this the radical component. Such a theory of democracy need not, however, say anything too final or conclusive about those components. Ample room should be left open to account for different historical and contextual specificities as well as the ongoing negotiations of situated, democratic actors in particular contexts. A democratic theory that insisted otherwise would not be very democratic after all.

That being said, a theory of democracy must be able to at least say something substantive about all of these components. Therefore, the three core conceptual chapters of this dissertation addressed each of the three components in turn. Chapter 3, on participation, addressed the ontological question of what and whom counts as political. It did so by arguing for an extension of the conventional ways of thinking about political participation within democratic theory, which have tended to limit politics to the activities

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575 Referring here to the original Latin meaning of the word radical, ‘root’, thereby suggesting that the capacity for self-overturning and continual change lies at the very root of democratic practice.
of deliberating, reason-giving, human agents. Instead, it argued in favor of a new way of conceptualizing politics guided by new materialist concepts such as entanglement, mediation, and the ability to affect others. Viewed through this lens, politics is envisioned as an inherently ecological affair in which myriad and multi-species forces produce emergent, and sometimes political, effects in their entangled relations with each other.

Chapter 4, on representation, then took up the institutional implications of these ontological insights and argued in favor of extending institutional representation beyond the human. More specifically, it argued for the extension of multiple types of legal and political representation to not only nonhuman animals, but also natural entities more broadly, including the extension of legal rights as well as more substantive forms of parliamentary representation. In the end, however, it also pointed to some of the limitations of institutional politics, by noting that they, too, rely on extra-institutional practices of care and receptivity that cannot be restricted to an institutional setting.

Chapter 5, on leadership, therefore, shifted the analytical perspective away from institutions and towards the more radical aspects of democratic politics, which take place in the multi-sited politics of sensorial reorientation and collective action unfolding on the ground today. Drawing on insights from both new materialism and complexity theory, the chapter argued that even if many of the possible futures of the Anthropocene currently look dire, a swarming politics of multi-site, multi-scale democratic actions and experiments might come to resonate and change the larger system through its autocatalytic and cascading effects. There is, however, no guarantees that it will happen in time – or that it will happen at all. But as democratic theorist William Connolly writes, it seems more and more like an “improbably necessity.”

Underlying all of these arguments is a basic premise that has not been addressed explicitly in this dissertation, although I have discussed it in more detail elsewhere. Why democracy at all? If it is true that the world is on the brink of widespread ecological collapse, do we really have time to wait for the often slow and difficult processes of democratic politics? Would it not be better if we ditched democracy altogether in favor of either a technocracy led by the leading climate experts, or an autocratic regime led by a benevolent climate dictator? Here, the answer is a firm no. Not only do both of these alternatives face difficult normative challenges regarding legitimacy and accountability, such as who gets to choose these leaders and what constituencies would they be accountable to?

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576 Connolly, Facing the Planetary, 12.
Even setting aside these normative challenges, the alternatives are subject to a much more straightforward critique: They are, quite simply, unfeasible. Both alternatives underestimate the challenges ahead by reducing them to a matter of effective top-down management, when what is needed is a much more demanding, and comprehensive, sensorial and material reorientation of human ways of life in the Anthropocene. A reorientation that concerns virtually every aspect of human existence, including how we eat, act, think, sense, and relate to human and nonhuman others in our daily lives. Such a transformation cannot be managed from above. Political elites do not have the knowledge needed to address the unprecedented challenges ahead, nor do they have the material capacities to force billions of people to change their ways of life, unless they are themselves on board with the change.

Fantasies of easy solutions, technocratic, autocratic or otherwise, are mere pipedreams. Scary ones, too. What is required, instead, is the full capacity and collective intelligence of a swarming democratic politics that begins from the only place it can: The situated places in which people live their lives.

Summarizing the arguments of this dissertation in a few paragraphs can make them seem overly abstract, when they are in fact quite mundane. As the interludes of the dissertation show, the abstract theoretical discussions of new materialism and the democratic politics of the Anthropocene resonate, in tangible ways, with the everyday political life of a place like Lemvig. Questions about the political participation of nonhuman forces and entities, such as the ever-present North Sea, play a vital role in the everyday politics of climate change (Interlude I). So do questions about how to include and relate to nonhuman others in the multi-species landscapes of Lemvig, particularly in the institutions of factory farming that have a long tradition in the area (interlude II). Even the more radical aspects of a democratic politics of change can be found here, through the ongoing efforts to combine a progressive environmental agenda with a thriving local community despite its increasing political marginalization (interlude III). Although Lemvig is a uniquely interesting place to study the challenges of the Anthropocene, many of these issues are not unique to Lemvig.

This dissertation could have been written from the perspective of a different place, and many of the contours of the Anthropocene condition would have remained familiar. That would, however, have been a completely different dissertation. This is part of what I mean when I say that Lemvig is located on the edge, being both inside and outside at the same time. This edginess is becoming more and more like a universal condition today, because all places are both ‘inside’ the Anthropocene, subject to its global dynamics of planetary change, and ‘outside’ it in their local specify. There is no single story of the Anthropocene, and no neat conclusions. There are only multiple stories with multiple and still-open endings. Grand narratives that suggest otherwise, such as the Anthropocenes of
ecomodernism and eco-Marxism, fail to acknowledge the full extent of the challenges that lie ahead.

What the new materialist narrative offers, instead, is an overarching frame that is capacious and flexible enough to contain multiple Anthropocene stories without insisting on their internal coherence or even consistency. One that allows for situated difference. The new materialist stories of democracy I have told in this dissertation are lively attempts to figure new and open-ended Anthropocene stories that begets more stories, while seeking to multiply the kinds of stories that can be told.

Let me be entirely honest. Although many of the situated stories of the Anthropocene are still open-ended, it is becoming clearer and clearer by the day that many, if not most, of these stories could eventually converge in tragic ways. In face of this tragic possibility, some authors of a more cynical inclination have suggested that it might be time to accept the end of human civilization. Maybe they are right. If we take a deep ecological perspective on the future of life on this planet, maybe our human departure is not so tragic after all. If the worst-case scenarios of anthropogenic global warming and ecological collapse turn out to be true, it might mean the end of most existing human, animal and plant species, but the planet and much of at least its microbial life is going to survive and will eventually bounce back. This has been the case, too, in the aftermath of previous mass extinctions events, such as the one mentioned in the introduction that took place at the end of the Cretaceous and killed off the dinosaurs and many other species. That event worked as an evolutionary reset that allowed for other species, including human beings, to thrive. Without it, we would not even be here.

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578 See also Ejsing, “Antropocæne Fortællinger.” English title: “Anthropocene Stories”.
580 Ibid., 153.
581 Ibid.
Some nonhuman species are already thriving in the human-altered ecological landscapes of the Anthropocene. Legions of Jellyfish, for example, thrive in the too-warm oceans of global warming and are on the verge of taking over the seas. Under other circumstances, jellyfish are actually quite capable of living alongside other species, but because of “modern human shipping, overfishing, pollution, and global warming,” they are gradually turning the oceans into a pool of sloshing goo. In their entanglements with humans, they are becoming tyrants of the sea. On land, another monstrous species is likely to take over the ecological space that opens up. According to one of the leading stratigraphers of the Anthropocene, Jan Zalasiewicz, giant rats might one day take over the post-Anthropocene Earth. If scenarios with legions of jellyfish and giants rats sound somewhat disturbing, maybe you are still a little too caught up in the sticky tentacles of anthropocentric notions of the Earth as a human planet. Perhaps it is time to realize that we will not be around forever. The planet existed long before us and will (unless humans, in all their ingenuity, find a way to obliterate it altogether) exist long after we have left. A hundred million years from now, everything human-made will be compressed into “a layer of sediment not much thicker than a cigarette paper.”

However, although I sometimes find these deep planetary perspectives enticing, especially as an antidote to overly human-centric perspectives and temporalities, they have very little purchase for democratic politics today. In fact, as a viewpoint for how to approach the planetary politics of the Anthropocene, it strikes me as an overly disembodied, if not downright dangerous, perspective to take. While such abstract perspectives might appeal to relatively safe and well-off academics of Western universities, they offer very little guidance to those who are already feeling the consequences of a warmer world, and tell us almost nothing about how to navigate the increasingly disaster-ridden futures to come. Here I think it is worth repeating, again, that a ‘climate apocalypse’ is not going to be a single-event catastrophe, but more like an extended edge. Although its intensities and temporalities will vary from place to place, the ecological collapses of an increasingly warmer world will look more like a slow unfolding of increasing multi-species pain and suffering. In the face of such suffering it will be imprudent, if not downright

584 Tsing et al., Arts of Living on a Damaged Planet, p. M1.
586 Ibid., 105.
587 For a better sense of what this might look like, see for example David Wallace-Wells, The Uninhabitable Earth (Columbia University Press, 2019).
unethical, to maintain the stoic attitude that ‘the planet will survive without us’. Even in the most apocalyptic scenarios, there is going to be plenty to fight for.

What is needed today, therefore, is not a resigned misanthropic attitude, but new ways of thinking and doing that can help guide us along the extended edges and open-ended futures of the Anthropocene to come. In this dissertation, I have sought to offer one such piece of guidance through the notion of a new materialist theory of democracy. Writing from the conviction that the most apocalyptic futures are still avoidable, I have sought to locate theoretical and empirical potentials for composing new futures despite the tragic possibilities of the present. In this same aspirational spirit, and inspired by Natasha Myers’s playful ten-step guide for the Planthropocene and Zoe Todd’s end-of-the-world survival guide, I would like to end the dissertation by offering eight concluding suggestions for how to achieve a new materialist democracy for Anthropocene.

One. Remember that you are part of something larger. No one acts alone. All things become what they are through their ecological entanglements with others. Human beings, in particular, cannot live without their nonhuman others. We depend more on the microbes than they depend on us.

Two. Pay attention to the world that surrounds you. Cultivate your senses towards the more-than-human forces that surround and penetrate you. Allow yourself to be excited about the vital forces of the natural world and its many nonhuman inhabitants.

Three. Show care towards the communities and ecological assemblages that sustain you. Practice receptivity and hospitality towards human and nonhuman others. Cultivate softness and tenderness instead of toughness. Do not take the world for granite.588

Four. Disentangle yourself from destructive assemblages. Say no to large-scale industries of capitalist consumption that continually wage war against human and nonhuman others. Opt out here, while opting in elsewhere.

Five. Conspire with others in the push for change. Begin in the communities and ecologies you are already entangled with and expand from there. Find human and nonhuman allies, who will sustain you in the long run. You are going to need them.

Six. Look for potentials of composition instead of detached critique. Do not let the desire for rightness inhibit your willingness to make connections across difference. Think about how new loops of knowledge and behavior can begin, even in the most seemingly troubled places.

Seven. Beware of both defeatism and optimism. Yes, it is already too late, but it is never too late. Neither technological innovations nor benevolent dictators will save the planet. A long, slow, democratic grind might.

Eight. Dare to dream and figure new and different futures. Experiment with other ways of living, being, and relating with human and nonhuman others. Be hopeful, but do not forget to stay with the trouble.

As with everything else in this dissertation, these eight suggestions are not to be mistaken as fixed convictions. They are more like the stars, the waves, and the winds of the Polynesian wayfinders. Points of guidance, which might help us navigate through the storms to come, but will constantly have to be negotiated and balanced against all the other unruly forces and currents that continually propel us forward, while they threaten to throw us off course.
Acknowledgments

Somewhat against custom, I have decided to put the acknowledgements section last. It often comes first, but is that not a bit premature? Before the reader has had a chance to see for themselves what has been written. I have always found acknowledgments sections to be a bit forced, if not downright awkward. Maybe that is why I wanted to put it last, in order not to force my own awkwardness on the reader upon entry. Either way, it is certainly not because there is no one or nothing to acknowledge. On the contrary, it resonates with me when Karen Barad writes in the beginning of *Meeting the Universe Halfway* that “it is not so much that I have written this book, as that it has written me.”589 Or when Jane Bennett writes in *Vibrant Matter* that the sentences of the book emerged from the confederate agency of many striving macro- and microactants: from “my” memories, intentions, contentions, intestinal bacteria, eyeglasses, and blood sugar, as well as from the plastic computer keyboard, the bird song from the open window, or the air or particulates in the room, to name only a few of the participants.590

No one acts alone. This dissertation could not have been written had it not been for the many things and beings that have sustained me along the way. All action, human or otherwise, depend on myriad others. For example, during the COVID-19 lockdowns in Denmark, it became painfully obvious just how vital the material conditions of writing and doing research are – especially when they are absent. Access to a decent office space, or at least a room of one’s own, is crucial when your time is spent mostly reading and writing. What I am trying to say is that this dissertation has been enabled not only by its human communities, but by a much larger network of things and beings that include also many nonhumans. I would be amiss here, if I did not mention the impact made on me by an encounter with a particularly lively cactus I used to live with, which helped cultivate my senses to the vital materiality of plants, or the weeks I spent sharing my daily routines, for the first time, with a companion animal, the cat Oliver, who lived in the house I borrowed one summer while looking for a place to stay. These and many other material encounters with nonhuman others have shaped this dissertation in ways that are difficult to pinpoint, but nevertheless have made a lasting impact.

589 Barad, *Meeting the Universe Halfway*, p. x.
It seems easier somehow, or at least more familiar, to recognize the contributions made by human others such as university colleagues, research participants, friends, and family. I am deeply grateful for the many inspiring academic encounters I have had over the years, and for all the engaging conversations and generous comments given on my work by incredible scholars. These include former and present political theory colleagues and students in Copenhagen, Anders Berg-Sørensen, Andrew Poe, Anne-Sofie Dichman, Benjamin Ask Popp-Madsen, Christian Rostbøll, Dean Cooper-Cunningham, Derek Denman, Ditte Sørensen, Ioannis Rigkos, Irina Papazu, Lasse Thomassen, Minda Holm, Troels Skadhauge, the entire group of graduate students, and many others. This also includes the many gifted graduate students and professors I met during my research stay at Brown University in the spring semester of 2016, Jeffrey Feldman, Hannah Baron, Siraj Sindhu, Julia Huggins, Aaron Stern, Thomas Pringle, Sherena Razek, Harper Shalloe, Rose Dawson, Bonnie Honig, and many others. I am particularly grateful to Anna Tsing, Bill Connolly, Eric Beerbohm, Jane Bennett, Mark Levene, Natasha Myers, Nils Bubandt, Rom Coles, Sharon Krause, and Wendy Brown, who all provided valuable feedback and encouragement at decisive moments in the process, sometimes without knowing the full extent of their own impact. I still remember the advice Wendy Brown gave me at a weeklong workshop in Switzerland doing the spring of 2018: “Don’t let anyone dissuade you from doing the work that matters to you.” If I can pass on one advice to other PhD students, let it be this one.

Luckily, you do not have to fight very hard to do the work that matters to you when you have an advisor like Lars Tønder, whose steady encouragement, sharp intellect, and Funen kindness have been instrumental to the development of this project. Between research trips to exotic places like Stockholm, Sydney, and Vejle, endless discussions about the complexities of the Anthropocene, and the occasional failed attempt to get me to finally read Spinoza, I have learned much of what I know about political theory from my conversations with Lars. It is with great excitement that I look forward to continuing them in the future.

In addition to these academic encounters, I want to acknowledge all the invaluable contributions made by the people I met during my fieldwork in Lemvig. These include the many named research participants that make appearances throughout the dissertation, Arne, Benny, Bo, Carlo, Claus, Gunvor, Ingeborg, Jens, Kurt, Lasse, Lars, Lene, Maria, Mette, and Uffe, as well as all the unnamed people I met and have spoken with. I also want to thank my extended family in Lemvig, who made me feel at home, and in particular my cousins Rasmus, Jeppe, and Kasper, as well as their friends and family.

Finally, I would like to acknowledge the unwavering support I have received from people in my private life over the past years. This support has mattered more to my
research, and to the completion of this dissertation, than we often acknowledge in academia. We can pretend otherwise, but there really is no denying that the private and the academic is deeply entangled. Had it not been for my network of friends and family, who picked me up when in the middle of this research project my private life fell apart, there would have been no dissertation at all. I am endlessly grateful to my friend Morten, who always offers a safe haven, and to Mirjam, whose daily support and company feels like a second home. I also want to acknowledge my friends in Copenhagen and elsewhere, who have had to listen to my incessant blabbering about the matters of this dissertation, many of which have managed to show, or at least fake, genuine interest along the way.

A final thanks to my family, my mom, my dad, and my sisters. Not unlike the public payphones in New York that showed up when they were most needed, you are always there for me when I need you. To have such an unconditional source of love in one's life, a steady rock when the tides turn too high, is a privilege of a magnitude that I cannot fully put into words.


Ritchie, Martin W., Carl N. Skinner, and Todd A. Hamilton. “Probability of Tree Survival after Wildfire in an Interior Pine Forest of Northern California: Effects of


