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Introduction

In April 2016, the University of Ottawa made a curious decision regarding climate change. The previous couple of years saw campaigning by student groups, supported by some academics, to get the University to divest the holdings in its pension funds and endowments from fossil fuels. This was in common with divestment campaigns on many other university campuses across North America and beyond, as well as in churches and some larger institutional investors. In response, the University announced that it would not divest from fossil fuels but later on in the report making this announcement, it stated that it would take the investments out of the various fossil fuel companies it had holdings in, and shift that money into 'clean energy' investments. In other words, it decided to divest from fossil fuels but would not accept publicly that it was doing this (see Chapter 8 for a longer discussion of this episode).

What is going on here? Why would a public institution such as a large university effectively deny that it was acting on climate change in ways that campaigners had demanded, even while it was in fact acceding to those demands? My aim in this book is to explore in what ways we can think of climate change as *political*. This vignette, which is discussed in more detail in Chapter 8, exemplifies many of the sorts of processes I want to bring to light.

First, it helps us think about some key conceptual questions about politics – is it a site of collective decision-making (the university in this case), is it about the power and authority to generate or resist change, or is it about conflict or consensus? I unpack these three in Chapter 2. With the first, of course, my choice of vignette is question begging – isn't politics as a site restricted to governments? One answer to this question is precisely that if politics is also about power and authority, we have to look for it in many more sites than just national governments. But more importantly, if politics means all three of these, how do they interact? One interpretation of this decision is that the university sought to *depoliticize* climate change, in saying both that it was not really bowing to pressure from

student groups, and not really making a public statement that could be regarded as hostile to fossil fuel interests, precisely in order to secure the political *authority* of the university senior management. That is, thinking about the multiple dimensions of politics as a concept helps us understand the nature of the processes by which responses to climate change are generated and justified.

Second, this vignette helps us think about some of the drivers of responses to climate change. What we see in the university's decision is that in explaining why they are divesting (although they refuse the term), they are doing so as a strategy that combines a logic of investment with a logic of public reputation and corporate identity. Their decision was driven by questions of return on investment, combined with a desire to present the university as a progressive, civic-minded institution playing a role in questions of broad social interest: Hence the 'clean energy' frame for the decision. This I call a *cultural political economy* argument. An important implication of this is that climate politics can be everywhere – in all human activities and relations. Climate change is everyday, mundane, implicated in the normal dynamics of our societies (Saurin 1994).

Third, the story helps us focus in on two core dynamics and dilemmas in addressing climate change politically. One of these I call a tension between *purification* vs. *complexity*, while the other is a dynamic between *depoliticization* and *repoliticization*. One powerful logic for campaigners and decision-makers alike is to engage in 'purification' of climate change – to simplify it to a single enemy (the fossil fuel industry), a single policy tool (carbon pricing), or a single magic technology (battery storage), most notably. For campaigners in particular, this enables them to mobilize effectively (as enemies are surely useful, as are simple stories about magic solutions), and to sharpen public attention on climate change itself, the threats it poses, and so on. Divestment campaigns have been one of a number of recent forms of more confrontational politics (alongside anti-pipeline campaigns, the Sunrise Movement, school strikes for climate, and Extinction Rebellion), which have this logic at their heart. They *purify* climate change through a focus on the fossil fuel industry as the enemy. But also, while the university tried to *depoliticize* the divestment decision by emphasizing its technical or managerial character, activists also *repoliticize* it by making the power relations involved in shifting away from fossil fuels apparent, and insisting on collective public decision-making to challenge that power. But on the other hand, climate change also has a powerful logic that stands in stark tension to this desire for purification. It is enormously complex, entailing dealing with almost all social and economic activity, developing and deploying new technologies, shifting social practices in varying ways in systems with very different structures and actors (think electricity vs. transport vs. agriculture and all the nuances within each of those sectors). It is hard to see how purification *on its own* can account for the

political dynamics entailed in shifting such an enormous complex system. 'System change not climate change' is a common slogan of these campaigning groups, raising the question of what is the 'system' and how do systems change? Nevertheless, the purification of climate change has been crucial to generating shifts in power relations and dynamics on the issue.

1.1 Why Focus on a City? And on Ottawa?

Chapter 2 develops these three core arguments in more detail, and they provide the arguments I try to develop throughout this book. I do so by exploring climate change within the city of Ottawa. In part, the attempt to theorize climate politics arises out of my own, very minor, role in some of the processes analysed here – including the divestment story above and some work over the years with local non-government organization (NGO) Ecology Ottawa. Studying a place you live in also enables the researcher to follow processes reasonably closely, and pay attention to context and in particular to the structures and practices of daily life through which climate change interventions are generated and upon which those interventions act.

A good deal of recent work on climate change politics has focused on the urban scale, or 'cities and climate change'.[1] While this book is not first and foremost seeking to contribute to these debates specifically, it is the case that the urban scale is where very large proportions of climate change interventions take place, and where the key carbon-generating systems – housing, transport, energy consumption, industry – are located physically, organized techno-economically, and governed politically. The urban scale is where we can bring sharply into focus the mundane character of much of climate politics, as well as the dynamics of what I call in Section 1.2 'implicit' climate politics. Focusing on a single city can be a useful way to explore the key political dynamics of climate change.

But Ottawa is also interesting in relation to the existing research on climate change and cities in that much of that work focuses, for good reasons, on 'pioneer' or 'leader' cities and city networks. We know a lot about Copenhagen, Vancouver, and various other cities that have got serious plans in place for reducing their greenhouse gas emissions and seem to be on track to meet them. And we know a lot about networks such as C40 or the International Council for Local Environmental Initiatives (ICLEI)'s Cities for Climate Protection network, which are, as Kern and Bulkeley (2009) pithily term them, 'networks of pioneers for

[1] For a small selection of this literature, see: Bulkeley et al. (2010, 2015), Hodson and Marvin (2010), Bulkeley (2013), and Luque-Ayala et al. (2018). A substantial focus of this literature is on city networks on climate change, see for example: Bulkeley and Betsill (2003), Bouteligier (2012), Gordon (2013, 2016b, 2020), and Lee (2014).

pioneers' (see also Gordon 2016a). But we know less about the 'ordinary' cities that struggle with climate change. These cities take some occasional initiatives, they implement them partially but they suffer political setbacks or bureaucratic inertia. Climate action thus comes in waves and stutters in between, by which time the city's emissions have grown further. They almost certainly fail to overcome basic contradictions between their imperatives for local economic development, combined with cultural norms about transport, housing, and the like, and addressing climate change effectively. These cities are probably the considerable majority of the world's cities. And this certainly characterizes Ottawa – at times in its history, especially during the 1990s, it was seen as a 'pioneer' but it has failed to sustain early momentum that would justify such a label (see Chapters 3 and 4 in particular for more details on this checkered history of the city). As such, there is much to be learned about the character of climate politics from exploring it in a place such as Ottawa.

In short, Ottawa is ordinary. Most cities, or at least their boosters, tell a story as to their uniqueness. But most cities are in fact rather similar in many respects. I hope in what follows that readers, whether they are in Brisbane, Toulouse, Hyderabad, Montevideo, Liverpool, Milwaukee, or Accra, will see dynamics familiar to those in their own settings. Indeed, an additional value in focusing on cities is that these similarities cut across geopolitical fractures in ways that states do not – city politics in the cities mentioned above are much more similar to each other than is the case across the countries in which they are situated. The diversity of cities across the world is not usefully understood in terms of categories of North/South (Robinson 2006) and in cities across this divide we see: Conflicts over urban planning, transport policy, housing, and commercial buildings; Faltering steps to address climate change stymied by apathy, corporate lobbying, resistance by car drivers but occasionally mobilized in novel and even inspiring ways to create change; or Recurrent dilemmas generated by competing emotional attachments to climate action and to familiar and convenient daily routines.

Nevertheless, to aid such a comparison to your own situation, here are a few specifics about Ottawa. It is a city of a little under a million people. In the 2011 census its official population was 883,390, and its current (2020) population is estimated at around a million. It has a sister city on the other side of the Ottawa river, Gatineau, which if added in, comes to around 1.2m in the 2011 census (City of Ottawa 2016). But a substantial amount of the territory of the city is rural, at least since various previous municipalities were amalgamated into the current City of Ottawa in 2001 (see Chapter 3), meaning the urban population is somewhat lower. This has implications for the balance of urban, suburban, and rural forces in the City Council, which have significant effects on the dynamics of decision-making over sustainability, as we will see both generally (see Chapter 3) and for

particular questions such as planning and transport (see Chapters 5 and 6 in particular). This also means that, in territorial terms, it is the largest big city in North America, at 2,790 km^2. Like much of Canada, Ottawa has a climate of extremes – average daily high temperatures in July of around 27°C (with temperatures in the 30s reasonably common) and average daily low temperatures in January of around –15°C (with temperatures in the –20s also commonplace). There is snow on the ground for between four and five months of the year. This has obvious implications for heating, cooling, and transport in the city.

Ottawa is also the capital of Canada, which generates a number of specificities. One is that it is a 'government town' – the federal government dominates employment in the city, especially since the collapse of hi-tech firm Nortel, the principal private sector employer, in 2009. Another is that its median income is relatively high, around 30 per cent higher than the Canadian average. A third is that it has some institutional quirks. One is the aforementioned split of the physical urban area into Ottawa and Gatineau, a split that is also across the provincial boundary between Ontario and Québec, a long legacy of Queen Victoria's decision to locate the capital precisely on the border between francophone and anglophone parts of what was becoming Canada during the nineteenth century. This has effects for coordination of urban decision-making, most notably over public transport infrastructure, which is only very loosely integrated between the two. The other, however, is the presence of a federal jurisdiction, the National Capital Commission (NCC), that straddles both Ottawa and Gatineau, owns significant amounts of land, and has specific rights over planning that is not the case in other cities.

Nevertheless, despite these specifics, Ottawa is, like many other cities, a city whose politics is often dominated by the questions of urban planning, transport, local economic development, and housing. And thus it is dominated by the interests, values, and visions surrounding these – dominant actors such as property developers, local communities defending their neighbourhood, city managers struggling to meet competing demands for low property taxes, efficient transport systems, and so on.

1.2 Why We Need to Search for Climate Politics

But while the book arises out of this research in Ottawa, it also arises out of a realization that while many people such as me teach, talk, write, and think about climate politics, none of us really says what it *is*. That is at least the premise of this book. While there is a vast body of work analysing various aspects of climate change politics, from the United Nations Framework Convention on Climate Change (UNFCCC), to national climate policy, to the politics of specific policies such as carbon markets, there is nevertheless very little which explicitly addresses

the question of how we should understand the political character of climate change *per se*. We use all the terms that connote specific aspects of political life – power, authority, conflict, or governance, for example – and there are endless terminological and theoretical debates about the meanings of these but we don't do the same with politics itself, in relation to climate change. What is political about climate change? What sorts of political forces and dynamics drive responses to climate change forward and hold them back? What are the political dynamics and dilemmas for those pushing for adequate responses to climate change?

There are of course also many who decry the political character of climate change. 'If only we could keep the politics out' is a common enough refrain. They think politics is somehow noise, getting in the way of us recognizing our common interests in dealing with climate change. This is most explicitly seen in the argument by James Lovelock that we need to abandon democracy to address climate change (Willis 2020: 1). This is often just a simple misunderstanding: The reflection of how in many societies 'politics' has come in public discourse to have the very narrow meaning of *politicking* – the jockeying for position between different groups of professional *politicians*, the cynical manipulation of citizens and electoral processes to pursue these aims, and so on. Such an account operates as a self-fulling prophecy of course (Hay 2007). But politics has a much longer history and richer, more important set of meanings than this particular expression, and we shouldn't allow it to be captured by such a superficial way of understanding it.

Other people think that climate change is not political but instead an economic or technological question. It is a simple matter of 'getting the prices right' to generate incentives for investors, producers, or consumers to shift behaviour accordingly, or of finding the sorts of technologies that can effectively decarbonize our various economic and social activities that currently spew carbon into the atmosphere at a still increasing rate. The economy and technology are indeed important but it is a mistake to think that they are themselves not political. If we ask how the prices may be made to be 'right', then we are immediately in the conflicts over taxation, emissions trading, and the power relations that will enable or constrain such 'carbon pricing'. Ditto with technology – radically new technology is almost always highly disruptive, and as such is resisted by many forces (economic, cultural, and political) that seek to prevent its emergence, and at the same time it requires huge amounts of effort to produce.

Against those who argue this is just really fundamentally about a technological revolution, and who do so because they believe that people will not voluntarily change their daily practices sufficiently, it is crucial to understand that technical and social change are always closely intertwined. It is simply a false dichotomy to make this contrast between technology and behaviour. The most obvious way to

debunk this persistent myth is to think about the emergence and dominance of the automobile in Western societies and then globally (if unevenly across time and space). From 1900 to 1950, the US (a little later elsewhere) underwent a major 'energy transition', where transport systems shifted from rail, horses, cycling, and walking to being dominated by the car. Was this a technical change? To be sure. Was it social change? Definitely. Could these two be separated out from each other? The attempt would be an absurdity. The lives led, the possibilities enabled (and others foreclosed), and the dangers generated were all enabled by the technology of the automobile, and conversely the social, cultural, and political visions created for the car shaped its future (see especially Sachs 1992; Gartman 1994; Paterson 2007). Similar stories could be told for the various other key elements in the energy transitions involved in industrial capitalist development – coal/steam and electricity, in particular.

Building on this, it is really important to underscore how integral fossil energy is to the modern world. Whether or not we believe that the global economy can be disentangled from fossil energy, and whether or not we believe doing so requires us to abandon economic growth as a collective goal, or capitalism as a social system, historically it is not an accident that fossil fuels have been central to the social, economic, and political dynamics of the last 200 years. We can measure this statistically through the exponential rise of both coal consumption and then later on oil and gas, and its correlations with global economic growth. But the nitty-gritty details perhaps demonstrate this deep link more effectively. As Andreas Malm shows, industrialization was proceeding reasonably well in Britain on the basis of water power, and the shift to coal and steam power was only decisive in the mills around Manchester after the 1826 spinners strike, when mill owners decided to automate spinning, which gave a decisive advantage to coal/steam over water as a source of power for mills. Coal/steam was a class strategy to undermine the power of workers in the production process (Malm 2015). But coal was also central to the democratization of Western societies: The forces that mobilized most systematically and effectively for universal *male* suffrage in the late nineteenth and early twentieth centuries across the West were trade unions, who derived their power from their ability to control the flow and use of coal – dockworkers, railwaymen, steelworkers, and coal miners themselves (Mitchell 2013). Conversely, oil has tended to undermine democracy, as workers were unable to effectively control its flow to generate political reform. And politicians in democratic societies have competed over their abilities to mobilize fossil energy most effectively, and distribute their benefits to citizens smoothly, from Herbert Hoover's 'a chicken in every pot: two cars in every garage' (as quoted in Wernick 1991: 71) to 'Mondeo Man' being one of the key signifiers in the 1997 UK general election (Paterson 2007). Dealing with climate change without 'politics' makes little sense when we

understand the depth with which the causes of climate change are integral to our political life.

This also implies that almost anything can be understood as part of climate politics. Climate politics is not analytically reducible to the things that are articulated explicitly in relation to climate change. Anywhere there is political activity (collective authoritative decisions, conflicts and power relations, and the relations between these elements) that entails energy use, we can treat these as questions of climate politics. Even if actors have not yet sought to frame an object as a climate change object, since its qualities and relations will be transformed as we respond to climate change, then we can explore its dynamics to help us think through climate change's politics. We can think for example about meat and dairy: For a long time ignored in the climate change debate, it has erupted in perhaps the last five years as an object of attention, from the methane emissions from cows, sheep, and goats, to the embodied energy of animal feed and mechanized farming. However, it would still have made sense to analyse the politics of meat as a climate change question even though the number of actors that had explicitly made the link in any sort of sustained way was vanishingly small, since it was always the case that any serious response to climate change had to address the meat (or perhaps more precisely and certainly most importantly, the cow/sheep/goat/dairy) question. Much climate politics is thus 'implicit' – logically contained in an activity, decision, initiative, or conflict, even if climate change is not mentioned explicitly. Indeed, there are often reasons to avoid framing an issue as about climate change: Even if explicit 'climate denial' is not in play (and, perhaps surprisingly, it is completely absent from the processes I analyse in this book), the sort of everyday denial that Kari Norgaard (2011) analysed is commonplace. She uses this to refer to the fact that while people are widely aware of climate change, its causes, dangers, and potential catastrophic consequences, they carry on about their daily lives as if ignorant, rarely mentioning it, not connecting it to their daily routines and habits, or to the political setting in which they find themselves.

I proceed therefore with the proposition that climate change is intrinsically political. I also proceed on the basis that, contra those who seek to 'keep politics out', who worry that the politicization of climate change only makes dealing with it more difficult, thinking more carefully about climate change's political qualities will be helpful in advancing responses to climate change. As such I seek to build on those claims emphasizing the need to politicize climate change, not depoliticize it (e.g. Pepermans and Maeseele 2016; Mann and Wainwright 2018; Wall 2020; Willis 2020). As Rebecca Willis (2020, 3) argues, 'the problem is not *too much democracy*, it is *too little*'. For democracy, read politics, and indeed as we will see in Chapter 2, in many ways the two stand in for each other – to make climate

change 'more political' is to bring it squarely and explicitly within the realm of fully democratic deliberation, contestation, and decision-making.

I assume readers are familiar with the litany of impacts of climate change, some already well underway, and many more to come or to intensify, and that the stakes are exceptionally high in terms of the effects on human misery and perhaps even civilizational survival. In recent years the stakes have become ever more sharply identified, and barely a week goes by without a new report detailing new evidence of the severity of the likely impacts. If you are not familiar with these, then there are myriad sources of such information: This book is not one of them. I also assume that readers are reasonably familiar with the scale of the challenge, the need in effect to get GHG emissions to more or less zero (and probably also to generate novel forms of 'negative emissions') in a spectacularly rapid timeframe, way beyond any such transformation human societies have ever experienced. But the premise that is perhaps new to many, is that understanding the political drivers of these potential transformations is key to understanding whether or not we can pursue them effectively. Chapter 2 is therefore aimed at elaborating what it means to think about climate change as political.

1.3 How I Explore Climate Change As Political

Chapter 2 develops the conceptual arguments sketched in the opening paragraphs of this introduction in much more detail to provide the core of the argumentative terrain of the book. What the rest of this book is designed to do is to develop an analysis of climate politics that tries to retain all three senses of politics – the arena of collective decision-making, power relations, and the dynamics of agonistic conflict – as well as to demonstrate and explore the cultural political economy drivers of climate action and the tension between purification and complexity. This means that climate politics can be understood in relation to a recurring dynamic of de- and re-politicization, as climate interventions are rendered technical but then repoliticized. But I also seek to keep in play a sense that the politics around climate interventions is never divorced from the material specificities of the intervention: Rebuilding a streetscape, changing planning practices, accounting for carbon, and managing the infrastructure of a large public institution, particular models for investing in renewable energy (to take some of the examples discussed in later chapters), will each have specific political dynamics in part produced by the technical, place-specific, material qualities of the intervention and its contexts.

How then do I seek to develop these arguments? The material for this book draws principally on research on climate change politics within the city of Ottawa, Canada, carried out between 2010 and 2016.

Throughout the book I explore the diverse *sites* of climate politics in the city: The decision-making processes in the City of Ottawa[2] itself (Chapter 3); how that site is made by collaborative networks and the spreading of carbon accounting as a governance tool – that is, as a way of exercising power – to the City (Chapter 4); within the University of Ottawa (Chapter 8), the Ottawa Renewable Energy Cooperative (Chapter 9); and in the main non-state carbon accounting initiative, Carbon 613 (Chapter 4). The book also maps the broad range of climate governance initiatives across the city (Chapter 7).

The book also demonstrates questions of *power* and *conflict* in climate politics. It shows how technocratic attempts to govern carbon entail the exercise of expertise-based power that seeks to become routinized in daily activities – carbon accounting (Chapter 4) is emblematic here, but the University of Ottawa's very successful energy management systems also have this quality (Chapter 8), as do some aspects of the efforts to shift urban infrastructure across the City through 'intensification' (construction within existing urban boundaries rather than out on the city's edge, Chapter 6) or 'Complete Streets' (rebuilding streets for multiple users rather than just cars, Chapter 5) as planning philosophies. It also shows various ways that the power of specific groups and interests shapes the trajectory of climate change action in the city. The power of property developers in the planning process is perhaps the most obvious (Chapter 6) but we can also discern it in the class dynamics of renewable energy development (Chapter 9), the power of finance and accounting that lurks in stories about carbon accounting (Chapter 4) or fossil fuel divestment (Chapter 8), and the broad cultural power of a car-centred transport norm (Chapter 5). It also shows how when such initiatives frame them through highly consensual, deliberative discourses, such initiatives then efface the conflicts implicit in them with problematic effects (Chapter 9). Finally, it shows the dynamics of repoliticization, as various actors contest the power of other actors and decisions at various sites of climate politics, from students contesting the University of Ottawa over divestment (Chapter 8), pro-car forces resisting the shift in urban infrastructure entailed in Complete Streets (Chapter 5), or councillors and community groups resisting building projects in the city under the banner of 'intensification'. Many of these have the dynamic of de- and re-politicization developed in Chapter 2.

We also see the *cultural political economy* argument reflected in various ways throughout the book. It shows how corporate strategies, and relations to the council, shape the form that climate change action takes in relation to planning and building development (Chapter 6), remaking street infrastructure (Chapter 5), and

[2] A terminological note is in order. Following local convention, when I use 'City of Ottawa', capitalized like this, or just 'City', capitalized, I refer to the city council. If I just say 'the city', lower case, then I am referring more broadly to the city as a whole (including but not reduced to the council).