Between the Tree and the Bark: The Politics of Boreal Forest Imaginaries in the Abitibi region, Québec, Canada

by
Sébastien Nobert

In fulfilment of the requirements for the degree of
Doctor of Philosophy
University of Edinburgh
November 2007

I would like to dedicate this work to my grand-father Harmel LeBel (1908-1996), who, like many young Québécois from the 1920s-1930s, was sent in the Abitibi region to contribute to the upbringing of his 17 brothers and sisters. It is through his lumberjack stories that I had my first contacts with the forest of the Abitibi region and it is through him that I learnt from a very young age the importance to know and the chance to learn.

Declaration

I am responsible for composing this thesis. It represents my own work and where the work of others has been used it is duly acknowledged.

Signed……..

Date……..

Abstract

This thesis examines the politics of managing the boreal forest in the Abitibi region of Québec in Canada. It pays particular attention to how the plurality of forest users produces multiple forest imaginaries that are involved in the constitution of the micropolitics of quotidian practices of the forest. The aim is to show how different forest imaginaries and their politics could inform current forest management and open up other possibilities for the governance of, and relationships with, the boreal forest.

By investigating the power relationships involved in the production of boreal forest politics, this work shows how forestry science and ecology have established and exercised their authority over how the forest is imagined and experienced. This territoriality has been articulated through discourses and practices that promote dominant industrial relationships with the forest which undermine other ways of imagining the relationships between forest users and non-humans. Engaging with post-structuralism theory, phenomenology and political ecology, I demonstrate how the multiplicity of forest users comes to know and experience the boreal forest in various and unstructured ways which destabilise efforts to imagine and construct the forest as a static entity. By paying attention to everyday life practices of various forest users, I show how contestations and negotiations about different imaginaries and places of the boreal forest are interrelated and mutually constituted. These practices and the imaginaries that they construct work together to produce the forest as an open space which is capable of embodying a wide range of meanings.

By investigating how the boreal forest is constituted by various unstable imaginary places and politics, I argue that the current territoriality and politics produced by the imbrication of forestry science and industrial forestry should be challenged by another form of governance. This new form of governance needs to acknowledge the relational quality of imaginaries and to democratize the politics of the forest. By showing how abstract concepts such as relational politics can become implemented in current forest policies, the significance of institutions that are already in place and that can serve to embody other politics of the forest is highlighted. Apart from contributing to political ecology and environmental politics, the findings of this research show that political projects which can seem utopian at first glance have the potential to become tangible agents of social and environmental change.

Acknowledgements

I would like to acknowledge all those who have participated to this research and who have taken time to answer my questions. I am particularly indebted to the inhabitants of the Abitibi region who were always open and happy to help me in my research endeavours and from whom I learnt about the complexity of the politics of the boreal forest. I would like to thank the community of Lac-Simon through which I've been initiated to Algonquian culture and relationships with the forest, especially the *Conseil de la Nation Anishnabe* which introduced me to the trappers of their community.

While in Edinburgh, I had the chance to be surrounded by a remarkable group of scholars. I owe much thanks to my supervisors especially to Jan Penrose whose generosity, rigour and great intellectual support throughout these four years were essential for the final version of this thesis and to Andrea Nightingale for introducing me to political ecology and for her encouragements. I also would like to thank other colleagues, who have participated in this thesis by their thoughtful comments and for helping me refining my arguments such as Eric Laurier (who I also acknowledge for giving me free access to his incomparable library), Ignaz Strebel, Joe Leibovitz, Emily Brady and Charlie Withers. I also would like to thank David Howard who offered good support throughout the Ph.D. process as an adviser. Many fellow Ph.D. students helped me to shape my thoughts and offered valuable insights through numerous discussions. Special thanks go to my colleagues from the *Barra Suite* (Karin Viergever, Ian Cameron, Nick Cutler and Omair Chaudhry) who made my writing time an enjoyable moment and who offered valuable help with formatting the thesis (especially Omair).

Many friends in the UK and Canada also contribute to this thesis by challenging me in a daily basis about my own work and their thoughts are somehow reflected through the lines of this thesis. Special thanks go to Guillaume Couture, Javier Albert, Zizis Gagkas, Susana Sebastian, Oscar Vasquez and Mark Friars. All have contributed to change my mind by breaking the work routine and offering distractions. I would like to thank Chris MacCahill for taking me mountain biking to Glen Tress almost every week-end and when I was hesitant, making all the necessary arguments to convince me that going cycling on Saturdays was a new form of religion that should be practiced in the Scottish Borders. Amongst all the people I would like to acknowledge I would like to pay a special tribute to Geneviève Patenaude who has decided to take part of my race by supporting me all over the process that is a Ph.D. despite the ups and downs created by my the nomadic life and often overstressed state. She also offered me the most valuable moments I had during these four years by pushing me out of my office to travel around Europe. Finally, I would like to thank my parents and my brother without who this project would have not been possible, their constant encouragements and support throughout my student career was much appreciated, especially towards the end of this Ph.D. when keeping the rhythm was more difficult. I also want to thank the Government of Québec and the British Association of Canadian Studies for awarding me the *Prix du Québec* 2005 as well as the University of Edinburgh Development Trust for providing extra funding to this project.

Content

List of Figures

Chapter 1

The Boreal Forest of Abitibi: From Block to Multiple Pieces

1.1 L'*Erreur Boréale* and the production of the problematic boreal forest

On the 28th of March, 1999, the documentary film *L'Erreur boréale*, produced by Richard Desjardins and Robert Monderie, was broadcast on the public television channel *Télé-Québec*. The film revealed the extensive disappearance of Québec's boreal forest, including its complete eradication from parts of the Abitibi region by forest machinery and profit-based industries. This documentary sought to inform Québec's citizens about the state of the northern boreal forest, especially in the Abitibi region, through a very powerful montage of environmentalist, anti-capitalist, nationalist and pro-unionist discourses that portrayed Québec's "public" boreal forest as falling prey to "bad" forest industries. The filmmakers' thesis emphasised that the forest was not growing as fast as indicated by government forecast and that at some point in the future, the forest would not be able to satisfy the industry's greed. The underlying message of this film was that Québec's "public" boreal forest was threatened by the mega power of the forest industries and their support from the Ministry of Natural Resources and Fauna (MNRF) of Québec.

The day after this public broadcast, a wave of criticism reached the shore of the MNRF of Québec and drenched its Minister, Jacques Brassard, the Parti Québécois (PQ) in power, the former Prime Minister Lucien Bouchard and the Québec Forest Industry Council. This wave was so significant that it continues to monopolise public debates in the press, on the radio and on television Québec.[1] An important factor behind the popularity of the film is the charismatic personality of Richard Desjardins, a songwriter, folk signer, filmmaker, poet, environmentalist and one of Québec's popular public figures. In addition, his talent as filmmaker makes *l'Erreur boréale* a very powerful

[1] Although the documentary film has been translated into English as *Forest Alert* for transmission across the rest of Canada and to the Anglophone communities of Québec, the most significant impact of the film was restricted to the Francophone Euro-Québécois population. The ensuing debate about the management of the boreal forest was investigated almost exclusively by francophone media. Consequently, the information used in this thesis focuses mainly on francophone understandings of the problem.

piece of documentary cinema, renowned for its quality and shocking scenes. The success ascribed to the film within the province of Québec (particularly in the southern and urbanised areas) allowed Desjardins and a group of citizens concerned about the state of the boreal forest to create a coalition named *l'Action Boréale en Abitibi-Témiscamingue,* which demanded that the Government of Québec form an independent inquiry into the state of the boreal forest of Québec. This coalition has subsequently developed into an environmental NGO with more than 2000 members throughout Québec.[2] The group was pro-active enough, and its message appealing enough, to mobilise a great number of citizens who were eventually able to force the government to undertake an independent inquiry into the state of the boreal forest in 2004.

Before going into further analysis of the events that have constructed Québec's "forest crisis", it is important to emphasise the reasons that led me to adopt the term "boreal forest" when I describe the forest located in the Abitibi region. Throughout this thesis, I use the term boreal forest to refer to the geographical space that has been configured by foresters and policy makers. However, it is important to note that not all forest users name the forest in this way. By using the term boreal forest to describe this particular space it becomes easier to understand how the power relations that maintain it are articulated. The term "boreal forest" that animates the current debate over the management of the public forest Québec. But they are, of course, other, quite different ways of knowing, naming and experiencing the forest that do not correspond entirely with the boreal forest and get involved in "a conflict over the representation and governance" of the forest (Nancy 1991: x). Using this term also makes it possible to understand how this geographic entity is bounded, and thus to recognise what is inside and outside this particular space of biophysical elements.

The public controversy created by *l'Erreur boréale* during the years 1999-2000 forced the Québec government of this period (the PQ) to respond to widespread claims that film's thesis that the forest has been overexploited by modifying and replacing the 1986 Forest Act with the New Forest Act (NFA) in 2001. The NFA was considered more acceptable to the population of Québec because it incorporates the notions of "sustainable development", public participation and ecosystem protection into forest management efforts. The NFA was thus an effective political tool for allowing the PQ to claim that everyone has a role to play in the management of Québec's public forests.

[2] For more information, see http://www.actionboreale.qc.ca/membres/index.html.

Although industrial forest exploitation was still the backbone of the NFA, the integration of ecosystem protection into the forest management strategy allowed the PQ to sell the NFA as a democratic political change. However, in May 2002 the Auditor General of Québec published her report on the years 2001-2002, in which she investigated the management of the public forest through the NFA. This report has been very critical about the "New" Forest Act of 2001 and raised important issues regarding the legitimacy of the forest management system (VGQ 2002: 4.3-4.9).

The Auditor General underlined several problems in acquiring accurate data about the amount of forest available for harvest by the forest industries (VGQ 2002: 4.3). Likewise, the lack of rigid norms for framing how the forest should be harvested and reforested was impeding attempts to evaluate the "real state" of the public forest. The lack of a systematic approach to reforestation was also implicated in the degradation of water quality and increased soil erosion. Worst of all, the NFA was judged to be unsustainable for the forest. According to the Auditor General, the lack of structures that normally allow the government to oversee management of the public forest could lead to serious overexploitation of forests instead of protecting their biodiversity (VGQ 2002: 4.31). These criticisms were the alarm bells warning the population of Québec that despite the actions of their government, the management of the public forest was dominated by economic interests. Trapped between these criticisms and *l'Erreur boréale*, the PQ called for an inquiry into the state of the public forests, especially the boreal forest which represents 1 060 600 km^2 and plays a significant role in the economic development of the province, with more than 150 towns and villages strictly dependent on its exploitation (MRN 2002). In addition to this economic imperative, the forest is also an important carbon sink and a major habitat for various animals and plant species, which puts its exploitation at the heart of political struggles among various groups of forest users.

On the 23rd of October 2003, the newly elected Liberal party of Québec (PLQ) tried to project an image of political renaissance and of social responsibility with the creation of a scientific, technical, public and independent inquiry into the management of Québec's public forest.[3] The PLQ appointed Mr. Guy Coulombe as Chair of the inquiry, and

[3] The inquiry on the public forest had been planned previously by the PQ before the provincial election of April 2003. However, by appointing Guy Coulombe as the inquiry Chair instead of the previous PQ choice of Roger Nicolet, and by making the inquiry public, the PLQ gained legitimacy among

consequently the commission has been known as the Coulombe inquiry through the media. The commission also includes one co-Chair and six commissioners trained in forestry, ecology, finance, economics and natural resource management.[4] The mandate of the commission was to recommend modifications to the current public forest management system and provide a "new" technical and scientific framework that would allow Québec's government to achieve "sustainable development" (CEGFPQ 2004). This framework was proposed after a careful examination of the prevailing scientific and technical justifications for harvesting and reforesting operations. To explore how Québec's government could achieve sustainable development, the Coulombe inquiry met with forest users in 13 regions of the province. Users were invited to submit their comments about the existing management of the public forest and express their ideas about how these practices might be improved. Specific regional interest groups, such as environmental NGOs, First Nations communities, university departments,[5] unions, forest industries and federations of leisure activities such *La fédération de canot et de kayak du Québec* were also invited to present their opinions through written submissions and oral testimony, as was also the case for independent forest users such as those citizens who felt concerned about the management of the public forest.

The multiplicity of texts presented to the commission was impressive. They ranged from submissions produced by simple hunters to those from the large and powerful forest products industries, and all of them had something to criticise about the management system. Because the commission was public, all documents were accessible on a web site where one could also hear regional consultations from audio archives of meeting sessions. Listening to these consultations, it is possible to hear different understandings of what the public forest is and how it should be managed for future generations of Québécois(es). Some users were in favour of more restrictions on forest exploitation and others were in favour of less state control over the way the forest was managed. The image of a divided forest, just like that which emerged in the film *l'Erreur boréale,* was reproduced in these regional debates.

---

environmental groups. However, the party's reluctance to follow the commission's recommendations has played against this political manoeuvre.

[4] It is important to highlight the complete absence of social scientists among the commissioners and, obviously, this lack has had a great impact on the commission's conclusions.

[5] It is interesting to note that the only academic departments which have participated in the commission were those producing the technical skills that became problematic in the management of the public forest (i.e. the Department of Forestry and Geomatics at Laval University, producers of the *SYLVA II* model. See Chapter 4).

On the 14th of December 2004, the commission produced its final report, which was presented to the then Minister of Natural Resources, Fauna and Parks, Mr. Sam Hamad, and to the Minister responsible for Forests, Fauna and Parks (now Minister of Natural Resources and Fauna), Pierre Corbeil.[6] The commission report was far from brilliant for the government of Québec. It showed that the amount of forest which can be allocated to the forest industry has been overestimated, and thus that the boreal forest is being overexploited (CEGFPQ 2004), just as the Auditor General of Québec suspected and as *l'Erreur boréale* claimed. The Coulombe Commission advanced 80 recommendations for improving the current forest management system. Among these recommendations, the commissioners suggested that 20% of forest that was then allocated to forestry industries should be reclaimed to avoid overexploitation (CEGFPQ 2004). The guiding principle of the Coulombe Commission was to enhance the scientific skills and knowledge of the current forest management system in order to reinforce the existing legislation that governs Québec's forest management. According to the commission, the recommended structural changes had to be completed within a maximum of three years if the state of the public forest, mainly the boreal forest, is to be improved. This short time frame meant that the government could support only two recommendations of the commission: first, the creation of a forester-in-chief, and second, a 20% reduction in the forest volume allocated to the forest industries. Environmental NGOs and forest industries accepted these decisions with criticism — one saying that it was not enough and the other saying that these propositions would lead them to bankruptcy. These recommendations and the responses of the PLQ in terms of their application produced social debates about the state of the forest and the future of forest-dependent regions and communities.

Following the Coulombe Commission's final report, the debate about management of the boreal forest has quickly been recuperated by the media and portrayed as a struggle between those against and those in favour of the forest industry's management. This polarisation has been enhanced by powerful figures such as Richard Desjardins (2004a) and the head of the Forest Industry Council (Gauvin 2004), who personify the most vocal sides of the boreal forest management debate. For example, Desjardins (2004a, 2004b) published an open letter in the newspaper about the management of the boreal forest and asked for a public inquiry into the causes of this overexploitation, rather than

[6] The constant unpopularity of the PLQ has pushed the Charest government to reshuffle its cabinet in 2004, 2005 and 2006. Consequently both ministers and ministries have changed very often.

just an acknowledgment that the problem existed. These demands were never directly met by the government of Québec, but an interview done for the business magazine *Commerce* with Frank Dottori, the former president of *Tembec* (a significant forest products company from Québec), answered the concerns raised by Desjardins. In this interview, Dottori acknowledges the complicity of the Ministry of Natural Resources in allocating unsustainable amounts of forest to the industry. He said "we harvested more trees than what the forest was actually able to produce, and all of that has been going on with the blessing of the government" (Chartrand and Rodrigue 2006 my translation). For Dottori, "forest is not an industry, it is a social and political question", since it was used as an economic development tool bringing political capital to the party in power (Chartrand and Rodrique 2006, my translation). This is made even clearer when he stressed that every community located in the region and interested in attracting a saw-mill to their village "had their mill, even if the capacity of the forest located in the vicinity of the village was not permitted to supply the mill" (Chartrand and Rodrigue 2006, my translation).

Coming from the retired president of a forestry company, this statement reinforces the debate about why management of the public forest has been restricted to the forest industry, the government of Québec (especially the Ministry of Natural Resources) and those "who care about the forest", namely the environmental groups. For Dottori, the "forest is a social and political question" before anything else, implying that the decisions about its management are monopolised by the reciprocal interests of government and industry. Dottori acknowledges this relationship when he states that, "indeed, we knew that the forest was overexploited, but we were backed by the government. The buffet was open, we served ourselves" (Chartrand and Rodrigue 2006, my translation). This statement cannot be clearer: something has gone very wrong with the management of the boreal forest in Québec. The reasons why the comments of a former forest-industry president made the headlines of a widely read newspaper may have to do with the stupefaction engendered by such a declaration. It was a surprise to learn from someone involved with the management of the public boreal forest that its overexploitation was known and orchestrated by the different political parties in power in Québec City for regional development and electoral reasons.

As a Québécois francophone who has contributed to and followed the boreal forest management debates in Québec, it was difficult for me to understand why so few people

were represented in these negotiations. It was even more striking to note that the question of boreal forest management has been reoriented as a question of governmental credibility, rather than of the relationship between the humans and non-humans that constitute the boreal forest. In the process, government practice has been deemed a legitimate subject for public concern and intervention, while forest management has been produced as something that can only be dealt with by forestry experts. As a consequence, the boreal forest becomes represented by a battle of numbers between government and forest industry on one side and the environmental NGOs on the other, rather than as an assemblage of relations among trees, animals, plants, water, soils and different forest users. Instead of paying attention to the multiple discourses, experiences, materialities and technologies engaged in the production of the boreal forest, the current forest management works to produce the boreal forest as a sort of unidirectional process which makes abstractions of the other ways of imagining and experiencing it. The boreal forest of Québec as described through actual management policies, as well as that constructed in the documentary *l'Erreur boréale,* is made into an immutable space that excludes and homogenises other imaginaries of the boreal forest.

As already noted by commentators on the North American rain forest of the Pacific West Coast management debate (see Proctor 1996, Braun 2000, 2002, Satterfield 2002, Reed 2003), forest users are often simplistically divided into monolithic groups by those with an interest in simplifying matters in just such a way (i.e. policy makers, the forest industry, environmental NGOs, government and First Nations). These two groups are those who are in favour of the forest industry and those who are against it. In this way, the debate about the management of the boreal forest is outrageously limited to a dichotomy which is far too simplistic to account for the multiplicity of perspectives on what the forest is and, consequently, on how it should be managed. In Abitibi, more than 7,000 jobs are directly related to the forest industry (Blanchette 2003: 2), and a great number of other jobs (such as services and governmental departments) are indirectly dependent on it.[7] At first glance, the population might seem to be composed mainly of foresters, but while many Abitibians are indeed working for the forest industry, they are also experiencing the forest in different ways than through their work

[7] This number decreased dramatically after numerous mills closed in October 2006. Many dependent communities have seen their mills closed because of the difficult economic context created by the high price of trees and the slow down of house-building in the USA. It is worth mentioning that construction timber is the most significant regional timber product.

and therefore their imaginaries of the forest are far from fixed. For example, on a territory extending on 45, 435 km^2 in which 93% of the forest is considered public (see figure 1), it is easy to construct the forest management debate as a regional economic stake between different users in the Euro-Canadian and First Nations communities (MAMR 2006: 1, MRNF 2006). It is, rather, the struggle between different imaginaries of the boreal forest, materialised through different discourses and practices, that lies at the heart of the conflict.

Not acknowledging the diversity of discourses and practices involved in the debate about management of the boreal forest leads to a sterile debate. Moreover, the preoccupation with pragmatic solutions such as public involvement processes has a tendency simply to reinforce the dominant stereotypes. This is illustrated by the categorisation of the actors commonly involved in forest management struggles and their standardisation into four groups; namely, the forest industry, the government, the NGOs and the First Nations[8]. As this thesis will demonstrate, when investigated in detail, these groups almost disappear (though some identity boundaries do persist) into the variety of ways of experiencing and knowing the boreal forest. These experiences and knowledges are linked with what I call the imaginaries of the forest, an important concept on which I will draw to understand how the negotiations over the representation of the forest become interconnected.[9] By so doing, I pay special attention to how different forest users imagine the boreal forest and how these latter become interrelated through multiple boundaries. These boundaries, both material and immaterial, are mobile elements that participate in the production of places that are territorialized as political entities in which governance can be imagined anew (Nancy 1991).

[8] It is important to note that numerous environmental groups also take the defence of First Nations. This can be seen through *l'Erreur boréale* when Desjardins and Monderie (1999) show First Nations as affected by the intense harvesting operations occurring on their ancestral territories and this portrayed First Nations as part of their monolithic understanding of forestry conflict in the Abitibi region.

[9] Imaginaries are the products of imaginations materialised either through discourses or by practices. The imagination refers to the continual flow of possibilities that emerge between the known and the unknown.

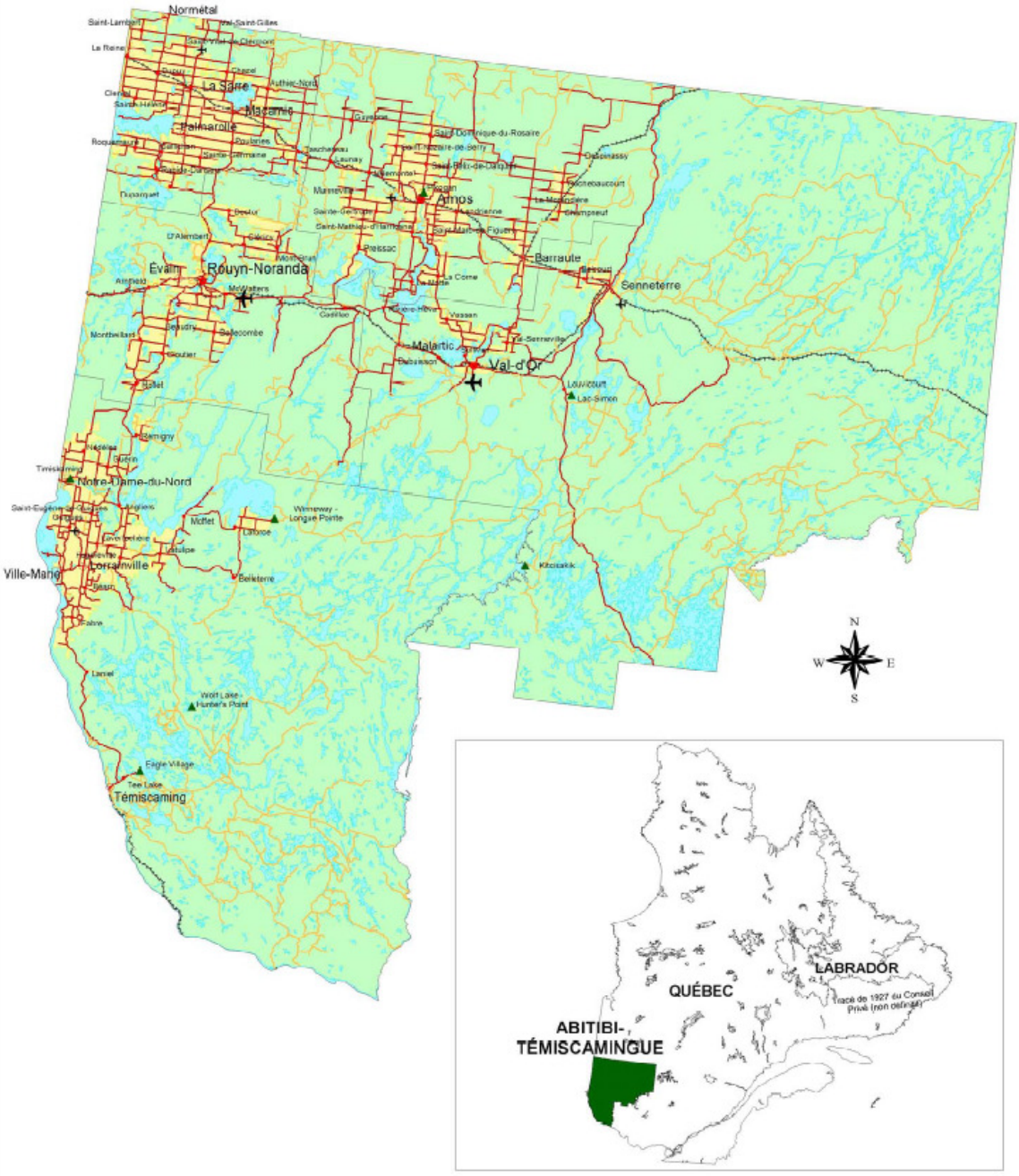

Figure 1.1 Showing the Abitibi region. The Abitibi region is located in the north of the Témiscamingue. Source: http://www.fapaq.gouv.qc.ca/fr/region/08_abi/PDRRF/carte_08_367k.pdf

In this thesis, the question I am asking is how do various imaginaries of the boreal forest of the Abitibi region become bounded and territorialized as political entities by different forest users? Posing this question implies a careful analysis of the different ways in which forest users engage with the boreal forest. It also involves asking how different boreal forest users construct and materialise different boundaries of the forest, boundaries which are used to claim the existence of different forest imaginaries and goals within the environmental debate about the management of Québec's public boreal forest. As this thesis argues, an investigation into the politics of the boreal forest means

exploring the ways in which various discourses, materialities and practices have produced different imaginaries of the public forest. As I will describe more in detail in Chapter 2, I use politics to refer to the contestations, negotiations and positions which forest users adopt through their discourses and everyday practices (Nancy 1991, Massey 2005). As I will argue, this is a necessary prerequisite for devising new and widely responsive management strategies for the boreal forest of Abitibi. To investigate the politics of the boreal forest is, above all, to bring philosophy back into politics in order to move from a debate of numbers and short term planning to a more fundamental debate about the relationships humans want to engage with the non human world. Acknowledging that the various ways in which the boreal forest is experienced and known is key to the protection of various knowledges may well have an important role to play in the conservation of the boreal forest's social and biophysical heterogeneities. Investigating the politics of the boreal forest of Abitibi is also an attempt to bring different and often marginal imaginaries of the boreal forest into forest management practices.

To achieve this aim, the concept of social nature (Castree and Braun 1998) is one of the keystones for my theoretical reflection. Poststructuralism is the framework through which I analyse the discourses and practices that shape the politics of the boreal forest. This is because poststructuralism "focuses on the role of language in the construction of social reality; it treats language not as a reflection of 'reality' but as a constitutive of it", and it implies an understanding of discourse as "the articulation of knowledge and power, of statements and visibilities, of the visible and the expressible" (Escobar 1996: 46). A poststructuralist framework makes it possible to conceive of the boreal forest as an entity made through a multiplicity of discourses and practices, rather than as a monolithic and fixed block. A poststructuralist framework also makes it possible to acknowledge the marginal discourses and practices that are often simply erased from policy-making, but which have the capacity to transform the boreal forest into an arena in which other political relations are possible. My interest in exploring different knowledges of the boreal forest and the ways they can be integrated through public forest management places this thesis squarely within a poststructuralist political ecology framework. This type of political ecology makes it possible to look at the different politics proposed and constructed by different boreal forest users and the imaginaries they claim.

1.2 A brief overview of the Argument

The thesis has been divided into eight chapters designed to advance my overriding argument, which are interrelated to each other in that they offer a fresh look into the politics of the boreal forest imaginaries. Chapter 2 sets the theoretical foundations on which I ground myself in order to understand the imaginaries of the boreal forest and their politics. Chapter 3 introduces the methodology I have used to understand how the imaginaries of the boreal forest, as well as the places and the politics they represent, can be understood from discourses and quotidian forest practices. Chapter 4 consists of an analysis of forestry science and ecology in the production of boreal forest geography and in the dominant imaginaries of the forest. This chapter pays particular attention to industrial forestry practices and their ability to maintain specific boundaries that produce the boreal forest as a site of foresters' territoriality. Chapter 5 shows how the dominant imaginaries of the boreal forest, their boundaries and politics described in Chapter 4 are challenged by the multiplicity of other imaginaries which exist in the everyday practices of a forest-dependent community. By using a festival as a microcosm in which various forest users meet to celebrate the forest, I explore how multiple imaginaries came together and destabilise the spatial fixity of the forest as it is represented through industrial forestry discourses and practices. In Chapter 6, I show how the multiplicity of imaginaries described in this festival can also be found within the forest by examining the relationships between forest users and the biophysical elements of the forest. This chapter also argues that imaginaries of the forest, performed as practices with the forest produce interrelated places and politics which should be recognised as co-constituted and interrelated by forest users and policy makers. By so doing, I argue that this interrelatedness makes it possible to propose forest management policies that accept the forest as a spatial entity that takes multiple purposes. In Chapter 7 I show how the ideas argued in this thesis can be articulated in practice and can influence current forest management. I propose how a relational politics of the forest can be implemented and how the ideas normally found in academia can be useful in the production of a new politics of the forest. Finally, Chapter 8 ends the thesis by highlighting the theoretical aims achieved and highlights the future research that could be done on aspects I did not have time to investigate in my own project. To advance these goals the next chapter will introduce the literature which informs my work and that situate it in the current geographical literature.

Chapter 2

From Sustainable Development to Poststructuralism: The Road to Change

---

2.0 Introduction

This chapter sets the conceptual and theoretical frameworks through which this thesis explores environmental politics and, more precisely, the politics of boreal forest imaginaries. The aim of this chapter is to review some of the literature that has been written on the various aspects of boundaries, territory, territorialities and imagination in order to show how this thesis connects these concepts and how it will contribute to this body of work. The chapter is divided into five interrelated sections. The first section introduces how forestry work has written about political conflicts and how forestry science has developed its own way of understanding forest management conflicts. This leads to the second section, in which I emphasise the importance of moving out of this traditional frame of mind, investigating instead the significance of boundary-making and its essential role in the production of territory and territoriality at play in environmental struggles. This section also stresses that the interrelations between boundaries, territories, places and spaces need to be investigated if one is to propose alternatives to the current management policies. Section three explores imaginations by paying particular attention to the work of Gaston Bachelard on the significance of imaginations in the creation of imaginary spaces and places, producing multiple positions, contestations and negotiations among forest users. Section four deals with the work that has been done on nature and society in geography, and will make the link between the production of imaginaries and their possible role in constructing alternative forms of natural and social relationships with non-humans. The fifth and final section of this chapter shows how political ecology can be joined to this corpus of work as an approach that makes it possible to explore how multiple forest users embody their own imaginaries of the forest through everyday practices, and how these practices are involved in the production of politics challenging the binarised construction of environmental conflicts.

2.1 From forestry science to poststructuralism

Forest issues in Canada have been described as a problem of a "common pool" management (Swift 1983, Marchak 1995), and the media have generally portrayed them as such. For example, the highly publicised cases of British Columbia's Clayoquot Sound (Braun 2002, Reed 2003), the Great Bear Rain Forest (Rossiter 2004) and the boreal forest of Québec (e.g. Desjardins and Monderie 1999, Dubois 2002) have all been constructed as conflicts over the accessibility of public lands. In the case of Québec's boreal forest, the literature written to solve management problems has been produced primarily by scholars from the fields of biology and ecology, and more generally by foresters. It is through these fields that notions such as Sustainable Forest Management (SFM) and public consultation process became part of the New Forest Act (NFA) of Québec in 2001. With the adoption of article 54 in 2001, the Act required local interested parties to participate in elaborating the General Forest Management Plan before it could be implemented by the Ministry of Natural Resources and Fauna (see Lecomte *et al.* 2005). Although forest management planning has changed since the Québec National Assembly approved the first version of the NFA in December 1986, forest management remains mainly technocratic. Interested parties are only invited to participate in forest planning once the *Contrats d'Approvisionnement et d'Aménamgement Forestier* (CAAF) beneficiaries have decided which harvesting techniques and reforestation scenarios will be used.[10] This situation places the impartiality of Québec's decision-making process far behind that of other Canadian provinces (Lecompte *et al.* 2005).[11]

The development of social mechanisms that can ease tensions between different users is largely done within a positivist framework. This has the unfortunate habit of reproducing the same categorisation dynamics in social behaviour that ecology and forestry do with the multiplicity of non-humans interactions found in forests. Such mechanisms are known as public environmental consultations or public involvement processes (Sample 1993, Selin and Chavez 1995, Carr *et al.* 1998, Mendoza and Prabhu

[10] As I will show in Chapter 4, CAAF is the French designation for supply and management contracts which "confers to private parties the right to get annual licenses to harvest the volume of wood required to meet the needs of a mill in excess of what can be obtained from woodlot owners, residual sources, and recycling facilities" (Bouthiller 2001: 260).

[11] In Ontario and Newfoundland, for instance, public participants elaborate forest management plans together with the forest industry, and in the case of conflicts between users (stakeholders), clear conflict resolution processes are part of their management guidelines, whereas in Québec they are blurred (Lecomte *et al*. 2005).

2000, Rieman *et al.* 2000, Butler and Koontz 2005), in which specific technologies — such as the technological multi-agent systems (MAS) — are used to quantify the satisfaction of forest users (see Ossowski 1999, Purnomo *et al.* 2005). When looking at this corpus of work and at the studies that have investigated how public participation could be improved, it becomes obvious that there have been very few novel ideas about forest management (see Côté and Bouthillier 2002, Lecomte *et al.* 2005). The subsequent dominance of these discourses and practices undermines attempts to acknowledge other ways of experiencing and knowing the boreal forest (Houde and Sandberg 2003).

As I will emphasise in Chapter 4, constantly presenting the boreal forest through the lenses of forestry science and ecology has constructed the forest as an entity that can only be seen and thought of in scientific terms. Even "social" foresters who make the effort to integrate postmodern theory into the analysis of forest management struggles have overlooked the need to engage with forms of knowledges other than scientific forestry when considering what constitutes the boreal forest (e.g. Purdon 2003). By using theories from forestry science and ecology to understand forest management conflicts, foresters and policymakers make abstractions of the social processes (i.e. the multiplicity of interactions between humans and non-humans) which allow unequal access to the forest. This means that by investigating forest management struggles through scientific knowledges, what constitutes the struggles among boreal forest users such as the meaning of the biophysical environment has been totally neglected in favour of concepts such as biodiversity. Foresters' and ecologists' focus was, and still is, to study the biophysical impacts of the current management system, as well as the probable impacts that climatic change will have on the boreal forest and thereby force the government to compete with new phenomena (e.g. Bergeron and Flannigan 1995, MacDonald *et al.* 1998, Straussfogel 2006).

Recent scientific research shows that global warming reconfigures the boreal forest. This can be seen through the melting of the permafrost (Camill 2005), the increase of tree height and the replacement of some vegetation by other, warmer-climate species (Gamache and Payette 2004, 2005), as well as the increased incidence of forest fires (Bergeron *et al.* 2001) and insect epidemics. All these changes will fundamentally modify the boreal forest and thus influence its definition. Scientific experiments (like measurements of the tree line) make it possible to redraw the boreal forest and to

explain how these changes affect animal and vegetation populations. On the other hand, these scientific experiments reinforce the notion that the forest should be taking in charge by the scientists. This has been well demonstrated by David Demeritt (2001b), who has shown that climate change has been appropriated by physicists' predictions, and thus climate change policies become the territory of computer modellers and ecologists.

All of this suggests that the boreal forest is fundamentally social, that is, fabricated from the social interactions that occur in the production of scientific knowledges. In turn, this constrains the understanding of the boreal forest as something that can only be articulated through discourses of forestry science and ecology. In forest management, sustainable development has become a fashionable notion used to find solutions to resource depletion. As Arturo Escobar (Escobar 1995, 1996) rightly stresses, sustainable development marginalises the cultures, knowledges (from First Nations or Euro-Canadian rural communities) and biophysical features that compose the boreal forest, makes it possible to sustain capitalism and "contributes to the spread of the dominant economic worldview" (1995: 196). This is far from reimagining the ways in which the boreal forest can be managed. On the contrary, it reinforces established power dynamics among boreal forest users and only recognises the existence of certain limited knowledges of the boreal forest.

Reimagining the management of the boreal forest also implies reimagining the space designated as "the boreal forest" (Castree and Braun 1998).[12] It implies a consideration of how this particular space is constructed by various places and boundaries, caught up in the territorialization of environmental politics and imaginaries of the boreal forest. Defined as a circumpolar space (Larsen 1980, Shugart *et al.* 1992), the boreal forest of Québec is characterised by coniferous trees and specific plant and animal species, all of which are categorised through scientific protocols and nomenclatures. As I will demonstrate in Chapter 4, one consequence of this classification is that, from an insect species to the type of soil categorised as "boreal", almost nothing is left unnamed, uncertain and inconsistent (Latour and Woolgar 1986, Roth 2005). It is therefore very

[12] Inspired by Michel de Certeau (1984), I understands space as open, multiple and as the continual flow of interactions between people, objects and things that produce the structures and references to movement. Whereas place is rather the intensity of the flow; it is "a particular moment in [the] networks of social relations" (Massey 1994:5). In this way, the intensity of interactions that occur between humans and non-humans, creating a particular moment that is metamorphosed into a place.

difficult to challenge the legitimacy of this circumpolar space. This is where poststructuralist theory comes into its own, as it is capable of exploring how knowledges interact to construct entities (such as the circumpolar boreal forest space) and how this space marginalises different ways of imagining and knowing the biophysical features associated with the boreal forest. For example, these biophysical features are not just implicated in the production of the circumpolar space; they are also involved in the production of places in which the forest is experienced differently than through forestry sciences and practices, such as the boreal forest of Abitibi that has become territorialized through the highly mutable political boundaries of the boreal forest imaginaries.

In my view, the concepts of boundaries, territorialities and imaginaries all need to be understood as potential ways of theorising the politics of the boreal forest. However, before going into further conceptual exploration, I think it is crucial for the coherence of my argument to clarify the meaning I attach to politics and the political. According to Claude Lefort (1988: 216), "[t]he fact that we can choose to say either the political [*le politique*] or politics [*la politique*] is, as we all know, an index of ambiguity [in the word 'political']". This ambiguity as been highlighted in political theory in general, and brings scholars such as Jean-Luc Nancy (1991: x) to define "the political" [*le politique*] as "the site where what it means to *be* in common is open to definition", and "politics" [*la politique*] as "the play of forces of interests engaged in a conflict over the representation and governance of social existence". Nancy's definition of the political is interesting since it sees the political as open, as a dimension that could take different meanings according to the social relations that made it. It is through the political that politics are articulated and vice versa: they are the ongoing confrontations over the representation of the world, confrontations that are free from predeterminations (Dikeç 2005: 185). Chantal Mouffe (1995) has also attempted to define these two concepts. She sees "'the political' [as] the dimension of antagonism that is inherent in all human society, antagonism […] that can take many different forms and can emerge in diverse social relations. 'Politics' refers to the ensemble of practices, discourses and institutions which seek to establish a certain order and to organize human coexistence in conditions which are always potentially conflictual because they are affected by the dimension of 'the political'" (Mouffe 1995: 262-263, quoted in Dikeç 2005: 183). By setting a certain order and organising human coexistence (Mouffe 1995), politics organise the construction of space according to the political. As I mentioned briefly in Chapter 1, the

politics of the boreal forest are created by the continual movements, positions, stands, dissensions and negotiations performed by a multitude of forest users. Such movements occur continually among forest users regarding the ways in which the biophysical elements involved in the production of the forest are imagined as political subjects. According to Brown (2002: 569), political theory should try to understand "the distinctive spaces and idioms in which negotiation can occur" by paying attention to how multiple boundaries are created and involved in the constitution of spaces and places that represent specific images and imaginaries of the boreal forest. In the next section, I will emphasise how the concepts of boundaries, territories and territoriality are interconnected in the production of the boreal forest's politics of imaginaries.

2.2 Boundaries, territories and territoriality in the production of the boreal forest imaginaries

Boundaries are normally understood as a series of lines linking different geographical points together with the ultimate aim to delimit territories. Until very recently, they were widely regarded as "concrete and, for scientific purposes, empirical manifestations of human action and markers or indicators of more general principal of territorial organization" (Paasi 1996: 27). Boundaries often constitute the focal point of political conflicts. They are designed to mark either differences or similarities; they are complex geographical traits that can either include or exclude biophysical and cultural features; and often, they are situated at the centre of social crises such as access to water and fertile lands (e.g. the Gaza strip), or access to the sea for fishing activities (e.g. Bolivia-Chile). Boundaries are directly implicated in numerous wars and conflicts because their role consists mainly of materialising differences (between countries, language, cultures and so on), and thus they delimit the territory and the power that certain people have within their institutions and over a certain geographic area (Sack 1986).

From cellular membranes and delimitations of ecosystems (Latour 1999a), to the production of First Nations reserves (Braun 2002, Harris 2002) and differentiation between animality and nonanimality (Lars 2005), humans and non-humans (Latour 1987), boundaries are everywhere, manifested through discourses and practices of all sorts (Mol and Law 2005). As Turnbull makes it clear, it is important to see boundaries as "messy, intermediate, incomplete, fundamentally social and negotiated", and when

materialised through discourses and practices, they produce "dynamic sites, zones of irruption, where new spaces [and places] emerge, [and] fresh encounters occur between people" (2005: 767). As all of this suggests, boundaries cannot be considered as simple cartographic components making it possible to divide continents into countries, provinces, regions, counties and so on. They are the objects of negotiation that vary greatly from one social organisation to another. They are geographical entities that maintain the flow of interrelations which secure, maintain and stabilise the "unutterable mobility of space-time" (Massey 1994: 5). Boundaries maintain the circulation of identity in part because they produce territory and territoriality through which the meaning of place becomes easier to govern. Their meanings and applications outside geo-politics lead me to describe them as entities which attempt to frame the imaginary and to secure and stabilize the identity of places, leading eventually to a struggle over the power of places such as those composing the boreal forest (Massey 1994).

By using Machiavelli's *The Prince* to understand what it means to govern (governmentality), Michel Foucault (1991: 90) emphasises that the source of governmental power relies on two things: the territory and the people who inhabit it (the subjects). For Foucault, governmentality consists above all of a political project that produces social reality through a structure that governs both humans and things (non-humans and phenomena such as accidents and misfortunes) (Foucault 1991: 93). To explain governmentality more concretely, Foucault uses the example of captaining a ship, since it includes taking:

> "charge of the sailors, but also of the boat and of its cargo; to take care of a ship means also to reckon with winds rocks and storms; and it consists in that activity of establishing a relation between sailors which is to be taken care of, and the cargo which is to be brought safely to port, and all those eventualities like winds, rocks, storms and so on" (Foucault 1991: 93-94).

This is an important point that he reiterates (2001/1978: 561-562) in his reflection on mobile political powers such as pastoralist power which rules over a multiplicity of individuals (both animals and humans; Foucault uses Christians as an example) in continual movement (for an analysis of pastoral governmentality see Elden 2007).

This sort of power relation is linked with surveillance of both animals and Catholic Christians through a kind of "oblative, sacrificial and individualist power" (Foucault 2001/1978: 562). By establishing rules, codes and laws, pastoralists and priests produce boundaries which govern animals or faithful Christians in their everyday life. This sort

of power can be linked with territoriality, since this corresponds to attempts by groups or single individuals to affect or influence phenomena, humans and non-humans by taking control over a specific geographical area (Sack 1986: 19). This is how the pastoral power described by Foucault can be useful for understanding the boreal forest's political struggles. Although Foucault (1978/2001) tries to suggest that pastoral power exist without territory, he seems to miss the fact that rules and laws are boundaries, that by their production create territories, and therefore pastoral power is a sort of territoriality. In the present case, it is important to replace animals and Christians with forest users, and it is also important to stress the shifting quality of territoriality since, just like boundaries and imaginaries, territoriality is far from static. It is an appropriate concept for an understanding of how different imaginaries of the boreal forest become entangled in conflicts over its management. Others' have provided rich empirical examples to illustrate Foucault's notion of governmentality by demonstrating how territoriality is produced (Braun 2000, Demeritt 2001c), a territoriality that is fabricated from the interconnections of colonial, scientific and political discourses and practices, and that has opened the door to capital and therefore to the commodification of what counts as "nature".

Scholars such as Caroline Desbiens (2004), have emphasised the role of different geographical imaginaries of "nature" (although she is not explicitly talking about imaginaries) in the construction of territoriality and national identity. In her work, Desbiens shows that the territoriality of "resources" — in this case the rivers of northern Québec that provide the hydroelectric power to southern Québec — is produced by both symbolic and material qualities of rivers, which in turn make possible the emergence and materialisation of different forms of identities and nationalisms. Desbiens emphasises the significance of colonial legacies in the construction of imaginary landscapes, but more important is the significant role these legacies play in reshaping the environmental politics that marginalise specific claims and identities, such as First Nations peoples like the Cree of James Bay. Colonial legacies, and their role in the territorialization of nature and identity-building, have also been highlighted in the context of environmental struggles (e.g. Willems-Braun 1997, Braun 2000, Braun and Wainwright 2001, Gregory 2001, Braun 2002, Baldwin 2004, Wainwright 2005), demonstrating the significance of post-colonial theory in this field of inquiry. However, the heavy emphasis on historical contexts, texts and maps has overlooked how other imaginaries of "nature" come into existence. These imaginaries are produced through

the flux of social interactions occurring among humans and between humans and the biophysical features that have come to be called “nature” or “natural resources”.

At the end of his book on the intemperate rainforest, Bruce Braun (2002: 269) talks about the further political implications that different forest imaginaries could have in rethinking the cultural politics of the western Canadian rainforest. This is a significant starting point in recognising the role played by imaginaries in the production of the political and politics. However, it is important to go beyond recognising other forms of forest imaginaries in order to find how they become the subject of political struggles. One way to access these politics is to investigate the interrelations among forest users, biophysical features and the objects and technologies used to experience and know the forest, and how they come together to produce particular forest places. These places are involved in the production of the politics of the boreal forest, politics that represent other ways to know and to experience the boreal forest. As I will show in Chapter 6, it is important to see these politics as relational. These politics of forest imaginaries need each other to exist and to maintain the trajectories among users, materialities and the biophysical features associated with the boreal forest. This means that the boundaries which frame places are also implicated in the in the territorialization of specific politics of imaginaries. The next section introduces the significance of imagination and imaginaries in the production of boundaries, spaces, places and territories, all of which are involved in the production of the boreal forest politics.

2.3 The place of imagination and imaginaries in politics

The concept of imagination has been widely discussed in philosophy, often associated with the works of Hume, Locke and Kant (Warnock 1976). However, it is through the development of the phenomenological project, “which extends from the writings of Husserl and Heidegger in the early decades [of the 20th century], through the existentialism of Sartre and Merleau-Ponty to the ulterior assessment of *poetics* (Bachelard), *deconstruction* (Derrida, Lyotard) and *hermeneutics* (Ricoeur, Vattimo),” that the meaning of imagination has been deepened, especially the question what “does it mean to imagine?” (Kearney 1991: 4-5). In geography, the term imagination often refers to the work of Edward Said (1995), who has shown how the colonial powers of France and England worked to frame reality and produce imaginary geographical

entities (such as the Orient) through a process which he called Orientalism. Although the notion of geographical imagination has attracted the attention of geographers, especially those interested in post-colonialism (Gregory 1994, Jacobs 1996, Willems-Braun 1997, Braun 2000, 2002, Gregory 2004) but also of sociologist and anthropologist who investigate the role imagination in the construction of nationalism (Anderson 1991) or mythology and symbolism (Durand 1964/2003), the concept of imagination has rarely been applied outside psychology, literary documents and visual arts. For Said (1995: 54-55), Orientalism corresponds to a mental space delimited by the production of Western knowledge about the Orient, either real or fictive. It is the construction of the "other space": the space of the un-civilised, the space of the non-European.

This interpretation of the imagination as a "space producer" was previously articulated by the French philosopher of science and poetics Gaston Bachelard (1957). [13, 14] According to Massey (1994:5), places are particular moments in the flux of social interrelations, characterised by the mix of social relations involved in this moment — what she also describes as events (see Massey 2005: 140-141). This means that places are "unfixed, contested, multiple" and contingent (Massey 1994: 5). Thus, what Bachelard (1942, 1943, 1957) describes as space is closer to Massey's (1994, 2005) definition of places, consisting of sites produced through interrelations among humans and non-humans (such as streams, rocks, rooms and houses) in which imagination occurs. The idea that imagination is involved in creating places is useful when one is concerned with theorising the politics materialised through the production of boundaries.

Like Said (1995: 55), I use the concept of imagination in the sense of Gaston Bachelard's works (1942, 1943, and 1957), especially *La Poétique de l'Espace* (1957), in which Bachelard highlights the importance of the imagination in the production of spaces. *La Poétique de l'Espace* shows how the imaginary of a house is constructed in the poems of Baudelaire, Rimbaud and Rainer Maria Rilke, and emphasises the

[13] Although I use Bachelard's work on the imagination, I do not support his asymmetrical understanding of sciences and society. I rather subscribe to Bloor's (1991) symmetry concept, which sees ideas and society as part of the same body.

[14] It is important to note that neither Bachelard nor Said explains why they use the term "space" instead of "place". Nonetheless, Bachelard's spaces are closer to places, since they consist of circumscribed sites (i.e. rooms) in which imagination is bounded and produced. Bachelard's spaces also refer to an already known site which is used to imagine something new.

dialectic between the house and the universe that produces various imaginations of the house space. Using Bachelard's house example as an analogy, the forest consists of a multitude of experiences that have fashioned contingent boreal forest places, in which users try to stabilise politics (positions over what the forest represents) with boundaries.

Although *La Poétique de l'Espace* offers an interesting geographical way of conceptualising the role of imagination in the production of places, there are no clear indications of how imagination as a concept can do anything more than show textual materialisation of the imaginary. For this reason my research pays attention to the product of imaginations: imaginaries. Some might confuse the term imaginaries with constructions, phantasms, dreams, myths, fictions and visions, and it is important to emphasise that they are not completely independent of these terms; as imaginaries are produced by interactions, they cannot be reduced to a single function (Wunenburger 2006). Imaginaries are the products of intense moments taking form in the relations one has with the outside world. Imaginaries are also linked with utopias, making them politically pertinent, since they produce other possible realities linked with other political aspirations (e.g. Ricoeur 1969, Lefebvre 2000). Few authors make the distinction between imagination and imaginaries and one of the strengths of this research lies in highlighting the difference between these terms and emphasise their political implications. Most of the time, imaginaries and imaginations are used as interchangeable terms and this generalised idea has made their separateness ambiguous and thus has greatly diminished the political meaning of imaginaries.

Imaginaries thus constitute the plan and directions of a route, whereas the surface of the road and the road itself will be the construction; both processes are interrelated. Construction refers to the instant in which imaginaries are made concrete. Imaginaries are generally politically charged, since they produce realities and assemble specific social relations and forms of power. On the one hand, imaginaries can be dominant entities that engender structures (laws, discourses and practices) through which the world is known and experienced. This in turn produces specific spatialities (spaces and places) that territorialize certain politics as dominant. On the other hand, imaginaries are also involved in the production of spatialities that can challenge the power of dominant territorializations. This contestation of power becomes an act of negotiation through which various spaces and places reconfigure the power relationships which constitute the boreal forest. This means that the boreal forest becomes reconfigured as a complex

amalgam of imaginaries, and thus the boreal forest is a political entity (see Dikeç 2005: 185). The political meaning of imaginaries and their link with constructions means that they are crucial in understanding the power relations that produce meanings of space and place. This is precisely why I intend to use the concept "imaginaries" instead of the variety of other expressions associated with it.

The significance attached to the concept of imagination, and thus to imaginaries, becomes clearer through the earlier work of Bachelard (1942: 24), in which he describes the imagination as a performance that:

> "invente plus que des choses et des drames, elle invente de la vie nouvelle, elle invente l'esprit nouveau; elle ouvre [l]es yeux […]"
>
> "invents more than things and dramas, it invents new life, it invents new spirits; it opens our eyes [to other possibilities]" (my translation).

For Bachelard, the concept of imagination is tied to images produced through poetry and texts, and although this concept is helpful for image analysis, it is important to move beyond a traditional interpretation of imagination and imaginaries. In the context of this thesis, the concept of imaginaries is useful as an embodiment of other ways to know and to engage with the boreal forest. In this way it is possible to recognise how various imaginaries of the forest are performed through discourses and practices, and maintained and stabilised as places through the production of boundaries. The various ways to engage and to know the forest generate not only different imaginaries, they also create the contexts in which the politics of the boreal forest are articulated. As I will show in Chapters 4 through 7, a good way to get access to the politics of the imaginaries is by investigating the production of boundaries at work, such as the practices performed in the forest (Latour 1987, 1999a). These practices are in turn the manifestation of interrelations between users, materialities, technologies and the biophysical features that composed the boreal forest and propose politics of the forest. As I added to the above quotation from Bachelard (1942: 24), imaginations have the power of opening new possibilities, and thus new possibilities for forest management policies that begin with an acceptance that the forest is a body made of interrelated and mutable places.

Inspired by Bachelard (1942, 1943, 1957), I see imaginaries as the products of experiences born from what has been experienced and what needs to be experienced, with unlimited possibilities offered by the unknown. In contrast, imagination consists of

the flux that makes possible the circulation of ideas and experiences connected with the outside of the human body. It is more the process of creating possible new places than the places themselves, since the latter refers to imaginaries. According to Bachelard (1942: 23):

> L'imagination n'est pas, comme le suggère l'étymologie, la faculté de former des images de la réalité, elle est la faculté de former des images qui dépassent la réalité […].
>
> The imagination is not, as the etymology suggests, the capacity to shape the images of reality, it is the faculty to shape images that go beyond reality […] (my translation).

If the imagination allows going beyond reality, it also means that it opens the boundaries used to claim the legitimacy of certain politics over others. This means that imagination makes it possible to create other politics and, subsequently, allows other imaginaries of the forest within management policies. In this context it is essential to see the imaginaries of the forest as composed of a multitude of political positions embodying different identities of, and experiences with, the forest — positions that are not currently represented within forest management policies. As I emphasised above by using Jean-Luc Nancy's (1991: x) understanding of the political — the political as an open definition of what it means to be "in common" — this means that the imagination has a great role to play in shaping the political and the imaginaries, and consequently a significant one in shaping the politics of the forest.

The different imaginations of the boreal forest and the different boundaries that delimit and maintain the politics of imaginaries inevitably lead to a conflict between discourses and practices, each claiming specific knowledges and experiences of the boreal forest as part of its approach to management. In the context of resource depletion, such as is the case with the boreal forest of Abitibi, conceptualising the circumpolar boreal forest space as socially constructed (through nature-society theory and political ecology) will enhance the understanding of how different imaginaries of the boreal forest come to form the basis of political claims, which in turn influence social struggles over forest management. The next section will introduce the recent work on the construction and production of nature and its relevance to understanding how imaginaries and imaginations can play a role in reconstructing the world differently.

2.4 Social Nature and the production of the boreal forest space

To investigate how different imaginaries of the boreal forest are materialised through different technologies and practices, it is important to understand how "nature" is conceptualised, displayed and described through policies and practices in Québec. This exercise implies accepting Haraway's (1992b: 296) popular statement that "nature cannot pre-exist its construction". Indeed, in this statement, the concept of nature consists of the epistemology of nature. I am not contesting that the ontology of nature exists without being associated with any kind of human discourses and practices, I rather believe that nature is not an "ontologically given of epistemological realism" (see Demeritt 1998: 181, "artifactual constructivism"). Bruce Braun's (2002: x) definition summarises well this points when he said that nature is the:

> "effect produced through the discursive and material practices of everyday life. This does not mean that mountains, trees, rivers, salmon and grizzly bears do not exist. Rather it calls attention to the ways […] landscapes are shot through with language, meaning and history, even as they are assigned to the category of nature".

This means that the epistemic nature should be conceptualised as a sort of flux of interactions between humans and non-humans, having no beginning and no end. If the concept of nature is in constant circulation and transformation, then it cannot be separated from the social activity that constructs its boundaries in either Western capitalist societies (e.g. Smith 1990, Harvey 1996) or in animistic hunter-gathers societies (Descola 1996). Since the 1990s, an explosion of academic works on the social construction of nature have contributed greatly to the understanding of the ways humans engage with and construct nature (Cronon 1996b, Castree and Braun 1998, Demeritt 1998, Proctor 1998, Demeritt 2001b, c, 2002, Whatmore 2002). If nature is the product of social practices, this means that nature consists of a flexible concept dependent on its cultural context and the space-time in which it is produced. This flexibility explains why so many environmental conflicts break out over concerns about access to nature, especially in decisions about what sort of nature will be transformed and/or managed. This is simply because humans refer to various kinds of imagined natures; or in the case of the boreal forest of Abitibi, users refer to different kind of boreal forests through the use of very similar discourses.

Another good example of this epistemic flexibility of social constructed nature concerns the fact that it has its own history (Escobar 1996, Coates 1998), which mutates through time according to the multitude of social relations that bring it to life. Nature also has a

role to play in identity-building, as demonstrated by Nash (2001) in the construction of United States culture, and more recently with Penrose (2003), who shows how the Euro-Canadian conception of nature has shaped First Nations identities in Western Canada. Examples showing how the identities of forest-dependent communities (Satterfield 2002, Reed 2003, Che 2006) or fishing communities (St. Martin 2001) are produced by continual interactions between humans and biophysical elements, making nature a hybrid result of networks between humans and non-humans (Castree and Braun 1998, Whatmore 2002). Briefly, viewing nature as flexible makes it possible to dislocate preconceived ideas about what it represents and, more interestingly, what it can become. As an analytical tool, the hybrid status of nature as a social construct makes it possible to recognise the marginal forms of knowledge which are erased by current forest management and which are at the heart of the construction of boreal forest as a political space.

For Castree and Braun (1998), there are three ways in which the social construction of nature can play a significant role in environmental politics: firstly, through Marxism, secondly, through political ecology and thirdly, through scientific studies and the networks that connect discourses, techniques and organic matter. To understand how different imaginaries of the boreal forest of Abitibi are constructed and maintained through the production of particular boundaries, places and territories, this thesis adopts an approach that encompasses these three elements. The interest in the material production of nature in geography was pioneered by Neil Smith (1990: 65), who has termed "second nature" the abstract side of nature— that which is socially produced (through labour), such as a commodity object — "in which human society has placed itself at the centre of nature". This second nature has been a very influential concept for investigating how capitalist networks produces entities and establishes its control over them. However, the Marxist view that the capitalisation of nature is universal undermines the scope of cultural variances in the construction of nature. For instance, the relation that hunters-gatherer societies have with their biophysical environment has been described as anti-capitalist by some researchers (Sahlins 1974), but more importantly, a Marxist interpretation of nature alters the variety of imaginaries involved in the production of nature; such as is the case with the boreal forest of Abitibi. Quoting Haraway (1997: 141), Braun (2002: 18) stresses that the production of nature should not be "reducible to capitalization or commodification", because to do so hides the "heterogeneous processes that are joined and separated in multiple 'reaction sites'".

Despite these critiques, the production of nature remains a useful concept for exploring how capitalism is produced and how it influences the environmental politics of the boreal forest of Abitibi. The production of nature makes it possible to highlight the ways in which knowledges of the boreal forest are constructed and maintained, which in turn emphasises how imaginaries of the forest construct places maintained through boundaries. In turn, these imaginaries of the boreal forest become possibilities for re-thinking the forest and constructing the boreal forest of Abitibi as an entity constituted by a multitude of places and meanings corresponding to different political aspirations.

Henri Lefebvre made this point a long time ago through his book *La production de l'Espace* (Lefebvre 2000) — a point that has influenced how Marxist geographers like David Harvey (1996) and Doreen Massey (2005) think about and theorise space. Lefebvre's main argument can be summarised as the use of dreams and imagination to stimulate theoretical thought, making it possible to construct new social horizons or political projects (i.e. revolution). Although a consideration of how boreal forest space is produced through different imaginaries cannot qualify as a social revolution, the inclusion of currently marginalised knowledges makes it possible to rethink forest management in revolutionary ways, and thus to rethink human relationships with the boreal forest. For Lefebvre (2000: 485), a social project that aims at re-theorising and re-appropriating space needs two important features. First, it needs an orientation, and second, a sense that has nothing in common with an existing system of thought and has no attachments to the knowledges produced in a capitalist context. A re-theorising would recognise space as open and in constant transformation. Lefebvre's ideas have influenced many geographers of the Anglo-American tradition, especially obvious in the work of Harvey (1990, 1996), Smith (1990) and more recently Massey (2005) about the significance of redefining the concept space in the implementation of social changes.

Lefebvre has been criticised for his lack of consideration of the differences among absolute, theoretical and physical spaces (Smith 1990: 91-92), and for his refusal to adopt the conception of space-time (Unwin 2000). Despite these fair critiques, his work is fundamental in providing ways to theorise possibilities for constructing new political projects and for finding different ways to explore unequal power relations by reconsidering taken-for-granted notions like "space" and "nature". Reconsidering how

space and place are produced implies reconsidering the concept of nature, since space and place are so intrinsic to it. Space and place are both products of the flux of interrelations between (and among) humans and non-humans, as is nature. But this latter needs the movement of the former to take shape. By recognising that space and place are multiple, the concept of nature can become something in which various experiences and knowledges could co-exist. In other words, nature could become an open concept. It is important to bear in mind, however, that in reconsidering how space is produced by paying attention to interactions/networks between forest users, these networks become the boundaries of specific imaginaries, and these latter attempt to stabilise places and their politics through particular practices and discourses. In the next section, I will show how political ecology can benefit research interested in understanding how the multiplicity of imaginaries of the forest is involved in the constitution of a politics of place.

2.5 Political Ecology and the unequal recognition of forest imaginaries

Political ecology is concerned with how inequalities between different actors are reproduced through their relationships with the biophysical environment. This particular field took off between the mid-1970 and mid-1980, and was performed through structuralism and mainly concerned with unequal power dynamics related to the access and use of lands, forests and water, primarily in what political ecologists refer to as Third World economies (Blaikie and Brookfield 1987, Watts 2003). Today, the discipline has shifted towards a poststructuralist theoretical framework exploring how power relations are reflected through underlying structures of discourses, which shape biophysical environments and the meanings attached to them (Escobar 1995, 1996, Jaroz 1996, Batterbury *et al.* 1997, Bryant 1998). The application of postructuralism engendered debates about the legitimacy of applying a political ecology approach in developed economies (see McCarthy 2002, Walker 2003, McCarthy 2005, Schroeder 2005, 2006). These debates have pointed out that the dichotomy between developed and undeveloped (or First and Third World) economies is "more important in terms of their discursive constitution and implications […] than as distinctions that correspond in some sense to actual divisions within the global economy […]. In one sense, they could

be seen as arbitrary products of specific economic and political imaginaries" (Jessop 2002: x as quoted in McCarthy 2005: 955).

These political imaginaries are what Joel Wainwright (2005: 1042) defines as "discrete places defined in advance", meaning that they are already bounded by the politics that ensue from geographical knowledge. Wainwright (2005: 1042) also argues that by focussing on these already known places, "we stand to miss what is arguably most radically political about political ecology: its intention to read the ways that the world is reproduced through environmental conflict". For Gilles Deleuze and Félix Guattari (1973, 1987), there is a need to criticise the fixity in which we come to know the world. This notion is particularly useful when applied to the boreal forest context, mainly because it is important to criticise the fixity of the imaginaries which, as I will argue, produce the politics of its management. It is important to concentrate on the ways in which the forest is made mutable through the infinite flux of social reproduction; it is an entity that is not only territorialized by totalitarian capitalism, but also by the politics of multiple imaginaries which define what counts as the boreal forest of Abitibi.

Poststructuralist political ecology offers potential routes to understanding how marginal environmental knowledge and imaginaries are materialised in politics. Richard Peet and Michael Watts (1996: 37) have emphasised that:

> "poststructural ideas about imagination and discourse […] open political ecology to considerations so different that we propose a new term to describe them—liberation ecology. The intention is not simply to *add* politics to political ecology, but raise the emancipatory potential of environmental ideas and to engage directly with the larger landscape of debates over modernity, its institutions and its knowledge".

Through liberation ecology, Watts and Peet (2004: 39) hope that social movement will reshape environmental discourses with the aim of including marginal groups of people, and therefore marginal discourses and knowledges. However, as shown by Forsyth (2003, 2004), social movements can also be the theatre of exclusion through imposition of hegemonic thought, especially in specific discursive patterns made explicit through the dominance of scientific discourses within policy making[15]. This is illustrated by environmental NGOs lobbying for more science in the management of non-humans,

[15] Here I just want to emphasise that scientific discourse does not refer to a homogenous ensemble. It is rather a cluster of different discourses considered as scientific that produces the body of science and its particular politics. For example, in the case of the boreal forest, it is better to talk about the forestry sciences and ecology than saying Science, mainly because these two disciplines produce different production networks and different political agendas.

while in fact minimising the legitimacy of other forms of knowledges and ways to know biophysical environments. Political ecology is not only about marginalisation through hegemonic discourses; it is also an exercise in finding out how hegemonic discourses are articulated through different practices, and thus it concerns the co-production of political and scientific knowledge.

Investigating the production of knowledge through communities of experts or what some call "epistemic communities" (Watts and Peet 2004), refers to the scientists and their production of privileged sites of authority (Haraway 1991). This particular stream of political ecology draws on science and technology studies, and instead of looking only at the continual transformation of knowledge from sciences and technologies, it also investigates the power of scientific knowledges in politics. This is a way to approach the geography of the boreal forest as produced through technology, as well as a means of understanding how technology (and therefore the construction of the boreal forest) is used to support specific types of extraction policies. This means paying attention to the circulation and hybridity of knowledge demonstrated in the field of science and technology studies and their role in the construction of nature (Braun and Castree 1998, Demeritt 2001c, b, a, Whatmore 2002). The hybridity of knowledges is important in my work because it shows that despite the particular histories and experiences that produce particular knowledges about the boreal forest, those knowledges and their constructions are far from fixed. On the contrary, they are in constant circulation, just as different imaginaries of the forest travel from one user to another. This makes the study of communities of experts interesting in the context of forest management, and this is what I will do in Chapter 4, especially as understanding how the power relations circulating between different users are involved in differentiated forest imaginaries.

Using the term "ecology" when examining how ecology and forestry sciences produce particular imaginaries of the boreal forest may look paradoxical without reflecting on the ways in which this paradox might be tackled. In *Politiques de la nature: Comment faire entrer les sciences en démocratie* (translated into English in 2004 as *Politics of Nature: How to Bring Science into Democracy*), Bruno Latour (1999b) rightly criticises political ecology for using a taken-for-granted notion of nature; a nature fabricated through the science of ecology and constructed as something independent from politics and society. In fact, this taken-for-granted notion of nature is highly contradictory, since

nature, as Latour (1999b) shows, has been used in the production of both political institutions and democracy, consequently producing political arenas that are already biased by the politics of ecological science. Thus, the nature produced by ecology is highly political and far from neutral.

Although Latour (1999b) argues for rethinking politics outside the concept of nature and redefining the sciences that produce political institutions and democracy, he is rather evasive on the ways in which such reflection could be materialised into "new" politics, or how it could locate a different arena that would produce politics not grounded in current Western institutional structures and a fabricated "nature". Latour's reflections about the validity of political ecology in understanding environmental struggles, especially concerning differential access to resources such as the boreal forest of Abitibi, remain very useful. This is particularly true when dealing with the politics of the boreal forest as productions of scientific discourse and ecological or forestry practices, and even more so when searching for a way out of the ecology paradox. In turn, disenfranchising the politics of ecology in working with political ecology opens alternative ways to engage with what is considered "nature" — in the case of this thesis, the boreal forest of the Abitibi region of Québec.

Tim Forsyth (2003) has found a clearer way to engage with the ecology obstacle by studying a community of expertise through what he called *critical political ecology*. Critical political ecology emphasises the importance of ecology in the production of politics and stresses the power wielded by the interconnected biophysical sciences, those that produce ecology and are used to understand environmental degradation. As an approach, critical political ecology makes it possible to recognise the politics that are not directly related to forestry sciences and ecology: the politics of the everyday life, the politics that come from multiple imaginaries of the boreal forest and cannot be legitimised within management policies.

Investigating communities of expertise as part of a particular political narrative makes it possible to recognise the politics of everyday life embedded in and articulated through scientific and political narratives. These politics exist through different imaginaries of the boreal forest, and become fuzzy in the face of predominant discourses and practices involved in the production of boreal forest management politics. To understand how these politics of the boreal forest imaginaries are produced and how they become

bounded and territorialized as places, the exploration of the community of expertise needs to be extended to forest-dependent communities. It is important to address the relevance of identity building in the production of politics, particularly in the context of production and materialisation of forest imaginaries.

Studies focussing on "resource-dependent" communities have shown that in both fishery or forest management, those affected by the exploitation of common resources (fish or trees) use other forms of knowledge and other means to engage with the biophysical features that compose these environments — knowledges and means that are absent from the prevalent management policies (Marchak 1989). For example, the work of Kevin St. Martin (2001, 2005, 2006) conducted among New England's fishing communities has shown that remapping local knowledge in a context of industrial fishing could provide an alternative conception of fish management and thus a resistance to hegemonic bioeconomic discourses. Others have investigated the politics of gender in common resource contexts; consider the work of Maureen Reed (2000, 2002), which has stressed the implications of socio-political, economic and environmental factors in the production of women's activist identities in British Columbia's forest-dependent communities. More interestingly, Reed (2000: 382) shows that "women's activism [for the forest industry is] both individual and collective, is heterogeneous and contingent, complex and embedded", and therefore women's impact on forestry and forest workers is made of the different values and experiences that have constructed the imaginaries of British Columbia's temperate rainforest. That rainforest is a product of the multiplicities of meanings and interactions produced by different users. Similar conclusions have been made by Terre Satterfield (2002), through her work on Oregon's old-growth forest management conflict, in which she deconstructs the dichotomy between those for and against forest industry. She argues that because the forest management conflict concerns a clash of identities and cultures that are constantly shifting, it is very difficult to implement policies that recognise the inherent instability of identity building processes.

Although these studies have provided different ways of investigating political conflicts in resource-dependent communities by conceptualising those conflicts as the product of multiple identities and histories disputing the legitimacy of different constructions of the forest and fish stocks, they are rather silent on how these constructions become alive in the political battles engaging different forest users. In this thesis, my interest lies rather

in understanding how different imaginaries of the boreal forest become involved in the production of both places and politics. In so doing, I am tracing the chain of interrelations between boreal forest users, objects, technologies and the biophysical features involved in the materialisation of imaginaries. This is somewhat related to what Michel Callon and Bruno Latour call Actor-Network Theory (ANT), which "suggests the necessity for a hybrid politics in which the fate of humans, machines, organisms, plants, animals and so on are considered simultaneously […]. ANT encourages us to imagine a world where socio-natural relations are multiple, messy and complex" (Castree and Macmillan 2001: 220-221). These chains of interaction are a useful way to trace how imaginaries of the boreal forest take form between human and non-humans. For example, hunters are users of the boreal forest and they need particular skills and knowledges that are paramount in the production of particular imaginaries, which then become political places. The use of rifles, requiring specific skills and knowledges about the forest and the technology used to hunt, and the interactions between hunters and the non-humans involved, materialises specific imaginaries of the boreal forest that in turn become circumscribed by the activity. As I will show in Chapters 6 and 7, all the networks and the technologies used in everyday life practices of the forest produce the imaginaries of the boreal forest in which the forest becomes a place for hunting, and therefore a place involved in the production of particular histories and identities that come into conflict in the management of a "public resource" like the boreal forest of Abitibi.

These case studies have all shown the relevance of the concept of community in investigating how differential access to resources has produced particular political terrain, through which the boundaries of identity are constructed, maintained, dissolved and reconstructed. The role of community-based studies is not only to emphasise the marginalisation of certain members in a conflict about getting access to natural resources, it is also about the multitudes of interactions that make communities important. Watts and Peet (2004: 24) have summarised the significance of community in political ecology by insisting that:

> "community is important because it is typically seen as: a locus of *knowledge*, a site of *regulation* and management, a source of *identity* and a repository of "tradition", the embodiment of various *institutions* (say property rights) which necessarily turn on questions of representation, power authority, governance and accountability, an object of *state control*, a theatre of resistance and struggles (of social movement and potentially of *alternate vision of development*) emphasis in the regional" (emphasis in the original).

Investigating community also means investigating identities, local histories and sometimes the marginalisation of their politics. This has been supported by other case studies like those from the rural western United States, demonstrated in James McCarthy's (2002) investigation of the "Wise Use" movement and access to federal forest lands for other reasons than aesthetic agenda. For instance, McCarthy (2002: 1285-1286) shows that the use of nontimber products such as fish, venison, mushrooms, dried wildflowers and medicinal herbs not only provide seasonal financial supplements, they are also linked to the construction of rural identities and to the existence of other knowledges of the forest that are not reflected in forest management policies. Similarly, Peter Walker (2003) emphasises the marginalisation of rural community identities by exurbanisation (urban people settling in rural areas) and the importation of urban values into rural areas — issues central to community struggles over the management of federal lands. These studies show that investigating resource management struggles in a developed economy, such as is the case in the boreal forest of Québec, depends largely on the politics of identity and culture embedded in forest-dependent communities. When investigated more closely, and through the chains of interactions occurring between humans and non-humans, the boreal forest imaginaries become contingent entities that resist being framed through the monolithic, scientific, capitalist and deterministic environmental policies. Again, this reinforces the necessity of tracing how the various imaginaries of the boreal forest are materialised through interactions between users, technologies and the biophysical features involved in the production of the boreal forest. At the same time, acknowledging how these imaginaries become materialised makes it possible to see how places are constituted and boundaries manifested through everyday forest practices. The production of place is inevitably linked to the production of power, which is how the notion of governance and territoriality become significant in understanding how specific imaginaries are central to the management of boreal forests in the Abitibi region and how they become governed through institutions.

2.6 Conclusion: Bringing imaginaries, territorialities, space and place together

Paying attention to the particular moments in which places and their boundaries become manifested also means paying attention to the particular political objectives and

relational histories that constitute the distinctiveness of social interactions. In turn, these social interactions are involved in the production of multiple imaginaries of, and places in, the boreal forest. Many geographers interested in environmental ethics or environmental politics (Castree and Braun 1998, Castree 2003, Baldwin 2004) have emphasised the loss of heterogeneity in "nature", but it is by retracing how social heterogeneity is materialised through boundary and place-making that it becomes possible to politicise what is defined as heterogeneous, or what I define as the "other" imaginaries of the forest. As this chapter has demonstrated, environmental politics needs to investigate how various imaginaries of the forest are interrelated with concepts of boundaries, territories and territorialities by examining the differential powers of a multitude of forest users. The recent debate in the literature of environmental politics has focussed mainly on social theory, providing few chances to see how this theory can be applied in practice. However, by using political ecology as an approach through which it becomes possible to understand the struggles over how the forest is imagined, I am not reducing the "scope of politics as a mode of thinking" (Rancière 2001: 1, quoted in Dikeç 2005: 174). Instead, I see politics as an art of everyday life that can be grasped through multiple practices and discourses (de Certeau 1984). By going to the forest and meeting those who are involved in forest practices on a daily basis (harvesting, reforesting, transporting timber and so on), and seeing how boundaries, territories and territorialities are fabricated and become involved in the constant negotiation, contestation and positioning that qualifies the spatial organisation of power relations, it is possible to recognise how the politics of the boreal forest is articulated. Recognising how this articulation is manifested means going beyond the simple assertion that politics exists; it is showing how it is performed in the forest, and how it is involved in the production of power in the shape of territorialities and unequal representation of the forest in the formulation of management and environmental policies.

The interrelations between imaginaries, territorialities, space and place have been exposed in this chapter as a potential theoretical framework that could help an interrogation of the tensions between multiple forest users. Although some works have attempt to understand these interrelations before (Demeritt 2001c, Braun 2002), these interpretations were often attached to past events or linked with post-colonial theory. In contrast my interest remains associated with contemporary forest management conflicts in Québec. To understand how the multiple imaginaries of the forest and their

boundaries and territorialities are produced, and how they are involved in the production of the politics of the everyday life, the next chapter will demonstrate my methodology for grasping their articulation into power relations. This methodology allows me to go beyond the large theoretical body of work interested in the renewal of environmental politics, and to see how multiple imaginaries of the forest can be integrated into new forms of forest management policies.

Chapter 3

From Field Methods to Paper: Tracing the Boreal Forest Imaginaries

---

3.0 Introduction

As explained in the preceding chapters, this thesis is concerned with how various imaginaries of the boreal forest interrelate with multiple places and boundaries. My field methodology for this project was driven mainly by ethnographic experiences and interviews. This differs from the majority of work in the field, which investigates imaginaries by using texts and maps (Gregory 1994, Said 1995, Braun 2002) rather than everyday life practices. To remedy this lack of field work studies, I explore how forest imaginaries are constituted through the discourses and practices of the routine and daily experiences of forest users. As explained in Chapters 1 and 2, imaginaries are the products and effects of imagination, and looking at how they are constituted makes it possible to grasp their political meanings. As I suggested in Chapter 1, the conflict over the ways in which Québec's boreal forest is managed is linked to the public status of the forest, which grants every citizen of Québec a legal right to participate in forest management (though very few people are aware of these privileges). To better understand this situation, my research took me beyond the Abitibi region and into the decisional centres of Québec City (the administrative and political capital of Québec) and Montréal (the financial capital of the province). Although I planned my methodology before going into the field, I knew that I would have to adapt to changing circumstances and new ideas. This chapter describes the methodologies I used in order to understand how different forest users imagine the forest and how their imaginaries become concrete spatial entities through discourses and practices (Latour 1992, 1999). It also addresses my attempts to adapt these methodologies to the complexity of ethnographic experience and the multiple imaginaries of the forest.

This chapter is divided into three main sections and a conclusion. The first section introduces the forest users I met and interviewed during my field trips in the summers of 2004 and 2005, and the methods that I used to contact them. The second section

introduces semi-structured interviews and outlines my reasons for choosing to use this technique in Abitibi, Québec City and Montréal. The third section describes the ethnographic methods I utilised to understand and show how imaginaries are involved in the production of spatial entities. Finally, I will address the limitations of this methodology and the potential consequences for my research.

3.1 From cities to the forest: meeting multiple forest users

Before going into the field, I contacted people who might be willing to take part in my research. Because the first summer of field work (2004) was largely exploratory, I wanted to find out if imaginaries of the forest could be understood through interviews and ethnographic field work. As I will address later, the dominance of quantitative work in forestry does not provide a good understanding of the reasons behind forest users' disagreements over the management of Québec's public forest. These studies investigate problems on a surface level, and interviewing was one of the tactics which would allow me to deepen my understanding of social conflict in a forestry context. As noted in Chapter 1, 2004 was the year of the Coulombe inquiry into the state of the public forests in Québec. Fortunately for me, all of the memoirs and essays written by forest users who took part in the inquiry and associated discussions about forest management were published on the inquiry's web site. Thus, these resources were easily accessible. Additionally, the debates organised in each region were recorded and made available on the same web site. Exploration of all this material made it clear that I needed to pay particular attention to the language used by various parties to describe the forest since it is through the different discursive forms that users were materialising different types of forest. This material also made me realise that many aspects of the forest users' experiences were left untouched by the commissionaires, especially the wide range of imaginaries. In order to round out ongoing disagreements about how the forest is imagined, politicised and managed, I realised that neglected forest users and what I described as their imaginaries would need to be investigated in more detail.

Examination of the Abitibi session of the Coulombe inquiry was especially useful because it allowed me to gather information on potential participants for my research. In addition, I consulted numerous web sites associated with the Abitibi region, which allowed me to enhance my knowledge of the region. For instance, the Abitibi-

Témiscamingue tourist association's web site provided links that allowed me to contact regional organisations of forest users such as outfitters, quad bikers and trappers. I also visited the web site for the Ministry of Economic Development of Québec, which included lists of all the forest industries and independent saw mills in the Abitibi region. These lists were very useful, not only for establishing contacts with potential forest users, but also for defining the districts, villages and towns in which forest exploitation is part of daily life. Other websites provided important data about regional divisions of forest-related organisations like the *Fédération Québécoise des Coopératives Forestières* (Québec's Forest Cooperatives Federation), the *Fédération des Clubs de quad du Québec* (Québec's Quad Bikes Federation), both of which provided me with lists of associations in the Abitibi region and the names of their presidents. Similarly, the web site of the Canadian Ministry of Indian and Northern Affairs facilitated contacts with Algonquian communities in the Abitibi region.

After identifying where most of these forest users were located, I selected the most accessible towns and villages for the realisation of my study. I then sent letters of introduction to selected forest users to request their participation in my project. In total, I sent 60 letters by mail and obtained 8 e-mail responses from people who were interested in working with me. This technique proved to be efficient, since the aim was not to get immediate replies but rather to inform forest users of my presence in their region as well as to highlight the initial interests of my research. These letters contained my contact details both in the UK and Canada, and indicated when I was expecting to be in their respective regions: Abitibi, Montréal and Québec City (see example letter, Appendix 1). To avoid confusion about the notion of imaginaries and the politics of imaginary places, I decided to use the term "social values" because it seemed less abstract than "imaginaries", and because it is a term often used in forest management discourses.

Although I am aware that "values" incorporate an economic connotation and that it is perhaps dangerous to use terms that reiterate the power of one specific way of imagining the forest, this term is common in forest management jargon and using it made my approach more accessible than more theoretical words and expressions would have. Using "values attached to the forest" instead of "imaginaries" allowed me to capture the imaginaries and their politics overshadowed by economic terminology. This is because forest users often described the forest in ways that did not translate well into

the economic finality of "value". It is through this tension — between what forest users described and meant when they spoke about the forest and their experience with it — that I was able to move beyond the boundaries created by values, and define these stories as negotiations over the meaning of the forest. It was in trying to define this discursive exercise that I realised that what forest users were talking about was closer to imaginaries than to the social values of the forest, and that these imaginaries were effecting the representation of the forest. My decision was similar to the reasoning that led me to adopt the term "boreal forest" when I talk about the space defining the forest of the Abitibi region (as discussed in Chapter 1). By using "social values attached to the forest" instead of imaginaries and "boreal forest" instead of forest or wood, I draw attention to the neglected imaginings, meanings of, and relationships with the forest that these terms embody.[16] It was the role of the interview questions to go beyond this terminology to understand how these imaginaries are active political catalysts in the forest (see Appendix 2).

In 2004, I explored most of the Abitibi region in order to understand the regional significance of the forest and to identify areas that were most relevant to my research. I adopted the same strategy when contacting the specific organisations related to forest management debate and based in Québec City and Montréal. I consulted web sites from the Ministry of Natural Resources and Fauna as well as the sites of the main environmental NGOs such as *Union Québécoise pour la Conservation de la Nature* (Québec's Nature Conservation Union) and Greenpeace associated with the conservation of the boreal forest. But, as in Abitibi, it was only once I was in the field that I met most of the organisations and individuals connected with the forest management question of Québec.

Although those who use the boreal forest in their everyday lives are far from the decision-making centres of Québec City and Montréal, these two cities were important because they are home to a great variety of institutions involved in the forest management debate. The concentration of organisations that are directly and indirectly related to the management of the boreal forest found within Québec City made it particularly relevant for me. My aim there was to meet those people who produce the current forest policies, participants in the polarisation of the boreal forest management

[16] Although I used terms such as values in the letter I have sent by mail, I explained during the interview that I was interested about different conceptions of the forest.

debate described in Chapter 1. These organisations include: Québec's Order of Forest Engineers; the Québec Forest Industry Council; the Québec Forest Research Council; the Canadian Forest Service (in the Laurentian Forestry Centre); the Ministry of Natural Resources and Fauna; and the Ministry of Sustainable Development, Environment and Parks. Québec City is also the base of other organisations, such as the Québec Outfitter Federation and the Québec Federation of ZEC,[17] which offer important contributions to my work. My preparation for field work also involved writing letters to university professors in the Department of Forestry at the Université Laval, who were involved in policy making. This department is at the centre of knowledge production in forestry science, and thus it is the department which trained those who now govern the current forestry system of the province. One final reason to undertake research in Québec City was the presence of the provincial environmental NGO *Union Québécoise pour la Conservation de la Nature* (UQCN; Québec's Nature Conservation Union), which agreed to take part in my work.

Interestingly, international environmental NGOs tend to locate in Montréal rather than Québec City, largely because they want to be close to the headquarters of forest industries such as Abitibi-Consolidated and Domtar.[18] Accordingly, I sent letters to the World Wide Fund for Nature and to Greenpeace in Montréal. Although the political opinions, actions and ways of imagining the forest of these two organisations are well known and documented, I was interested in meeting the representatives specifically responsible for their boreal forest campaign. This was mainly to understand how the imaginaries of the forest they defend were articulated in forest debates and by how these imaginaries become spatial entities.

The wide variety of forest users encountered within Québec City and Montréal made these cities essential ports of call in my research although their representatives do not spend most of their time in the boreal forest. I also wanted to meet forest users who

[17] ZEC is the French acronym for *Zones d'Exploitation Controlées*, geographic enclaves in which forest users can go and enjoy the forest in multiple ways, but the main activities practiced are hunting and fishing. ZECs have a complex mandate, since they should promote the use of the forest fauna and flora as well as accommodate the forest industries in collecting trees on their territories. ZECs are managed by voluntary managers who have to obey the rules produced by the Ministry of Sustainable Development, Environment and Parks.

[18] On 29 January 2007, Abitibi-Consolidated merged with another multinational forest industry, Bowater. After this transaction, the company was renamed Abitibi-Bowater. However, I use the old name of the company throughout, mainly because the context described refers to the space-time when Abitibi-Consolidated existed.

could help me to understand how imaginaries become concrete places within the Abitibi boreal forest. In the summers of 2004 and 2005, I contacted forest industries and regional environmental NGOs, as well as some outfitters in the Abitibi region. I felt confident that I would have no difficulty meeting other forest users once I was in the field, so I only sent advance letters to those identified through my initial internet search and the Coulombe inquiry.

So far, this section has shown the groups and individuals who kindly participated in my research in both urban and forest-dependent communities. The variation among these groups and individuals allowed me to explore the multiplicity of ways in which the forest is imagined. Before outlining how I conducted my ethnographic fieldwork, I will explain why I decided to use interviews as one of the principal techniques for exploring how forest imaginaries are produced and performed in a multiplicity of ways.

3.2 Methodological Objectives

In order to grasp how the forest becomes an imagined entity embodying various meanings, I questioned boreal forest users about the ways in which they come to know and experience the forest. Because imaginaries are made from the juxtaposition of personal experiences and stories of the forest, the flux of interrelated words and concepts make up the discourses through which these imaginaries become locatable. However, as I will demonstrate later in this chapter, discursive imaginaries are transformed into material entities through practices; thus, studying how they emerge from discourse inevitably leads to studying how they are produced and performed through the specialised and unspecialised practices of quotidian life. It is important to reiterate that the great majority of work done on the social aspects of forestry have almost inevitably applied quantitative methods, and as I mentioned in Chapters 1 and 2, conflicts over the management of the boreal forest have to do with how forest users imagine the forest — something very difficult if not impossible to measure, categorise into types and demonstrate through rigid quantitative approaches. As I will explain in Chapter 7, the multiplicity of forest imaginaries and politics are interrelated and it was important for me to use a method that would immerse me in these interrelations. It is also important to emphasise the relevance of qualitative methods in contesting the

dominance of quantitative approaches in forestry, and showing the existence of multiple ways to know and imagine the forest.

3.2.1 Interviewing through semi-structured interviews

The advantage of using semi-structured interviews to understand how imaginaries are constituted and articulated in the production of spatial entities is that they can be conducted in various contexts with a large variety of respondents. This was particularly relevant for me, since I had to meet boreal forest users who ranged from forest industry representatives to Algonquian trappers, including simple forest users such as quad bikers and hunters as well as highly specialised users like professional foresters. Moreover, I wanted to speak with both men and women of varying ages. Interviewing as a method allowed me to meet forest users directly and engage with them on various questions about the forest.

Using interviews to understand how forest users imagined the forest is different from common forestry research, in which quantitative methods and computer models are applied to calculate the satisfaction with current forest policies (see Mendoza and Prabhu 2000, Côté and Bouthillier 2002, Lecomte *et al.* 2005). By investigating how public involvement processes are performed, quantitative approaches reiterate the significance of forestry science and ecology. By contrast, adopting a qualitative methodology for understanding the politics of the forest is more likely to highlight the existence of other epistemologies of the forest, outside the frame of forestry science. This is particularly important if one is interested in developing other ways of interacting with the biophysical world and showing that forest users are very difficult to categorise. Forest users have various relationships with the forest, and this means that they may swap from one imaginary to another on several occasions over the course of the same day, and that different imaginaries intersect one another in ways that continuously produce new imaginaries. For instance, a professional forester may also practice fishing and bird watching; an Algonquian trapper could work for a reforestation company; and an environmentalist might be an avid moose hunter. This continual movement explains why it is so difficult to categorise interviewees and forest users into the sort of tick-boxes that characterise the recent political debate over boreal forest management (e.g. Desjardins and Monderie 1999, Dubois 2002).

Ambiguity in the roles of forest users means that the discourses they use to describe the forest and their relationships with it become highly relevant. The particular terminology chosen by forest users allows the creation of particular forest imaginaries, and it is through these discursive forms that the latent power relations involved in their production can be captured. This is particularly true if one is interested in how imaginaries are involved in the production of boundaries, places and politics. Categorising forest users according to types and delineations that encapsulate them in static bubbles, as forestry science does, is an approach unlikely to provide ways of understanding the micropolitics of everyday life practices. According to Deleuze and Guattari (1987: 235) every politics is simultaneously "macropolitics and micropolitics". The latter are defined in the work of Guattari and Rolnik (2007) as the strength of what happens when individuals meet (*le contact*), appearing through various forms of power negotiations. For Guattari and Rolnik, micropolitics are parts of a molecular revolution (*révolution moléculaire*), in which a great variety of struggles and negotiations meet and become interconnected. These micropolitics are the politics of everyday life relationships with the forest, and only become articulated when one takes a stand; it is the concretisation of political positions that proposes changes to the current situation. Using an open qualitative design becomes a way to get in touch with how forest users experience the forest and how the connections between their experiences, imaginaries and places are made into the micropolitics of the forest — a process that remains difficult to comprehend without combining interviews and ethnographic field work as I describe in Section 3.3, below. In order to understand how micropolitics are articulated in the boreal forest of Abitibi, my interview questions were designed to be open and applicable to all contexts.

In total, I conducted 35 semi-structured interviews with 41 people (two interviews were conducted with two people and one with three people) (Appendix 3). All of them were conducted in the regions of Abitibi, Montréal and Québec City. Out of this number, 20 interviews were conducted in 2004 and 15 in 2005. The interviews ranged from 45 to 90 minutes in length and all of them were conducted in French. This is primarily because all interviewees were Francophones, except for one subject whose first language was English but who preferred to be interviewed in French because he knew forestry terminology in French. All interviews were recorded on a standard tape recorder and all of the interviewees signed a declaration allowing me to use the interviews for publication (Fetterman 1998) (see Appendix 4). All interviews were then transcribed

verbatim. Very few interviewees were reluctant to be interviewed. I think this was because I explained the significance of the interviews to my research and detailed what I was planning to do with the material. I always left my business card as well as a copy of the declaration guaranteeing confidentiality.

During the interviews, I used 30 questions that were part of an interview guide (see Appendix 2), which allowed me to initiate discussions with interviewees, focus the interviews on similar topics and maintain consistency during the interviews (Yung *et al.* 2003). Questions were about the interviewees — the activities they practice in the forest, their knowledge of the forest, where they like to go once in the forest, their use of the forest — as well as about the forest management policies of Québec. I adapted these questions according to each subject, tailoring the terminology used to be sure interviewees fully understood the questions. Although I always followed my interview guide, I created an open atmosphere in which interviewees felt comfortable asserting their own interests.

As indicated above, I decided to do my field trips during the summer because of the extensive forest activities normally associated with this time of year. For instance, summer is the season in which reforestation operations are performed, and thus the other operations associated with it (such as drag-scarifying) can only occur then. It is also the season in which many forest users like to be outside, enjoying the warm weather. Summer is also tied to holidays, meaning that forest users go into the forest to practice various leisure activities in both aquatic and terrestrial environments. For instance, the forest becomes the place in which forest users meet and go swimming, fishing, canoeing and jet skiing as well as bird watching, trekking, quad biking, mountain biking and wild fruit picking. For all these reasons, summer was deemed the best season to meet forest users and to witness how they experience the forest. It is also easier to travel within the region in summer than winter, when snow storms and icy patches on the surface of the roads can make travel very difficult. In addition, winter in the Abitibi region can be extremely cold, with temperatures reaching -40ºC in January, thereby limiting forestry practices and outdoor activities.

I had my first contact with forest users and with the Abitibi region in summer 2004. Three months each year over two years was long enough for me to gather the amount of data I needed, and this arrangement also gave me plenty of time to make myself

comfortable with the regional pace of Abitibi, especially in 2005 when I spent more time within forest-dependent communities. I also consider three months each year to be sufficient because, being myself a Francophone from Québec, I did not have to learn new cultural codes or languages. Although I encountered some regional particularities, this field work was not a cultural shock. While there was certain amount of methodological progression from 2004 to 2005, my first session of field work was crucial to the main data-gathering phase, and thus was far more than a mere pilot study.

3.2.2 Dealing with distance while interviewing

An important element I was aware of while conducting interviews was the French language codes that are absent in the English language — a point on which I will expand in Section 3.2.6, on interview analysis. In French, the use of *vous* or *tu* indicates the distance one wishes to establish with an interlocutor. In formal contexts I used *vous,* especially with people having a certain authority over me, such as a minister or the president of the Forest Industry Council, elderly people or high-ranking staff members at sawmills in the Abitibi region. However, in several cases, interviewees I judged as local elite asked me to use *tu,* and in the great majority of interviews I asked if I could use *tu* instead of *vous*, creating a relatively informal context and making the interviews exchanges rather than a one-way questioning process. I suspect that in many cases my use of *tu* instead of *vous* made people comfortable enough with the interview that they asked me to stay for lunch or diner, invited me out for a day of canoeing, fishing and swimming, or suggested I follow them in their working environments (such as reforestation and harvesting operations).

One objective of the interviewer is to access the universe of the interviewee, and this means finding common ground between the two parties (Dunn 2000). In other words, interviewing should be more than bringing a voice recorder and notebook to a meeting that involves one person asking and the other answering questions. Interviewing should mean engaging in conversation with someone and trying to blur the boundaries between interviewer and interviewee, in order to collect data that are not accessible in the basic interview context. For instance, when I met foresters, I talked about my experience in reforestation practices. In many cases, my experience showed them that I was more than an urban product, that I also knew what it meant to live in a forest environment and, to a certain extent, in a forest-dependent community. Another way to access the universe of

interviewees, especially those who were not related to the forest industry or impressed that I was attached to a foreign university, was to demonstrate my poor knowledge about regional history, how forest machinery works, how to use hunting and fishing gear, and so on. I noticed that when interviewees felt they could teach me something, they were more inclined to speak.

However, I also noticed that those subjects working for the Ministry of Natural Resources and Fauna and of the Ministry of Sustainable Development and Environment, and forest engineers and industrials were the opposite; they expected me to know almost everything about forest policies and the biophysical features that constitute the forest. I suspect this was linked to my affiliation with a foreign university. Interestingly, these expectations showed how difficult it was for foresters to imagine that a researcher could be interested in the forest without being a forester or an ecologist. Being interested in the social aspects of the forest was not considered directly related to the forest itself. This reaction was also very interesting for my research, mainly because it gave me a sense of the power exercised by foresters and ecologists, and their discourses on the ways in which the boreal forest was imagined. These reactions suggested who was considered a legitimate researcher by foresters and policy makers. My observations on this became even more pronounced when I was analysing the interviews. Analysing the interviews also made me realise how the lack of distance between myself and the interviewees was important for producing a convivial discussion that would provide me with good data. Although interviewing allowed me to access the world of forest users, it was important to know how making interviewee comfortable with the interview questions and me. This is why distance between me and the participant was important for data collection but also to the subsequent development of the field work. In the following section I will explain the reasons that led me to undertake interviews in the urban regions of Montréal and Québec City.

3.2.3 Interviewing in Québec City and Montréal

When I arrived in Québec City in 2004, I spent the first month at the Université Laval, where I worked at the Hydro-Québec Institute under the auspices of Professor Louis Guay, from the Department of Sociology. I used my time at the Institute to contact organisations directly related to forest management, as well as policy makers and important political leaders like the president of Québec's Forest Industry Council, the

head of the Ministry of Natural Resources and Fauna forestry research division, as well as scientists working in Laval's Department of Forestry and representatives from the Canadian Forest Centre, the Laurentide section based in Ste-Foy (a town attached to Québec City). It was also during my stay at the Université Laval that I contacted (by telephone) those I intended to meet in the Abitibi region, using the lists of forest users I previously used to send my letters of research intention in April 2004.

In the majority of cases, I did not face any problems arranging interviews with the organisations located in Québec City. However, because the management of the public forest (mainly the boreal forest) of Québec was a highly sensitive subject in 2004 (partly because of the Coulombe inquiry and the documentary film *l'Erreur Boréal* in 1999; see Chapter 1), I experienced some difficulties in meeting those working in powerful positions, such as high civil servants. For instance, I was not allowed to contact or speak directly to either the deputy minister of Natural Resources and Fauna or the president of Québec's Forest Industry Council. The "rule" I followed was to leave a message in which I mentioned the subject of my interview and how long I intended to spend with these two forest users. Indeed, these are very busy people, but in these preventive measures I nonetheless detected a sort of suspicion towards my research. I faced the same difficulties in meeting with the president of Québec's Order of Forest Engineers. I had to write electronic messages in which I included the content of the discussions I planned to have and which subjects I expected to explore. Fortunately for me, they all agreed to be interviewed for a maximum of 45 minutes. In these interviews, the confidentiality forms which stressed that the content of the interview would not be used without permission were particularly important (see Appendix 3). Only two interviewees (out of 35), both civil servants, asked me to send them the content of their interview transcripts in order to present them to the higher levels of the ministry for which they worked. After the material had been read they both agreed to let me use their interviews. It is clear that a researcher faces high security when interviewing civil servants on forestry questions, and the degree to which the information is controlled inside the ministries shows how much the current forestry system is regulated.[19]

If some interviewees were difficult to reach, others contacted me directly even though I did not get in touch with them. This was the case with a former president of Québec's

[19] All names of interview subjects used in this thesis are fictive.

Forestry Research Council, who contacted me to be interviewed. I stress this particular event because it is through interviewing and spending time in Québec City that I realised the proximity that exists in the forest milieu of the province. This proximity is not only related to the similar imaginaries of the forest shared by these organisations, but more concretely, both Québec's Forestry Research Council and the Forest Industry Council are located in the same building, on the same floor, with doors that allow members of the organisations to communicate readily. Furthermore, the administration board of the Forestry Research Council is composed of people from the Forest Industry Council, the Ministry of Natural Resources and Fauna and the Department of Forestry at Université Laval. Due to their proximity and their power in decision making about the management of the public forest, these three organisations were particularly important in my research. It was crucial that I explore how the people in charge of these organisations imagine the forest, and what kind of discourses and practices they use to materialise their imaginaries. My experiences gave me an excellent idea of the orientation of forestry science research in Québec. Interviewing gave me the chance to investigate the close relationship between forestry research and the forest industry in more detail, asking questions about how forestry research is funded in order to examine its underlying orientation.

As mentioned above, it was during my time in Montréal that I met the international environmental NGOs Greenpeace and the World Wildlife Fund for Nature. These interviews provided me with data on how the imaginaries of the boreal forest were constructed and how they produced a set of politics articulated through brochures and posters. It is also in Montréal that I understood the importance of undertaking research on how urban environments have influenced the ways in which the boreal forest is imagined and on the role of environmental NGOs in maintaining forest imaginaries in the urban space.

3.2.4 Interviewing in the Abitibi region and the "snowball" effect

In the Abitibi region, my approach for interviewing forest users was influenced by a "snowball effect" due to the generosity of residents and interview subjects, and their interest in participating in my research. This effect is often linked with "convenience sampling", which refers to a method of interviewing the most accessible people (Patton 1990). Although this technique has been criticised for the lack of causality between the

most accessible people and their ability to answer research questions "correctly" (Baxter and Eyles 1997), it allows the researcher to get a representative sample of social actors that is not pre-determined by the interests of those who refer other potential interviewers. Although I agree that the purpose of interviewing is to understand "how individual people experience and make sense of their own lives" (Valentine 1997: 111), it is important to judge the quality of the interviewee and not talk to just anyone, especially if a potential interviewee highlights his or her ignorance about the interests of the researcher. Although many participants referred me people who were judged by others to be suitable interviewees for my project, I often took the addresses and names without contacting them. My aim was to meet different forest users, broadly distributed and with various interests, instead of focussing on a small group of individuals with similar relationships to the forest.

A snowballing effect was created in the conversations I had with people I met in public spaces such as libraries, supermarkets and restaurants, who then put me in contact with forest users linked to the forest through their employment and recreational activities. This means that the variety of forest users I interviewed within the Abitibi region was much more diverse than those I found in the urban areas of Montréal and Québec City. This was because the majority of users were not directly linked to an organisation, and if they were, their everyday contact with the forest gave them numerous distinct relationships with it. Interviews were conducted in different contexts, varying from sitting outside on a tree trunk to sitting inside a pick-up truck travelling between one harvest site to another and from houses to forest cooperative offices. As such, the contexts in which the interviews were conducted were, like their subjects, varied; and the interviews were less formal that those conducted in urban environments. These factors do have an impact on the construction of interview data, an effect on how the conversation between both interviewee and interviewer is related to the space in which the interview has been conducted and how this has had an impact on the subjects the interviewees are treating in the interview (see Sin 2003).

In both 2004 and 2005, I benefited from the help of "gate keepers" who allowed me to meet forest users that were more difficult to approach on my own. In 2004, for instance, I met and interviewed a representative of an Abitibian environmental NGO who introduced me to members of Algonquian communities, and who allowed me to participate in meetings between the government, the Algonquians and environmental

NGOs on the development of protected areas in Algonquian hunting and trapping territories.[20] In 2005, one of my contacts, that could also be described as a sort of "gate keeper", was the mayor of the forest-dependent community of Senneterre. He was interested in my project and turned out to be one of the most important contacts in the entire project. The mayor introduced me to a large cohort of forest users in his community, and these people connected me, in turn, with other forest users that I did not know.

I met the mayor during the *Festival Forestier* of Senneterre in 2005 (see Chapter 5), and after being presented with my project, he asked me to phone him the following week so he could introduce me to residents who might want to participate in my research. Interestingly, the mayor introduced me to the most powerful actors in the forest sector, such as those in charge of the forest industries (Abitibi-Consolidated and Tembec) in this forest-dependent town. Through these contacts, I was able to access harvesting sites and was given the opportunity to live in a forest camp for five days (which I will describe in the section on participant observation, 3.3 below). Although the snowball effect is part of almost every research undertaking, it is important to keep focussed, since it is easy to lose control over the research aims; this is particularly true if the person who contributes to the snowballing is a powerful agent like the mayor of a forest-dependent community. The influence wielded by the mayor became clearer to me when he prepared a list of users he thought I should meet for my research — all of whom were related to the forest industry.

Although the forest users selected by the mayor were all related to the economic development of the region, the interviews I conducted with some of them allowed me to discover a great variety of opinions, especially amongst non-experts — by which I mean those people who were not forest engineers but were working directly for the forest industry, as sawmill machine operators, mechanics, reforestation entrepreneurs and so on. In this diversity of users, many expressed views on current forest

[20] The government of Québec defines a protected area as: "a geographically defined expanse of land or water established under a legal and administrative framework designed specifically to ensure the protection and maintenance of biological diversity and of related natural and cultural resources" (MSDEP: http://www.menv.gouv.qc.ca/biodiversite/aires_protegees/aires_quebec-en.htm). These protected areas are linked with the North American Free Trade Agreement (NAFTA) and the creation of the Commission for Environmental Cooperation (CEC), which aims to "address regional environmental concerns, help prevent potential trade and environmental conflicts, and […] promote the effective enforcement of environmental law" (http://www.cec.org/who_we_are/index.cfm?varlan=English).

management practices and on the regional economic development that differed from those of the mayor. By presenting me to forest users he qualified as the "champions" of economic development, the mayor attempted to portray Senneterre as a dynamic community in which users did not experience real problems with the management system. I suspect in this good intention a sort of exercise of seduction, which also reveals the threat in contesting the dominant power of industrial forestry.

By interviewing some of the forest users the mayor judged important, my aim was to see if the imaginaries of the forest and of the forest industry presented to me by the mayor were shared by other active forest users. For instance, all the sub-contractors working for the forest industries (such as forest cooperatives or those specialising in transporting forest machinery in harvesting sites) have different ways of talking about and experiencing the forest than what the mayor presented to me as a generalised opinion amongst Senneterre's inhabitants. This investigation suggests that other imaginaries of the forest were alive amongst forest users associated with, but not in charge of, the industrial imaginaries of the forest (Chapter 4 will discuss the construction of these). As I will demonstrate in following sections on the ethnographic methods I employed, I used many different sources of information in order to meet and interview forest users: listening to local radio stations and consulting local newspapers, brochures and booklets offered by the regional tourist office. In these I found information about specific forest users and about activities which introduce tourists to an experience of the Abitibi forest. It is through these sources that I met many forest users who were interested in participating in my research. Materials collected in the field like newspapers and tourist brochures allowed me to understand how the forest was presented to visitors, and which types of relationship with the forest were portrayed. Although the use of these materials is more related to ethnographic methods, it is worth mentioning that I used them to gain a sense of the region and to communicate with interviewees and Abitibians generally.

3.2.5 Interviewing First Nations

In Abitibi, I also interviewed Algonquian forest users. I met the three communities that have hunting and ancestral territories within the region of Abitibi: Pikogan, Kitcisakik and Lac-Simon (see the red circles on figure 3.1). It was in the community of Lac-Simon that I gathered most of my material. This is because I met members of the

Anishnabe Nation Council during my participant observation in 2004, and they demonstrated an interest in my research. In Lac-Simon, I met and interviewed various forest users. These participants were also members of a group responsible for territorial issues and were representing trappers' and other community members' interests in the forest. A key player I met and interviewed was the chief of the community, who gave me a good overview of the social problems faced by his community, as well as of their claims over management of the forest.

Another factor that influenced my choice to spend more time at Lac-Simon rather than in the other communities is the high number of families active in trapping on their territories and their strong political engagement in the protection of these areas. For instance, while I was in the Abitibi region in 2004, they blocked Road 117 (the closest road to their reservation) and distributed leaflets to motorists explaining their claims and the social problems caused by the differentiated forest access that characterises the current forestry system. This political claim was also interesting in terms of the kind of forest imaginaries this community was trying to promote and politicise. These elements all made this community especially attractive for my research.

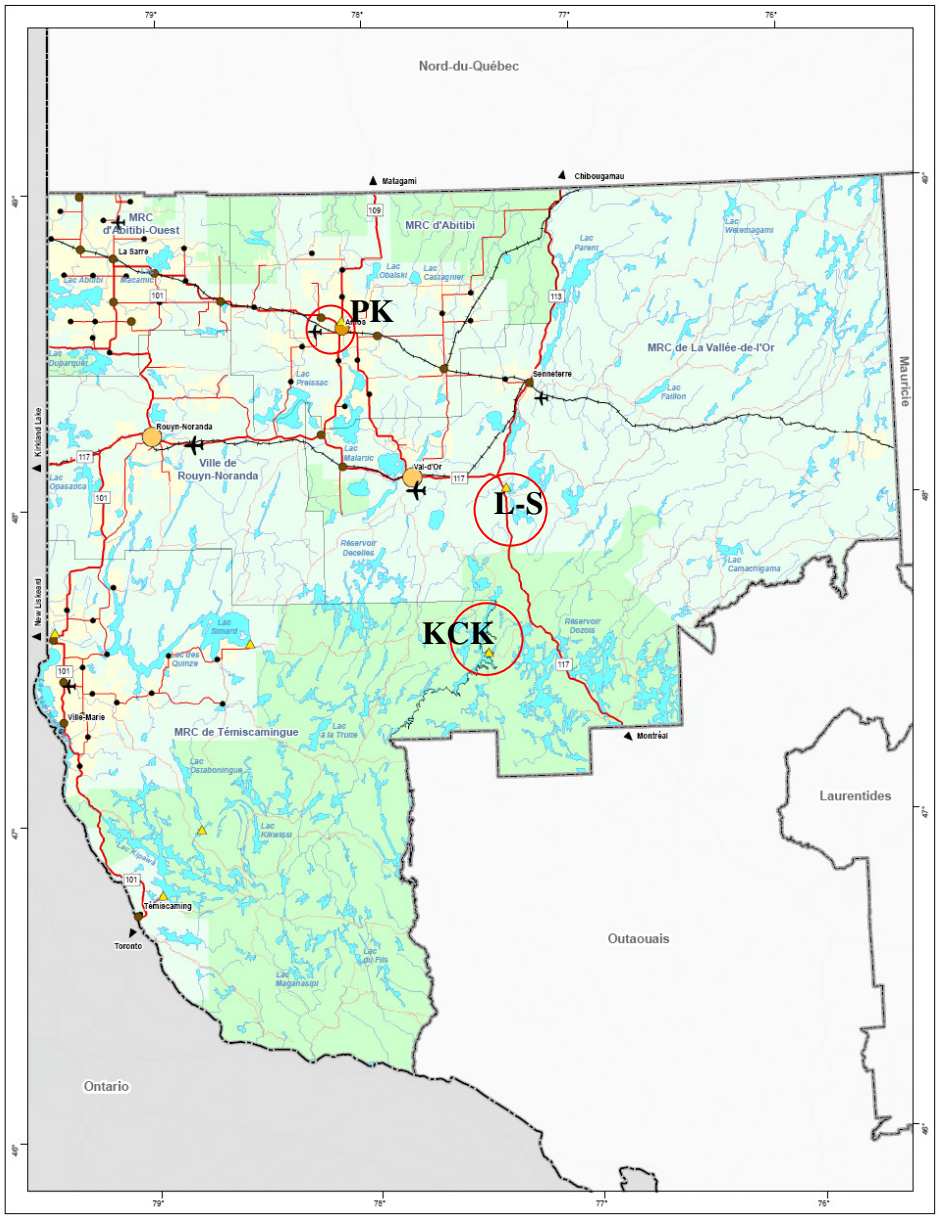

Figure 3.1 Regional portrait of the Abitibi region, showing roads and Algonquian reserves. Pikogan = PK, Kitcisakik = KCK, Lac-Simon = L-S. Source: MRNF. 2006. *Portrait Territorial de l'Abitibi-Témiscamingue*. Ministère des Ressources Naturelles et de la Faune, pp.21, Diffusion code: 2006-2002.

In Pikogan, located to the northwest of Lac-Simon, close to the town of Amos, I met those representing the Abitibiwinni Nation Council, which consisted of a team of community members that work on forest-related issues as part of their own forest department. Their tasks included paying attention to the forest industry's operations on their ancestral territories and finding reforestation and harvesting contracts for the members of their community. As with Lac-Simon, the forest in their territory was also allocated to the forest industry, and their main role consisted of negotiating the area of forest that should be harvested and protected. Pikogan has a small territory (88.6

hectares),[21] and because of the few members that still practice traditional activities in the forest, I thought that interviewing the people in charge of management decisions and those who represented the links between forest industry and community trappers would be sufficient to learn about the politics of their multiple imaginaries of the forest. My experience in Pikogan was intended to determine whether the territorial claims and the ways of experiencing and knowing the forest were different from Lac-Simon reserve. However, although the Pikogan community has a better relationship with the forest industries than Lac-Simon or Kitcisakik, the ways in which the community members knew and experienced the forest in Pikogan was similar to Lac-Simon.

In Kitcisakik, the situation is very different from the two other reserves, mainly because it is not recognised as a reserve by either the federal or provincial governments. This means that the members of this community do not benefit from the infrastructures normally associated with federal government reserves (schools, proper roads, telephones, electricity, running water and so forth) and thus their ancestral territory has no legal status. This non-reserve status has made it impossible for community members to finalise an agreement with the federal government that would recognise their legal rights in the area that they consider ancestral territory (see Leroux 1995). The remote geographical location of Kitcisakik also makes it more difficult to access than Lac-Simon and Pikogan. Moreover, because it is located outside the official Abitibi boundaries (although their hunting territories overlap those of the Lac-Simon community), I decided to not spend too much time with this community.

There were other reasons that convinced me to not research extensively in Kitcisakik, one of the most important being that the person in charge of the community's forest claims was not interested in seeing a researcher involved in his work, making my access to the chief more difficult. These obstacles restricted my contacts with the Kitcisakik community to the *Centre d'Amitié Autochtone de Val d'Or* (Val d'Or's First Nation Freindship Centre). This centre is the place where Algonquians meet to discuss issues regarding the social and economic development of their respective communities, and it is here that I met the Kitcisakik chief. Contrary to the chiefs of Lac-Simon and Pikogan, the reception of my project and my request for interviews was not very well received amongst Kitcisakik's community members. The chief and the research agents who worked with him told me that many doctoral students contacted them, and that they

[21] See http://www.ainc-inac.gc.ca/qc/gui/abitibiwinni_f.html

were not interested in wasting time with research that rarely benefits their community. Moreover, the Kitcisakik people were involved in a judicial and political battle with federal and provincial governments over the development of their community, and the subsequent attention they received from the media made them difficult to approach.

For all these reasons I decided to not work with this community. However, I did manage to share a lunch with the chief, which gave me the opportunity to learn a little more about their claims and how they imagine and experience the forest within their community, especially amongst those who still practice hunting and fishing activities as a mode of subsistence. Interviewing First Nations people gave me the opportunity to deepen my understanding of the lexicon they use to transcribe their relationships and knowledges about the boreal forest. This was particularly important to understand how this lexicon was enacting as everyday life politics, in contesting the powers of industrial forestry.

3.2.6 Analysing interviews

After recording and transcribing interviews, I analysed the material in order to understand what these stories have to say about the micropolitics of everyday forest practices, and how these micropolitics feed into the current debates about management of the forest. Analysing interviews involves paying attention to discourses and, as I will demonstrate later, discourse analysis can be applied not only to text but also to images. Most of the work that has been done in discourse analysis refers to the work of Michel Foucault (1961, 1966, 1969, 1975), in which he pays particular attention to how power is produced, distributed and articulated through discourse. His work has investigated different terrains in order to understand the interfaces between knowledge and power, highlighting the types of power reason has tried to exercise over madness (Foucault 1961), and how power is articulated through scientific discourse (Foucault 1966) and institutions (Foucault 1975). This work has enriched our understanding of how the effects of power are replicated from one discourse to another and through which mechanisms they are performed. For Foucault (1976/2001: 123), discourse is much more than words and processes giving structure to human thought, it is rather the ensemble of significations and constraints which circulate through social relations, manifested in gestures, attitudes, ways of life and spatial organisations. By accepting this definition, discourses become both contexts and instruments of struggle (Foucault

1976/2001). The important element of Foucault's work for my discourse analysis is the quest to understand how power relations are articulated, contested and negotiated through various social relations and discourses. It is important to note, however, that Foucault defined himself as a "blind empiricist" with no general theory or method for investigating social relations and their power;[22] he "simply" uses presumption and rejects methods that allow analysing unknown objects of study through pre-established methods (Foucault 1977/2001: 404). Thus, although Foucault is interested in "conflicts, tensions and anguish" to better understand the effect of power, it is important to mention his lack of reflexivity on his own work (see Rose 2001: 143).

Thinking about reflexivity, or what Kim England (1994: 82) defines as the "self critical sympathetic introspection" of how field work has been conducted, understanding the way material has been collected and analysed is critical for understanding how the argument presented in this thesis has been constructed. It was in analysing the content of the interviews that I realised the influence of techniques I used, as well as the significance of the places in which interviews took place (see Elwood and Martin 2000, Sin 2003). The stories I have recorded on tapes helped me to understand the experiences and knowledges that have contributed to the production of specific types of forest, which I named the imaginaries of the forest. This means that although the interviewees were not talking specifically about imaginaries of the forest, what they described to me in their interviews and what I noticed through my field work was similar to the meaning of "imaginary" as I discussed it in Chapter 2. This realisation became obvious while I was transcribing the interview material. By analysing these interviews, the term "imaginaries" accrued even more meaning, and like Foucault, I paid attention to the ways in which different meanings of the forest become connected in the production of discourses, or what Foucault called discursive formations (Rose 2001: 137). These discursive formations are involved in the production of imaginaries which in turn become agents of power and thus political vectors.

In order to capture these forest imaginaries through the discourse of interviewees, I used different techniques both in and out of the field. For instance, I usually made oral summaries immediately after concluding my interviews, on the same tape I had just used to record the interview. By looking at my interview notes and emphasising the

[22] This lack of general method and theory is, for Foucault, what differentiates his work from structuralism (Foucault 1977/2001: 404)

points I considered significant, I would add about five minutes of material to the tape, highlighting what I judged as important based on my first impressions of the interview — impressions I knew would change throughout the research process. I used these summaries at the end of each interview to get a sense of their content and note what I considered the imaginaries of forest as articulated by the participants. I always kept in mind, however, that these summaries were products of the research stage I was at in the moment of the interviews. Therefore it would have been risky to use these descriptions alone, without other material collected from my ethnographic experiences. I would normally use summaries in conjunction with my field notes and the notes taken during the interviews. When recording these summaries, I paid particular attention to the body language of participants, something I also would have observed in my interview notes. Back in my car or in the room I rented, I transcribed the interviews and summaries in a notebook or directly onto my computer. At the end of each transcription I re-visited the summaries to be sure they were complete.

When transcribing, I codified paragraphs with relevant information by the minutes and seconds at which this information appeared on the tape (Appendix 5). My codes referred to both theoretical concepts and empirical material raised in the interviews. Coding is an exercise that makes it possible to pay attention to what the interviewees are trying to say and what might be important in that particular moment of the discussion between interviewer and interviewee. However, I did not use a homogeneous system of codes, which would be an attempt to categorise interviews as events that can be fixed by the same terminology. On the contrary, each interview is dynamic and encapsulates a particular moment of connexion between two (or more) individuals, and it cannot be framed according to identical terminology. In other words, what creates the complexity of the interview event cannot be evacuated and framed into fixed meanings. I did not use the same words for the 35 interviews, except when interviewees were talking about the same subjects (e.g., the forest industry) in similar or dissimilar ways. Because researching is a process constantly under construction and in mutation, some codes were not always useful, and a homogeneous codification system would have been highly problematic. I did not use coding software such as Nvivo since many interviews have been transcribed during my field work and although I learned about the virtues of software later on, I decided to keep the same technique I adopted over the transcription work for practical reasons.

It is also important to mention that I transcribed 22 interviews myself and 13 were done by two ethnologist friends. Although transcribing can be time-consuming, it is an excellent way to analyse and work with the material and to be immersed again in the interview contexts (Fetterman 1998). It is also through transcribing and listening to interviews that it becomes possible to recognise subtleties not perceptible in a reading of transcripts. I transcribed six interviews while in the field during summer 2004, and this allowed me to improve my interview technique and to rephrase certain questions in my interview guide that were not completely clear for interviewees. Once in the UK, I realised that I spent too much time transcribing in 2004, and that summer 2005 would require more extensive ethnographic work.

All interviewing events have directly or indirectly participated in my ethnographic experiences. This is because meeting different forest users allowed me to encounter the different ways in which they come to experience and know the forest. Interviews are more than conversations between two people: they consist of ethnographic experiences for the interviewer; they are intrusions into the different spaces of interviewees. By extracting boreal forest imaginaries from various stories, I entered into the multiple places in which everyday life relationships with the forest become fabricated and connected with each other in the constitution of space. Places such as offices, houses, pick-up trucks, canoes and so forth are constituents of the ethnographic experience and cannot be detached from the interview (Sin 2003). For instance, walking through a forest engineer's office to conduct an interview is an ethnographic experience in itself, since it means entering an unknown terrain. It is experiencing something that will extend an understanding of the social relations implicated in the production of the boreal forest. Therefore, interviews are part of an extended ethnographic experience linked with a "methodological goal of creating […] a finely detailed, massive, finely varied set of descriptions of [forest imaginaries] emerging and declining in various [contexts]" (Katz 2001: 468). If interviews allowed me to understand how experiences of, and knowledges about, the boreal forest contribute to the elaboration of imaginaries and politics of the forest, then these discursive products should be verified in the field. This is particularly important for understanding how different imaginaries become central to negotiations and contestations about the meaning of the forest. The next section will describe the ethnographic methods I used to determine how discursive imaginaries are involved in the production of spatial entities and politics in the forest.

3.3 Ethnographic and participant observation experiences

Since I was interested in finding how imaginaries of the forest become materialised and involved in the production of multiple places and politics, I paid attention to the ways in which forest users concretised their imaginaries while in the forest, by creating specific contexts (Latour and Woolgar 1986). Here I draw on Bruno Latour's (1987, 1992, 1999a) ethnography of scientific practices, especially on how field work and the equipment used in forest practices create contexts that allow forest users to claim their forest imaginaries (and the politics embodied in them) as reality. I wanted to trace how multiplicities of forest imaginaries were materialised through practices and involved in the production of spaces and politics. All these experiences took place in the Abitibi region. My aim was to spend time with forest users during their daily activities in forest. The methods I will describe in the following sections allowed me to understand how the imaginaries of the boreal forest become spatialised and materialised through practices and involved in political negotiation.

I paid attention to the type of objects used while practising both leisure and working activities; the objects that allow forest users to animate and maintain their imaginaries in the boreal space. I was interested to see how spatial imaginaries of the forest described in interviews take the form of concrete entities that are negotiated in the production of boundaries. These boundaries are not limited to their discursive form; they are part of imaginaries and they therefore need to be recognised in the field. These experiences in the field led me to extract what I define as imaginaries of the forest, but they also helped me to conceptualise how imaginaries are performed and in what ways they are related to each other (see Chapter 6). Many interviewees invited me to participate in their activities, such as going to the beach and swimming, canoeing, walking and fishing. I also met local quad biking club members who invited me to attend a slide show of their winter expeditions. It is through these activities that I learned how Abitibians experience the forest, and more importantly, how their imaginaries of the forest became concrete spatial entities. I also walked in the provincial park of Aiguebelle, and used foot trails designed to invite visitors to experience the boreal forest. These experiences allowed me to get a sense of what it feels to be in this forest and they helped me reflect about the complexity of the social relations involved in the constitution of multiple forest imaginaries.

3.3.1 Field notes: making sense of the "unutterable multiplicity"

In ethnographic field work, note-taking becomes the way in which experiences of the field become situated among and linked to other experiences, allowing the ethnographer to make sense of the material judged important (Emerson *et al.* 1995). In writing my field notes, I tried to be as detailed as possible and I wrote only at night or when I was not involved in observing and participating in the social relations around me. These notes were the products of what had happened to me or what people had told me during the day. In short, my notes were textual representations of the interactions that aided my understanding of how forest imaginaries were produced and maintained through social relations. These brief reports varied between one and five pages (depending on the day's events) and were helpful in exploring new avenues in interviews and ethnographic field work.

I always kept my tape recorder close at hand in case I was unable to write (e.g. while driving or when taking notes was inappropriate), and I realised that it was easier for me to summarise the important points of the day when I spoke them out loud. These important points were comprised of elements of everyday relationships with the forest, such as information about the places where users go to experience the forest as well as discussions about mills, politics, fishing and hunting histories and experiences of tourist attractions. I also combined note taking with voice recording when I was too tired to write at night. This technique was particularly useful when I had travelled long distances and did not have the time or energy to write a report at the end of the day. Field notes were part of the ethnographic routine and were also a way to make sense of what I observed in the field and thus, they were essential during the participant observation.

3.3.2 Participant observations

According to Eric Laurier (2004), participant observation is one of the simplest qualitative methods. Despite this simplicity, it is important to realise its significance in helping the researcher to grasp the complexity of the social relationships being studied. The ethnographic experiences in which I took notes or in which I participated in various conversations were considered participant observations (Emerson *et al.* 1995). Amongst these participant observations were three guided tours of forest industry facilities (i.e.

saw mills) in Val d'Or, Senneterre and Tachereau, in which I observed the production of construction timber from the moment when the trees arrived until their transformation into plywood sheets or other construction timber such as two-by-four planks.

These tours constituted tourist attractions; they were presented in the booklet provided by the regional tourist association located on the fringe of Val d'Or. They were designed to inform visitors about the transformation of the forest, and they offered interesting sites for understanding how the forest was imagined, portrayed and performed through forestry science and technologies. These tours helped me to understand how the social interactions inside a mill were regulated and they demonstrated the type of forest relationships workers developed through their everyday tasks. By paying particular attention to the tours — including the questions asked by guides and visitors as well as the terminology the guides used to describe the forest — I tried to get a sense of how the boreal forest was described and portrayed.

I also took part in another guided tour, on the production of genetically "improved" seedlings used in the reforestation of the Abitibian boreal forest, at the Guyenne cooperative greenhouses (see Chapter 4). This tour enabled me to understand the steps in the production of tree seedlings and what kind of discourses and practices were used to construct an imaginary of the forest in which tree seedlings play a part. Another important tour in which I participated was during a festival held in the forest-dependent community of Senneterre (see Chapter 5). As with the Gueyenne greenhouses, this tour was guided by forest engineers and composed of a multitude of forest users with different links to, and experiences of, the forest. These tours were instructive, since they allowed me to meet forest users who worked indirectly for the forest industries and gave me the chance to organise other interviews. They were also a good way to understand the purpose behind such tours, which was mainly to promote the forest industries for the regional economy. It was through these tours that I realised how important a role is played by industrial forestry in shaping the ways in which visitors come in contact with the forest.

Another experience of participant observation invovled a meeting organised by forest researchers from the Industrial Chair in Sustainable Forest Management at the Université du Québec in Abitibi-Témiscamingue (UQÀT), held at their research station in Duparquet (see figure 3.1). The aim of this meeting was to allow foresters and

biologists to present their research to non-expert forest users. While attending this popularisation session, I took note of the presentations given by foresters and the questions asked by the audience. It was particularly interesting to observe, and collect data about, the power relations involved in the production of imaginaries and the articulation of forest micropolitics. This was also a good exercise in observing the involvement of scientists in the forest, meeting other forest users in the audience and subsequently having other interviews.

I was invited by one of my "gate keepers" to attend two meetings organised by civil servants from the Ministry of Sustainable Development and Environment (MSDE), in which they presented two protected-area projects to the Algonquian communities of Lac-Simon and Kitcisakik. As during the guided tours, I restricted myself to the role of observer: I noted the exchanges between the civil servants and the Algonquians. These meetings gave me the opportunity to understand how the forest was portrayed by these two groups, and how the forest they described in these meetings was used to support and negotiate positions about the forest practices that each group was interested to see implemented in protected-area policies (e.g. hunting, fishing, "green" tourism).

It was also through these experiences (both with First Nations debates and industry guided tours) that I paid attention to the production of boundaries — how their positions are produced and negotiated. These participant observations allowed me to arrange interviews with Lac-Simon trappers, which was particularly important for understanding how hunting territories are delimited, what kind of markers are employed and how hunting equipment is used to construct what I defined as imaginaries of the forest.

In other participant observation, I asked questions and took part in discussions. This was the case for a meeting held in Val d'Or, in the *Bar le Rafiot* (a local bar), organised by a local environmental NGO. The discussions were oriented towards the future of the boreal forest management system. I saw in this meeting an opportunity to ask questions of participants. These questions were not addressed exclusively to NGO representatives, but also to local artists and other citizens who had a stake in the Abitibian forest. I noted the answers to my questions as well as the questions of others, the ensuing discussions and the meeting's main themes. The meeting concluded with short documentaries made by members of the NGO, presented to the audience in order to make them aware of the

different ways they could contribute to the protection of the forest. My interest in attending this meeting was to understand what kind of forest participants referred to during the discussions.

If imaginaries of the forest were perceptible through these participant observations, it was the everyday industrial practices of the Abitibi forest that offered the most interesting lessons in how boreal forest imaginaries were produced and involved in the articulation of politics. This is why I decided it was necessary to spend time in the forest with foresters, to follow them in everyday life practices, the activities that make up a forester's routine, through participant observations in the field, or what foresters call *le chantier* (the shanty). I finally succeeded in convincing the head of forest operations of Abitibi-Consolidated in Senneterre to let me go with one of his foresters for a short period of work. This experience allowed me to see how the imaginaries described by foresters are the fruits of their experiences and relationships with the forest and how these imaginaries are concretised into practices.

3.3.3 Experiencing the forest through camps and festival

Aside from the participant observations discussed above, I also participated in longer ethnographic experiences. For instance, I spent five days with foresters in forestry (logging) camps. This experience required spending time with foresters in every aspect of industrial operations, from harvesting phases to reforestation practices. Here, the work of Latour (1999a: 24-79) has been important in organising my data collection. I spent most of my time with a foreman in charge of the reforestation process, and it was through him that I was able to spend time with other foresters, tree planters and subcontractors in the field and at the forest camps (during meal times as well as after diner). I also followed a lorry driver through his work routine, which consisted of transporting tree seedlings to reforestation sites, I shared a lunch break with drag-scarifier operators, and I drove a drag-scarifier assisted by one of the operators.[23] All these experiences were recorded in notes and photographs. The aim of my extensive field experiences was to see how industrial practices allowed foresters to materialise imaginaries in the boreal space, and how this spatialisation is produced by the maintenance of boundaries — also materialised through practices.

[23] A "drag-scarifier" is the tractor that tows shark-fin barrels in order to expose the minerals of the soil, which facilitates the reforestation process.

Although this field work was only five days in length, it was very intense. My work consisted mainly of taking notes and photographs of the practices that allow foresters to claim particular imaginaries of the forest through technical manipulation. These ethnographic experiences helped me learn about the routine of foresters and the benefits and difficulties of their profession. This immersion in the world of foresters was also significant in thinking about how a renewal of forest politics should include foresters' relationships with the forest (see Chapter 7). I did not conduct interviews during this experience, but instead privileged note taking and observing in order to concentrate on the action of the field and the social interactions that create the boreal forest defined by forestry science and ecology. It was important for me to understand how foresters' imaginaries were performed in their everyday relationships with the forest and in the technologies that allowed them to claim and negotiate space.

Another intense bit of field work I undertook while in the Abitibi region was attending the *Festival Forestier de Senneterre* (Senneterre's Lumberjack Festival; see Chapter 5). This festival was important in that it demonstrated how such an event can be seen as a microcosm in which the different politics of forest imaginaries can be manifested and understood. I made use of the same techniques I utilised in other participant observations (i.e. note taking and photography), but in this case I also used a digital video camera to capture the performance of competitors and described them in detail during my analysis once outside the festival. My analysis used descriptions of the actions, as other social researchers have when working with this type of material (Macbeth 1999, Laurier and Philo 2003), but videos were important for capturing the chain of movement that allowed foresters to produce the festival's events and for showing how their relationships with the forest were embodied through lumberjack performances. Videos were not only good for capturing the competitions, but also for giving a sense of the festival's ambience by recording both images and noises (e.g. hands clapping, chainsaw engines, voices) which allowed me to give a detailed description of the behaviour among festival-goers.

I also used the festival as an opportunity to meet forest users and arrange further interviews. As I will explain in Chapter 5, this festival was an excellent place to observe how the boundaries of different imaginaries become visible and interrelated through the presence of various objects and forest users. Because boundaries and politics are not

necessarily concrete, easily described entities, photographs and videos seem to me appropriate ways to capture their articulations and manifestations. It is also because of this visual support that I was able to show how imaginaries of the forest and their politics were concretised in space. Taking photographic and video notes was an effective method of showing how different imaginaries of the forest are embodied in a variety of objects and actions, and further, of showing how what I analysed through interviews can be seen in the everyday life of Abitibians.

3.3.4 Tracking imaginaries through images

Before concluding this section on ethnographies, it is important to highlight the significance of photography in substantiating how imaginaries are involved in the constitution of boundaries, places and politics. Photographs allow me to present the power relations crucial to the creation of the politics of boreal forest imaginaries. As argued by Gillian Rose (1996: 283), it is important to go beyond the belief that images replicate the "real world"; photography is also about showing the worlds as it appears to the individual who took the picture, and the meaning this person constructed in the image. Imaginaries are often attached to images, and thus by paying attention to the ways in which the boreal forest is portrayed through popular art forms — sculptures and monuments, road signs, paintings that represent both everyday and fantastic representations of the forest — the multiplicity of forest imaginaries become perceptible. These pieces of popular art were excellent material for tracing how imaginaries are represented in multiple ways (Daniels 1993). In fact, my photographic attention was focussed on objects often considered common to the landscape (e.g. road signs), and I was able to use my photographs to contextualise them in the social history of the Abitibi region and in the production of the politics of imaginaries.

In the case of paintings, I did not focus on well-known Québec painters such as Bruce Braun's analysis of Emily Carr or Lawrence Paul Yuxweluptun's paintings of the Canadian West Coast. I preferred focussing on local painters and drawings that were exhibited only regionally, sometimes restricted even to the house of the artist. As with the other images used in this thesis, I analysed their content and meaning according to my own values and particular life story, but I also paid particular attention to those who produced these images, to the images themselves and to the audience for whom the images had been produced (Rose 1996, 2001). By investigating how imaginaries of the

forest and their politics were represented in the work of local artists, I was trying to discover how the forest was represented through everyday life scenes and what kind of relationships with the forest were portrayed by these imaginaries. Image analysis is thus related to discourse analysis, since what is represented in the image is part of discourse. In the images I analysed for this thesis, it is possible to see how specific forest users claim specific representations of the forest and specific power relationships. As for discourse, I attached importance to the intertextuality of images, defined by Rose (2001: 137) as "the way that the meanings of any one discursive image or text depend not only on that text or image, but also on the meaning carried by other images and text." It is through this relational quality or intertextuality that contestations and negotiations of imaginaries becomes easier to capture.

In my critical analysis of images and discourses, I paid particular attention to the power relations embodied in the production of imaginaries and forest places[24]. For me, the images captured a particular piece of space-time that I thought was important in showing the power relationships involved in configurations of boreal forest micropolitics. Although I tried to stay as close as possible to the reality forest users described to me through their discourses and practices, qualitative research involves acknowledging that the researcher is part of the continual process of researching (Katz 1994, Crang 2002, 2003). It is through photographs, arts, crafts and other images (e.g. pictures selected by different users for brochures, post cards, etc.) that boreal forest power relations and their micropolitics became visible to me. The substance of these images will be described in Chapters 5 and 6.

3.4 Limitations of methodology

It is important to highlight the main obstacles I encountered in this research, which were not necessarily related to the normal obstacles of funding and time limitations. This methodology has shown its limitations, especially where it concerns my intention to follow all interviewees in the forest to see how their imaginaries are materialised into practices. This was particularly true for those subjects located in Québec City and Montréal, where the distance separating them from the forest was too significant. Being

[24] It is important to see imaginaries and places as co-constituted; there is a not a unidirectional relation by which imaginaries produce places. Places also produce imaginaries.

in the forest with interviewees allowed me to clarify certain things they mentioned, and thus it was easier for me to comprehend how their imaginaries of the forest became concrete entities. Going into the forest with each interviewee was too demanding in terms of logistics, and therefore I did not have the opportunity to see how each discursive form of imaginaries was concretised within the forest setting.

The main obstacles I faced in my field work were not related to me or to the interviewees, but due mostly to the geography of Québec. The distances I had to travel between the people and organisations involved in my research were often considerable, and this became a definite obstacle in the research process. During my two summer trips (2004-2005), I drove more than 10,000km — causing certain logistical problems, such as arriving for an interview at the right time or finding places to stay in remote areas. The geography of Québec meant that this project could not be viable if I was sedentary, since my aim was to cover the entire region of Abitibi. In other words, I had to travel throughout the 45,435km^2 that comprise the region (MAMR 2006: 1). With only 127,850 inhabitants, Abitibi's villages and small towns were widely dispersed throughout the region and meeting two forest users in the same day in different areas was sometimes difficult, requiring a lot of driving on both tarmac and gravel roads (MAMR 2006: 1).

This leads me to note an indispensable component of my field trip: a car. It was an essential for travelling long distances, and it also provided a topic of conversation when I met interviewees (males, generally). Such extensive territory meant that I spent numerous hours in my car driving from one point to another, but in this way of travelling I also came to understand what it means to live in the Abitibi region. For instance, during my time in the Senneterre area, I arranged to meet various outfitters located "near" a given town and had to drive up to 150km out of town on forest roads to meet them. They often invited me to stay overnight and put my tent on their land — and I often accepted.

I conceive of interviewees as much more than simple "data providers"; they are people with whom I shared time and discussions, and it was often in a non-interview context that I was able to learn even more about how their imaginaries of the forest are constructed and politicised. I do believe in staying in touch with interviewees, as most of them have contributed to the success of my project, took time to answer my questions

and were interested in the results of my research. It is because I stayed in touch with most of them that I met other forest users who could also provide me with important data. It is in my intention to go and visit my interviewees in January 2008 to discuss the outcomes of this research with them.

3.5 Conclusion

My methodology allowed me to elicit and create data that offered me the means to build how different forest users come to know and experience the boreal forest. This methodology also reveals to me how these experiences contribute to the formation of imaginaries, which are in turn involved in the production of places and the politics at the centre of conflicts regarding forestry management. Grasping imaginaries is a difficult task, but by combining explorations of discourse and practices, it is possible to see how forest imaginaries are expressed and performed in various ways in the Abitibi region. Having established how I collected and analysed my data, the next chapters will show how this empirical material demonstrates the existence of multiple imaginaries of the boreal forest, and how these imaginaries are involved in the production of political places and claims. The following chapter will show how the boreal forest of Abitibi has been imagined as a geographic entity by multiple forest users, from the colonisation of the Abitibi region up to the current forestry science discourses. This particular chapter (Chapter 4) will discuss the relevance of my interviews and the ethnographic material I collected through field work by showing how industrial imaginaries of the forest become the dominant ways through which forest users come to know and experience the boreal forest.

Chapter 4

The Invisible Scientific Hand and the Construction of a Cybernetic Boreal Forest Entity

4.0 Introduction

In this chapter, I will introduce how the boreal forest is imagined as a geographical entity in which the industrial ways of knowing and experiencing the forest are dominant. I also show how foresters and forest industries have territorialized the boreal forest through industrial imaginaries, discourses and practices. The chapter will be divided in four sections. Section 4.1 summarises how Abitibi's boreal forest has been imagined by Euro-Canadian settlers with a short historical overview that will show how the current boreal forest became territorialized as a space of natural resources suitable for extraction. Section 4.2 investigates how this industrial imaginary has become a concrete entity through forestry science and ecology discourses and practices. Section 4.3 emphasises the role of simulation models in producing the boreal forest as a cybernetic entity (produced by computer models) that plays into an ontology of foresters which is spatialized through forestry science practices. Section 4.4 shows how the production of genetically "improved" trees are involved in the colonisation of the landscape and finally, Section 4.5 demonstrates how reforesting practices allow foresters and forest industries to colonise the boreal space with industrial meanings.

4.1 Sketching the imaginary of the boreal forest of Abitibi

Much of the work that has been done on colonial legacies and the forest in Canada has focused on how the first European explorers and Jesuits (Lejeune 1632: 221, quoted in Brisson 2003) have portrayed the forests of Québec as a dark and dangerous environment that needed to be tamed and civilised (Thwaites 1838-1901, from Halliday 1939: 230, quoted in Baldwin 2004: 189). Other historical analyses of how particular sciences have worked to portray different environments as "governable spaces" that are manipulated, regulated, produced and reproduced through specific topologies (e.g.,

maps and legends, graphics, statistics) and governmental practices (Rose 1999: 32, quoted in Peet and Watts 2004: 28) have also showed how particular imaginaries shape biophysical environments (Farish 2006). The role of geology in the production of governmental rationality has been rightly described by Braun (2000: 15) as the re-territorialization of nature leading to the erasure of other social natures that pre-exist the advent of geology (see also Braun 2002).

It was only in 1898 that the Abitibi region became officially attached to the Québec province, and thus territorialized as a potential exploitable land for purposes other than exchanging goods between the Hudson Bay Company and the Algonquians and Crees who shared this former part of the Northwest Territories (Gourd 1973, 1975, Asselin and Gourd 1995). The territorialization of nature — and more precisely the territorialization of an unspecified "forest" into "the boreal forest of Abitibi" — can be seen through the reports of the first surveyors, such as Henry O'Sullivan, one of the Québec government's pioneers in surveying, describing and mapping the northern regions of the province into land classifications. These classifications stress whether the land was appropriate for agriculture, mining[25] or best suited to forest exploitation. [26] During a survey expedition, O'Sullivan described the Abitibi region as densely wooded, and talked about trees as follows:

> […] they generally look all the same throughout this northern region. Black spruce prevails over other tree species. In certain places, this type of tree is as dense as an oat field; it is not big, the average gives no more than 9 to 10 inches at the stump — but it is long, straight and without knots (O'Sullivan 1910: 229, my translation).

Comparing the density of the black spruce which composes the Abitibian boreal forest with an oat field, O'Sullivan describes the forest as a vast space in which the physical attributes of trees are appraised in term of their economic potential. This imaginary of the boreal forest is reproduced through other reports, as when O'Sullivan wrote about the forest located along the Mistowak river:

> There is an immense quantity of nice spruces all along the Mistowak [river], the ground is composed of rich calcareous clay and gently sloping. Leaving the *Lac aux Herbages*, we can see that the wood consists almost exclusively of small yellow spruce, but we slowly enter a region of nice spruces […]. Nice white spruce, two to two and a half feet in diameter, is not scarce in the smallest valley part from which this river receives its water (O'Sullivan 1909: 170, my translation).

[25] The classification of land was done according to Section 27 of the *Lands and Forest Acts* (Lower and Innis 1936: 82).
[26] Although the Abitibi region is well known for its copper and gold mines, I will not discuss the significance of those industries in this thesis.

These descriptions of Abitibi's boreal forest landscape, the use of geology and forestry, as well as the scientific field instrumentation of surveyors (such as sextant and theodolite), made it possible to transform the land into categories that solidified as they became visible on geographic maps. This geography of colonisation produced the boreal forest of Abitibi as a land that could be exploited for its timber and clayed soils. In the process, it overrode other, previous geographical imaginaries of the boreal forest: for example, those of the Algonquian groups that lived in this region. Although the names of lakes and rivers that appear on O'Sullivan's map are written in Algonquian, almost nothing is included about the speakers of this language in the township division of the region. The reason for this silence is well explained by Don W. Thompson (1969: i), which he describes the role of a Canadian surveyor as follows:

> "He thrives on patterns, his marks and monuments transform wilderness and by his carefully tagged and numbered squares, neat roads, correction lines and small cadastral lots he clothes in certainty, in geographical designs, man's [sic] ancient rights […]."

In the case of the boreal forest of Abitibi, these ancient rights do not correspond to the rights of the Algonquians. They are the rights to territorialize spaces (such as the boreal forest) within specific boundaries, which come to fix the multiplicity of imaginaries involved in its production.

Through the descriptions of the first surveyors, the Abitibian landscape was imagined as untamed, drawn as an open space ripe for colonisation (and civilisation) by new knowledges. The boreal forest of Abitibi has been re-territorialized from a land of fur trade between Algonquians and the Hudson Bay Company into a land divided into townships and ready to be claimed by Euro-Canadian settlers. This new categorisation and the fragmentation of Abitibi into townships displaced the Algonquians of the region and produced an imaginary of a boreal forest that was empty of humans and meanings.

The colonisation of the Abitibi boreal forest is a relatively recent event, only starting in the beginning of the 20th century (1900-1930); it was a colonisation movement greatly differentiated from the other Canadian provinces for two significant reasons. First, colonisation of the Abitibi region was structured and maintained by a coalition between the Catholic Church and the government of Québec (Lower and Innis 1936a, McDermott 1961, Gourd 1973, Asselin and Gourd 1995). Second, the colonisation movement was a project to ensure the protection of French Canadian faith, customs and language (Lower and Innis 1936: 84-93). This was mainly due to the massive exodus of

French Canadians to New England (New Hampshire, Maine and Massachusetts) and Ontario, seeking work in the textile industry. The social structures of French Canadian society were central to this migration movement, as the rural economy of parishes and the paternal inheritance of farms favour only one son per family, leaving others to find work outside the parish (Miner 1939).[27] Kinship and geographical limitations also contributed to the migration movement of French Canadians in Eastern United States. At the end of the 19th and beginning of the 20th century, rural families were big, numbering between 10-20 children, and they were generally not financially fortunate. Consequently, not all children had the opportunity to study and many were attracted by the salaries offered by New England's textile industry.[28] Another significant factor that contributed to the exodus of many French Canadians to the United States was the shortage of cultivable lands available along the St. Lawrence River, which constrained many seeking work in the province of Québec (Miner 1939, Dickinson and Young 2003).

Through the descriptions of O'Sullivan and other surveyors (du Tremblay 1910, 1912a, Lepage 1912b, 1913, Fafard 1916), the boreal forest has been portrayed as a space waiting to be colonised. The Catholic Church and the government of Québec saw the opportunities to convert this "empty" space into a space by which French Canadian migration could be stopped and in which French Canadian customs could be reproduced and maintained. The maintenance and reproduction of French Canadian populations and customs was made possible by clearing the boreal forest trees and converting the boreal forest into cereal fields, the product of French Canadian agriculturalists (see Caron 1912, 1919, 1923). Through the colonisation movement, the Abitibian boreal forest was imagined as an agricultural land modelled on French Canadian parishes located along the St. Lawrence River and in the south of the province. According to Miner (1939: 63), the parish was a "religious, civil, territorial, and economic unit, the parish [was] the first point of reference to anyone in it," and thus its reproduction in the Abitibi region was crucial for perpetrating French Canadian customs and lifestyles, as well as for territorializing the forest as something that would reflect this agrarian identity.

---

[27] The paternal farm inheritance system consisted of a land distribution system in which the father normally retired at about 60 years old, and gave the farm (lands, animals, buildings, tools) to one of his sons who was located in the middle of the sequence of children (e.g. the fifth son of ten children) (Miner 1939:79-90).

[28] Generally, only specific children were given the right to study — typically those dedicated to becoming priests (men) or nuns (women) (Miner 1939).

Through a study on the colonisation propaganda made by the Catholic Church and the former Ministries of Colonisation, Mines and Fisheries, Gourd (Gourd 1973, 1975) shows that French Canadian nationalism was greatly involved in the colonisation movement of the Abitibi region. This significant feature of Québec's colonisation project contrasts with that which took place in the northeast part of Ontario (New Ontario), at the western limit of the Abitibi region, in which the colonisation process received little support from the state and was mainly driven by settlers who dreamt of a new future (Lower and Innis 1936, McDermott 1961, Gourd 1973). This means that unlike the west coast of British Columbia (Braun 2000, 2002) or north-eastern Ontario (McDermott 1961, Gourd 1973, Asselin and Gourd 1995), the colonisation process of the Abitibi region of Québec (and other regions of such as Lac Saint-Jean (Lower and Innis 1936) or the Eastern Townships (Little 1989)) was politically structured and animated by a nationalistic ideal. As demonstrated in the O'Sullivan reports of 1909-1910, the rich soils of the Abitibi region have given rise to the production of a particular imaginary of the forest in which agriculture and French Canadian customs have drawn the geography of the region.

However, the difficulty of surviving only on agriculture in the Abitibian boreal forest attracts settlers to improve their prospects, and they began to clear and sell the forest on their lots and to work for the forest industry during the cold winters (Asselin and Gourd 1995)[29]. This means that what was conceived originally as an obstacle to the development of French Canadian identity (as portrayed through Catholic Church colonisation propaganda (Caron 1919, 1923)), gradually became a means for this way of life to survive in a northern region.[30] The characteristics of the boreal forest — such as the cold climate and the density of trees — have challenged the sustainability of an agricultural economy, and thus they contributed to production of an imaginary of the boreal forest as a space of tree extraction. This territorialization of the "empty" boreal forest into a part of the Abitibian identity has participated in the development of dominant discourses and practices involved in the construction of the boreal forest. The

[29] It is also worth mentioning that some settlers were working for the timber industry by pretending to settle as farmers on the land with the best quality trees, in order to sell them to forest industries (Little 1989: 9).

[30] It is interesting to note the contradictory images the priest Ivanoë Caron gave of the boreal forest of Abitibi. In a brochure published in 1919, Caron mentioned that the Abitibi forest was very rich, whereas 4 years later (1923: 5), he described the forest as "*pas très riche*" (not very rich) and stressed that the Abitibi region was not a place where settlers could make a good profit from the forest. This deliberate contradiction shows how the nationalist project of producing the Abitibi region as the "*château fort de notre nationalité*" (the stronghold of French Canadian nationality; 1919: 3) was at the centre of the colonisation project.

boundaries created by the surveyors of the Abitibi region have produced the boreal forest maps, opening this French Canadian colony to forest industry.

Through the territorialization process, Euro-Canadians constructed the Abitibi region by taking over the boreal forest space and figuring it as a space that needed to be transformed (Asselin and Gourd 1995). Traces of the colonisation movement can be found everywhere in Abitibi and they often consist of signs normally associated with the industrial history of the region, more particularly with the forest industry. By their presence, these signs of the colonisation period contribute to the territorialization of the boreal forest as a space of extraction. Such signs can be found along the roads that link the different parishes and towns of the region, such as those shown in Figures 4.1 to 4.3. They are reminders of the forest industry's relationship with the forest of Abitibi; they construct a connection between humans and non-humans that promote imaginaries in which the boreal forest is a space of extraction.

In Figures 4.1 and 4.2 (see next page), both characters are ready to transform the forest into either timber, demonstrated by an axe in 4.1, or into agricultural and colonial land, represented by a box on a raft in 4.2. In Figure 4.2, the trees of the forest are not threatened by axes; they are already transformed and tied into a raft and a pole, allowing the figure to show how first settlers travelled in the region and how they participated to the colonisation and development of Abitibi. It is also interesting to highlight the absence of women in these representations of settlers' life. As it is represented by Figures 4.1 and 4.2, this imaginary has made the forest a male-dominated environment.

Figure 4.1: Immortalising the past — a painted figure representing French Canadian lumberjack. Photo taken by the author along Road 393, between La Sarre and Rouyn-Noranda, Abitibi (14/07/05).

Figure 4.2: Sculpture representing the first Euro-Canadian settlers of Abitibi arriving on a raft. Photo taken by the author at Poularies, Abitibi (14/07/05).

These memorial sites perform the first surveyors' descriptions of Abitibi and they embody an imaginary of the forest through objects (axes) and contexts (colonisation) that refer to the region as a space to be transformed, either by clearing the land for timber or for colonising purposes. Other examples include a round saw blade, formerly

used in saw-mills, recycled as a traffic sign on which motorists can read directions to the villages of Saint-Laurent de Gallichan and Sainte-Germaine Boulé (Figure 4.3 next page). By their presence, these signs normalise industrial relationships with the boreal forest and they portray the forest as a space of extraction in which clearing activities take a leading role in knowing and experiencing the forest. These signs are not only guides for understanding the regional history, but they also play a role in stabilising the imaginaries and meanings of the boreal forest as a space of industrial extraction. These signs embody a connection between humans and the boreal forest that portrays the forest industry as something intrinsic to the landscape.

Figure 4.3: Immortalising the forest industry as part of the landscape. Photo taken by the author along Road 393, between Palmarolle and Duparquet, Abitibi (14/07/05).

As Doreen Massey (1994: 168) argued, all these sites and memorials "have been attempts to fix the meaning of places, to enclose and defend them: they construct singular, fixed, static identities for places and they interpret places as bounded enclosed spaces defined through counterposition against the Other who is outside." In the context of the boreal forest of Abitibi, this means that instead of considering the forest as an open space that can take multiple definitions, in which a multitude of places are in constant mutation and relation, these sites and memorials used to represent the Abitibian region contribute to the production of fixed imaginaries that abstract the complex

amalgam of representations inherent in the production of space (Massey 1994, 2004, 2005). Consequently, the production of static meanings and places excludes the possibility of defining the boreal forest by other forms of imaginaries.

In the next sections, I emphasise how the discourses of forestry sciences, ecology and geology have also contributed to imagining the boreal forest as space of extraction, by the production of the boundaries that create the geographical body of the forest. By investigating forestry science discourses, I will show how the fixity of the forest is constructed through a series of categories and names that naturalise its scientific and industrial meanings. This exploration will make it possible to understand how the boreal forest of Abitibi has become imagined as a site of expertise.

4.2 Bounding the imaginary with forestry science: mapping the boreal forest

As shown above, the terriotrialization of the boreal forest has been extremely efficient due to colonisation and to the processes of naming and categorising the land, which allow scientific discourses (forestry science, ecology and geology) to naturalise its categories and legitimate them. The social reproduction of categories has the effect of transforming constructed classifications into "reality", and from that point on, this "reality" is perceived as virtually immutable (Latour 1987, 1999a) or as an essential construction (Penrose 2003). In a classic ecology manual that is normally used as undergraduate biology textbook, Colinvaux (1993: 373-375) gives an example of how scientific discourse has classified the boreal forests. These latter are defined as:

> "forests [that] exist essentially where winters are *very cold*, like those of the tundra, but where summers are longer, perhaps with a short period of warm continental weather. […] Most of the *trees are evergreen and needle leaved*, this being a design that apparently is suited to achieving useful working temperatures in temporarily productive periods at a minimum cost of maintenance. […] The evergreen gymnosperms that have prevailing adaptations to this biome type are flammable, with the result that the boreal forest is subject to *periodic fires*. A *burn-regeneration cycle* in the forest is an important characteristic. […] The preponderance of insect herbivores in this seasonal environment causes *abundant insects* to be predictable in early spring, a property of the boreal forest that is used by many migratory song birds as a source for the rearing of young. The large mammalian herbivores includes several species of *deer* and *bears*, all of which are make use of the regenerating forest in burned areas for browse or as a source of fruits. […] Carnivores are essentially similar to, or the same as, the *cold-adapted carnivores* of tundra […]" (emphasis added).

In his definition, Colinvaux emphasises two characteristics of the boreal forest: climate and trees. Although a section concerns the types of insects and animals normally

encountered in these forests, climate seems to regulate the vegetation and this, in turn, attracts insects, birds and mammals (both herbivores and carnivores). The animals and vegetation as well as the climate are encapsulated into a definition of forest that is defined as boreal. In order to support his definition of the boreal forest, the author refers to physical principles that characterise the boreal forest as a biome by the use of scientific concepts such as the trees' "cost of maintenance" as well as a "burn-regeneration cycle". This language naturalises the categories used to describe the boreal forest as an ecosystem.

This is also exemplified by other definitions of the boreal forest, especially those coming from more technical literature, because it includes more detailed analysis and subdivision of the forest. According to Payette (1992: 144-145), the North American boreal forest is described as:

> "[…]contracted south of the Hudson Bay and James Bay, and in Alaska. At the continent scale, the boreal forest is a *floristically poor biome* (Takhtajan 1986) *with only nine tree species* dominated regionally or throughout the range, in coexistence with a subdued under-canopy flora in dense stands and ubiquitous cryptogamic flora in open stands. Black spuce (*Picea mariana* (Mill.). BSP) and white spruce (*Picea glauca* (Moench) Voss.) are transcontinental in distribution; balsam fir (*Abies balsamea* L.) and tamarack (*Larix laricina* (DuRoil) K. Kock) have a predominantly central distribution. Lodgepole pine (*Pinus contorta* L.) is a Cordillean species and jack pine (*Pinus banksiana* Lamb.) a continental species found more or less distant from maritime environments, except in New Brunswick and Nova Scotia. The other dominant species are deciduous trees, i.e., white birch (Betula papyrifera Marsh.), aspen (*Populus tremuloides* Michx.) and balsam poplar (*Populus balsamifera* L.) which are distributed throughout the biome […]. The *depauparate boreal flora* appears to be the result of sustained, severe climatic controls that occurred during the Quaternary. The bulk of the boreal flora is made up of robust, generalist species able to withstand recurrent, dramatic changes in the environment" (emphasis added).

This definition gives a geographical body to the boreal forest, defining it as a biome and making it a biophysical entity.[31] The limited number of tree species that compose the boreal forest is only nine and the known plants number a mere 850 species. Through Payette's description (1992: 145), the boreal forest entity is reinforced by Latin categorisations that characterise trees and plants and structure the forest according to a specific naming process that gives an identity to every tree and plant that composes the boreal forest. In fact, this quotation from Payette also indicates that although the boreal forest is represented as a uniform carpet of coniferous trees throughout the circumpolar space (see Figure 4.4), several variations in its composition occur and produce a

[31] According to Allaby (1998: 52), a biome is "[a] biological subdivision that reflects the ecological and physiognomic character of the vegetation. Biomes are the largest geographical biotic communities that it is convenient to recognize. They broadly correspond with climatic regions […]".

fragmented forest, distorting the uniform boundaries used to frame its geographical body.

The internal variations within the boreal forest are associated with biophysical processes such as fire cycles and insect epidemics (see Payette 1992, Haack and Byler 1993, Bergeron *et al.* 2001). Accordingly, three plant zones emerge from these variations, all of which have well-defined boundaries: the closed-crown forest zone, the lichen woodland zone and the forest-tundra zone (Payette 1992). These zones (and the boundaries that make them "real" entities) are characterised by the different tree species that occupy specific thermal environments. The closed-crown forest zone is associated "with black spruce-balsam fir stands in which the presence of yellow birch (*Betula alleghaniensis*), white birch and white spruce as co-dominants near the mixed forest transition to the south and feathermoss black spruce forest to the north" (Payette 1992: 148). The lichen woodland zone is characterised by a tree cover of 25-40% in its southern distribution, whereas 5-25% of trees are associated with its northern distribution. The forest-tundra zone consists of "patchy lichen-spruce woodlands and lichen-heath-dwarf birch (*Betula glandulosa* Michx.) stands", representing less than 25% of the total vegetation (Payette 1992: 148).

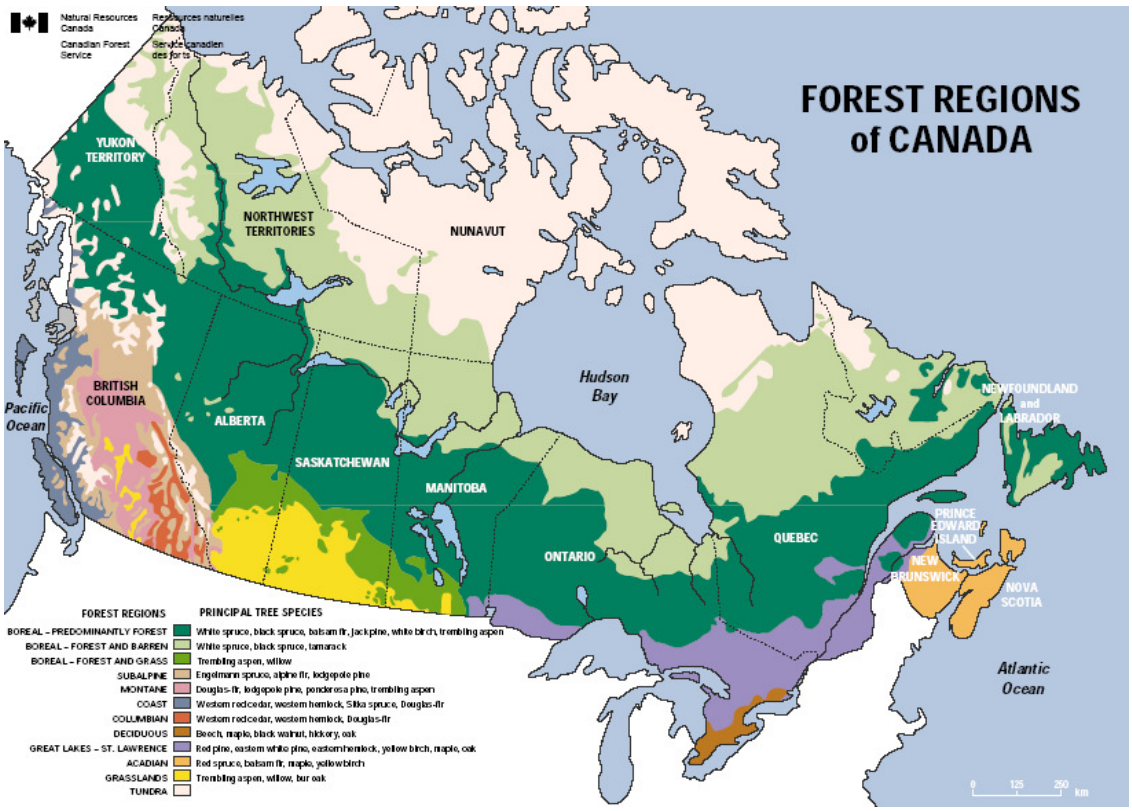

Figure 4.4:Forest regions of Canada, showing the boreal forest in dark green.

Map taken from: http://www.cfl.scf.rncan.gc.ca/ecosys/images/classif/forest-reg2_e.pdf

Forest transition zones and subzones (see Figure 4.5) are mainly based on the measurement of floristic, climatic and physiognomic-structural criteria (Sirois 1992: 197). According to Payette (1983), the transition between boreal forest and taiga and between taiga and shrub tundra is represented by four forest limits: 1 - the continuous limit, 2 - the physiognomic limit, 3 - the forest limit and 4 - the tree line (see Figure 4.5). The continuous forest limit is delimited by the "isopleth where climate allows the sexual regeneration of trees on an annual basis" (Sirois 1992: 197); the physiognomic forest limit is associated with mesic areas in which the trees are widespread "regardless their sexual reproductive capacity" (Sirois 1992: 197). [32, 33] The forest limit corresponds to the forest stands found in scattered areas where climate and soils enable their presence and finally, the tree line corresponds to the "northern limit where forest species with an arborescent habit, and reaching a minimum height of 5 m, are found" (Payette 1983, quoted in Sirois 1992: 198).

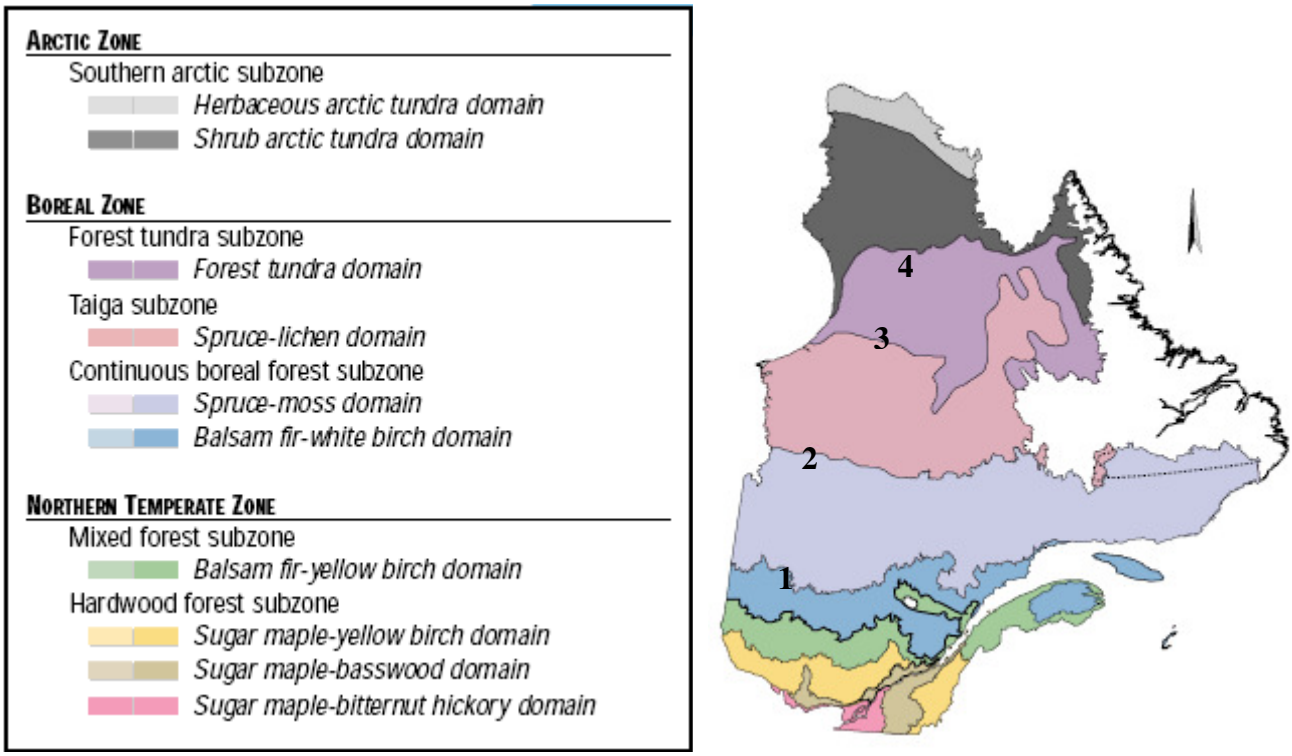

Figure 4.5: Québec's vegetation zones, subzones and bioclimatic domains[34]

Map taken from http://www.mrnfp.gouv.qc.ca/english/publications/forest/publications/zone-a.pdf

[32] An isopleth consists of a line that connects two or more points having the same value. In this case, the line has been drawn according to sexual regeneration according to forest fires and precipitation.
[33] Mesic areas correspond to "areas that are neither extremely wet nor extremely dry" (Allaby 1998: 258)
[34] The subzones illustrated in Figure 4.5 correspond to the scheme established earlier by Payette (1983). Therefore the continuous boreal forest subzone in 4.4 is equivalent to the closed-crown forest, the lichen woodland is the equivalent to the taiga subzone and the forest tundra stays unchanged.

Among the different characteristics that delimit vegetation zones and subzones, scientific discourse allows ecologists and foresters to argue that the "segment[s] of the boreal forest constitute a well-delineated biome both geographically and ecologically" (Payette 1992: 144). These vegetation segments are not as fixed as they are normally represented on maps. Instead, they can expand or retract according to climatic changes, as has been demonstrated in several studies investigating the boreal forest tree line from the Little Ice Age until now (Lavoie and Payette 1996, MacDonald *et al.* 1998, Gamache and Payette 2005). This flexibility of boundaries suggests that the categorisation used by scientists in the production of zones, subzones, tree lines and consequently biomes can vary through space-time. It also shows the difficulty of representing the great variation occurring between sampling sites within what comes to be described as a uniform entity. This also exhibits the difficulties in representing geographically the predominant heterogeneity of species entangled between subzone boundaries, illustrated by the production of subzones (see Figure 4.5).[35] The junctions between subzones are far from definite: on the contrary, they represent a mixture of species associated with two or three different subzones, and it is also possible that subzones are not clearly defined according to the variance of parameters used by ecologists.

By comparing Figures 4.4 and 4.5 (see Figure 4.6), we see that the boreal forest of Québec is not represented consistently as a uniform body of vegetation. The main difference between these two maps concerns the categories used to draw the boreal forest boundary. In Map B, for instance, the classification is restricted to two groups of vegetation: dark green represents the zones densely composed by trees, whereas the light green zone encompasses mainly a mixture of forest and barren areas. In Map A, the boreal forest boundary encompasses a large zone subdivided by four subzones, or segments. This fragmentation of the boreal forest body shows that despite the meticulous calculations and measurements which allow foresters and ecologists to define the extent of the forest and to draw its boundaries, the boreal forest is represented as two different geographical bodies. These different geographical representations illustrate the fact that the boreal forest is an imagined object, fabricated from different understandings of data and biophysical mechanisms.

[35] Subzones have distinct vegetation patterns reflecting differences in precipitation and forest fires. It is, however, difficult to predict forest fires on a year-to-year basis (MRN 2003: 2).

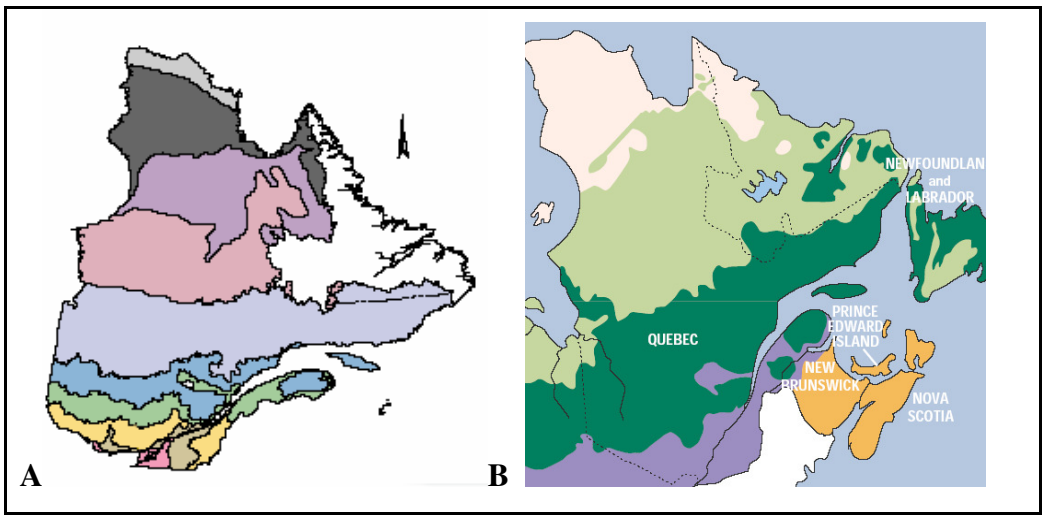

Figure 4.6: Comparison between Figures 4.4 and 4.5, which consist of the vegetation zones of Québec.

Map A taken from http://www.mrnfp.gouv.qc.ca/english/publications/forest/publications/zone-a.pdf and Map B from http://www.cfl.scf.rncan.gc.ca/ecosys/images/classif/forest-reg2_e.pdf

The immobility of the elements that constitute the boreal forest — such as trees, plants, soils and climate (this latter can vary, but it is mainly the same on average) — facilitate its appropriation by forestry science and ecology, and often give the impression that this immobile, scientific object is a given: produced by biophysical phenomena and not by human reasoning and classification systems. However, as Sirois (1992) points out, the categories that legitimate the scientific attributes that constitute the boreal forest are not universally accepted among researchers. This is especially true of the classifications that have drawn isopleths separating the boreal forest subzones, such as those that differentiate continuous boreal forest from taiga, and taiga from forest-tundra. This shows that the categories used by specialists are constructed by observations and naming processes that do not reflect a shared and uncontested understanding of biophysical phenomena. These different understandings of biophysical phenomena also show that the unity of scientific discourse is contested by different constructions and understandings, something which makes it clear that the boreal forest is not a “natural” given, but rather a scientific product.

As all of this suggests, forestry science, ecology and geology have named the biophysical elements that constitute the forest and produce the boundaries that delimit the geography of the boreal biome. This naming process has established the basis of interaction with the boreal forest, which allows humans to imagine the non-humans that compose this biophysical entity as a reservoir of resources to be regulated and transformed according to capitalist aims (Foucault 1966, Demeritt 2001c). As I will show in the next section, this imaginary of the forest (or geographic body) allows

foresters to predict the future of the forest — what will grow between the boundaries defined as boreal and what should and should not be harvested. By using categories and Latin names as parameters, foresters and ecologists maintain the imaginary of the forest as something that can be controlled and that needs to be regulated. It is through production of this scientific terminology and creation of the boreal forest boundaries that the forest becomes known, experienced and imagined as a site of expertise, which only those having the necessary knowledges can articulate and understand.

4.3 From geography to practice: maintaining the scientific boreal forest boundaries

The taxonomic processes and categories utilised by biologists and foresters to produce the boreal forest are applied through mathematical equations and simulation models, which allow the scientific imaginary (and geography) of the boreal forest to be projected through time. These projections and their anticipated outcomes are made possible through reforestation practices, measurements of forest density, thinning and harvesting, as well as through the production of certification practices.

Forestry science practices allow the boreal forest of Québec to be concretised as a tangible concept and through mathematical calculations and computer simulations they allow the yield determination of a forest to be planned over a period of 150 years.[36] Thus, the boreal forest body becomes fragmented into a mosaic of forest classification territories in which the boundaries are determined by age and species of trees. The resulting territories consist of forest management units (see Figure 4.7), allowing foresters to think about which forestry practices are the most appropriate to sustain Québec's forest regime and regional economic development. Such thinking is based mainly on calculations and predictions that simulate the boreal forest life cycle.

Forest inventory is the first step in the production of boreal forest boundaries. From aerial photographs, foresters delimit homogeneous vegetation areas that are codified according to tree type, height, age, the harvesting techniques that have previously influenced the vegetation composition, the type of slope encountered in the forest and

[36] Yield determination consists of "the calculation, by volume regulation or, less directly by area regulation of the amount of timber that may be harvested annually or periodically from specific area over a stated period in accordance with the management objectives" (Côté 2003: 649).

the edaphic conditions.[37] All of these classifications are summarised into one code that describes every particular stand of forest, so that later it can be introduced into a computer matrix which will allow the government to draw forest management units (Figure 4.7: next page).

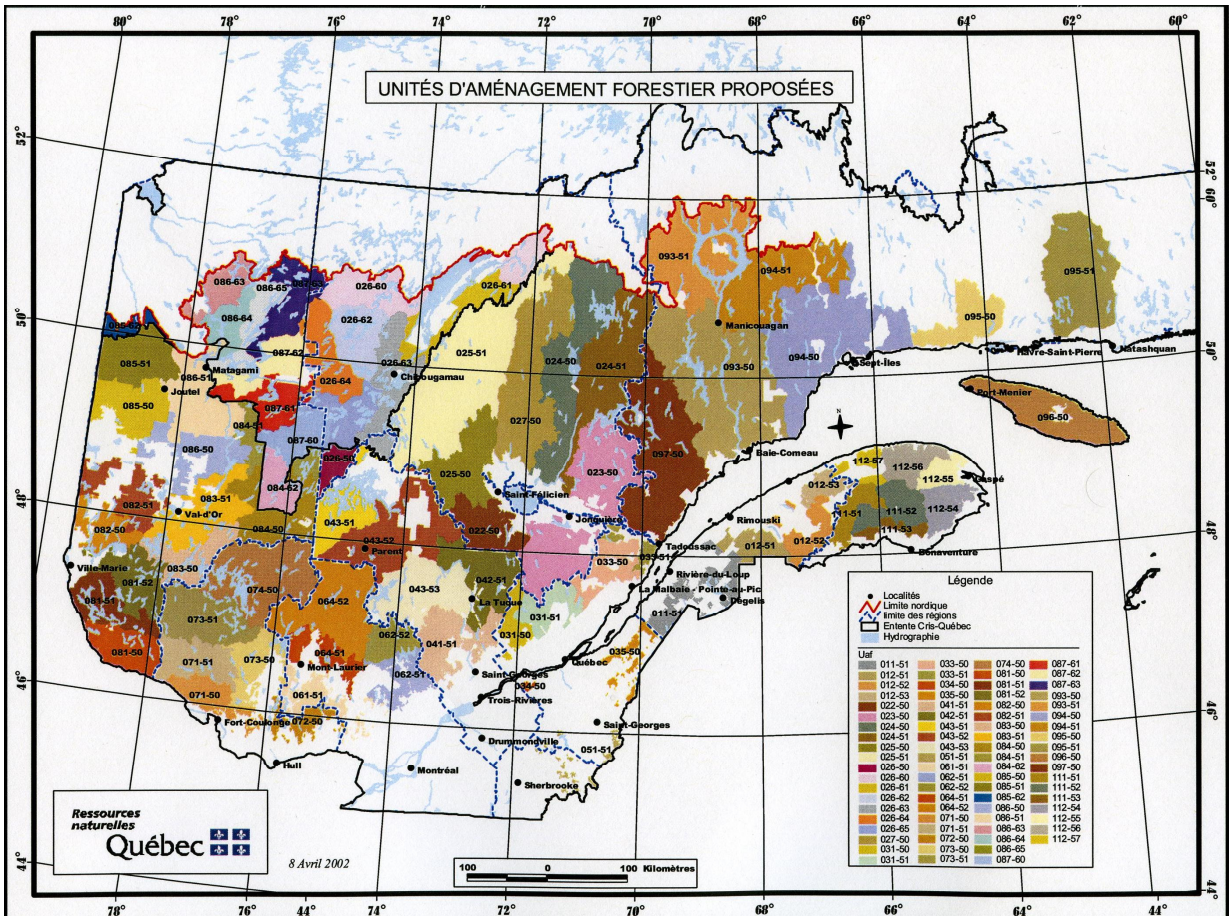

Figure 4.7: Geographic map of Québec showing the coloured forest management units.

Map taken from http://www.mrnf.gouv.qc.ca/publications/forets/consultation/generale.pdf

The dimensions and frequencies of sample plots are dependent on the area covered by stratums and on the biophysical measurements of trees (height, diameter, age) and soils (slope, altitude, drainage and mineral composition) (see Figure 4.8). The aerial photograph interpretation is tested on the field by sampling parcels of the stratum through sample plots. Samples are taken on-site and analysed later in a laboratory to support the photographs. Sample plots can be either temporary or permanent: temporary plots are investigated only once, whereas permanent plots are examined every time an inventory is made (every 10 years since 1970) in order to understand the growth rate of a particular type of forest. This allows the creation of a data bank used to produce an

[37] Edaphic conditions refer to production of, or influence by, the soil.

accurate statistical portrait of the forest through time (MRNFP 2002, Jobindon *et al.* 2004). In both cases, foresters investigate which tree species dominate the landscape, what other commercial types of tree are present in the plots and if the forest has been disturbed by biophysical phenomena, looking also for the presence of old-growth forests.[38] Through these sampling methods, scientific categories used in ecology and forestry sciences play a fundamental role in drawing the boreal forest boundaries and orienting the ways in which the forest is imagined and experienced. At the same time, these categories produce complex cartographic codifications that become an exclusive discourse only comprehensible to foresters.

[38] Although forest inventory considers perturbations, things like forest fires, blowdowns and defoliation episodes caused by insects other than budworm (*Choristoneura fimuferana* Clem.) are not taken into account in the simulation model used by foresters.

Figure 4.8: Forest inventory principles, sample plots and sampling methods. Source: Ministry of Natural Resources (2002) *Combien y a-t-il d'arbres dans nos forêts?* Diffusion code: 2002-3038, p. 3.

As all this suggests, it is important to see forest inventory as a process through which scientific concepts become involved in the production of an imagined geography. It is through this imagined geography that the heterogeneity of the boreal forest becomes restricted to specific interests led by management strategies, and it is by modelling this geography that forest maintenance becomes the exclusive site of experts.

4.3.1 *SYLVA II* and the birth of the cybernetic boreal forest

Simulating forest growth through mathematical models is very complex; because models are finite pictures of reality, it demands a great capacity to theorise and rationalise the unlimited reproducibility of interactions found within forest environments. Employing the parameters used to model the biophysical attributes and phenomena that characterise the boreal forest as a specific biome, computer models such as *SYLVA II* draw on previous categories defining the boreal forest boundaries and then reproduce the constructed rationality and veracity attached to this classification scheme.

In Québec, yield determination is simulated through the *SYLVA II* model, which is the product of a very long chain of processes. These processes begin with forest inventory and the stratification of homogeneous forest stands based on biophysical and physiognomic classification schemes as described above (i.e. soils, trees and plants, tree diameter and height) (Jobindon *et al*. 2004: 6). Through this stratification process, certain species will be prioritised over others, according to forest industry criteria (i.e. density and quality of timber). Then sylviculture treatments are conducted in order to reproduce the dominant forest cover and to add specific species that are privileged by forest industries. All these strategies are oriented towards specific management objectives that have been influenced by previous analyses of the socio-economic context where the forest activities are planned: by the type of forest that has been investigated through the forest inventory and by the stake in maintaining biodiversity despite forest operations (MRNFP 2003a).

Such management objectives allow harvesting and reforestation practices to be oriented towards prioritised production groups. These priority groups correspond to the future tree species that have been selected to become the next generation of boreal forest (MRNFP 2003). Priority production groups are categorised according to new terminologies such as *SEPM*: *Sapin*, É*pinettes*, P*in gris*, M*élèze* (balsam fir, black and white spruces, jack pine and tamarack). *SYLVA II* uses both production groups and ecological types to model the kind of boreal forests that will grow in the future in the province of Québec.[39] Through this terminology and the associated categorisation processes, the boreal forest is reduced to production values attached to the specific groups of trees that are used as model parameters. This, in turn, facilitates the incorporation of the boreal forest into simulation models supporting the conceptualisation of forestry operations (harvest and reforestation) almost entirely in terms of optimal production. Through these terms, the forest is defined as a space of extraction — an industrial space.

The boreal forest's heterogeneity is framed into categories, and these categories are materialised through tables that encompass ecological types, priority groups of production, and sylviculture scenarios that allow predictions about how to harvest and reforest the region. In turn, these categories play the role of model parameters; they are calculated and represented through curves describing the amount of boreal forest that can be harvested and, more importantly, the amount that can be optimally produced. All these processes combine to produce a cybernetic entity named the boreal forest.

In short, the role of *SYLVA II* consists mainly of modelling the state of future forest stratums in order to predict the volume of mature timber that will be available on the market (MRNFP 2003). This strategy uses the curve model, making it possible to simulate the growth of market volume per hectare based on the age and species of tree that compose the forest, on the quality of the vegetation productivity and on the topographic position, as well as the stocking class (Jobindon *et al.* 2004: 13; see Figure

[39] Ecological types consist of classification units that are associated with a combination of biophysical (soils, climate) and vegetation (composition, dynamism and structure) features that differ from each other in their "ability to produce vegetation and respond to management" (Côté 2003: 423).

4.9).[40] Therefore, the available market volume is estimated by multiplying the number of trees that have reach maturity per hectare, known by the yield volume table[41] (Jobindon *et al.* 2004:6). This calculation is repeated every five years and it provides the yield determination for specific stratums over a 150-year time frame (Jobindon *et al.* 2004:6).

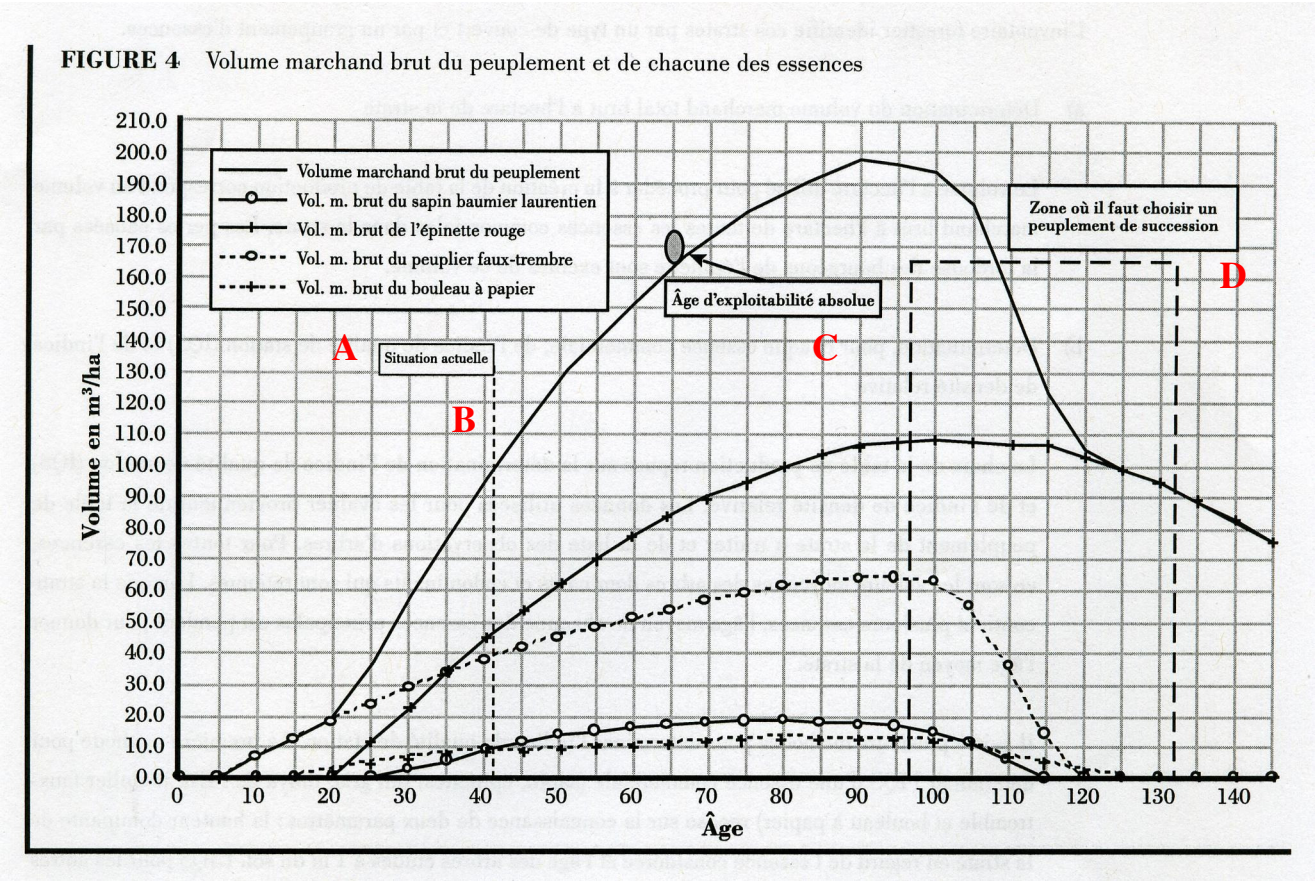

Figure 4.9: *SYLVA II* curve model showing the merchantable volume of m^3/hacres by the age of stands. A: a forest stand's raw market volume, including the volume curves for balsam fir, tamarack, trembling aspen and paper birch. B: Present day forest state. C: Silvicultural rotation (the rotation through which a species maintains satisfactory growth and reproduction on a given site (Côté 2003: 588). D: Stand regeneration decision zone. Taken from *Manuel d'Aménagement Forestier* 4e edition, MRNFP, 2003: Chapter 2, p. 47.

The use of computerised models such as *SYLVA II* has transformed the boreal forest into a mathematical equation that purports to predict the amount of forest available for regional economic development. With *SYLVA II*, the boreal forest appears to foresters as an electronic device through which the materiality of trees, plants, animals and

[40] Stocking class is the "qualitative expression of the adequacy of tree cover on an area in terms of crown closure, number of trees, basal area or volume, in relation with a pre-estsablished norm" (Côté 2003: 607).
[41] Yield tables consist of tables and graphs that illustrate volumes per hectare of stands at a specific age (Côté 2003: 649).

biophysical features (soils, rocks, climate, sunlight, etc.) normally encountered in the field are translated into priority groups, tables, grids, and curves, all aimed towards optimising productivity. Crucially, this cybernetic boreal forest does not correspond to the entity through which one can walk or in which one can smell the soil, the plants, the trees, and so on. Instead, the cybernetic boreal forest consists primarily of a series of lines appearing on foresters' computer screens. As David Demeritt (2001: 455) has clearly demonstrated in describing the impact of statistical representation of the forest, "[s]ubjecting the forest to standardizing practices of quantification transform[s] heterogeneous forest stands into apparently calculable quantity available to new forms of precise disciplinary control and governmental power".

Under these circumstances, "black spruce materiality" no longer refers to the tree, but rather to the lines and curves that show the amount of forest available for transformation. This cybernetic representation of the forest is constantly reinforced through the production of industrial territories taking place within forest management units (see Figure 4.7). Among these industrial territories, the Supply and Management Contracts, or CAAF,[42] represent one of the most significant forms of control over the ways in which the forest is experienced and known. These supply and management contracts "confer […] to private parties the right to get annual licences to harvest the volume of wood required to meet the needs of a mill in excess of what can be obtained from woodlot owners, residual sources, and recycling facilities. In return, the contract-holder undertakes to attain a level of wood yield set by government officials" (Bouthillier 2001: 260).

Drawing on Demeritt's (2001) interpretation of the statistical mode of representing the U.S. forest, I would like to suggest that the cybernetic boreal forest allows foresters to engage with the forest through specific types of imaginaries that result from industrial relationships with it. Thus, the categories and the complex cartographic codifications used to produce the cybernetic boreal forest become the basis of forestry's territoriality. By "territoriality" I rely on Robert Sack's (1986: 19) definition which sees it as "the attempt by an individual or group to affect, influence, or control people, [non-humans,] phenomena and relationships by delimiting and asserting control over a geographic area". Foresters use the cybernetic boreal forest to control the ways in which the forest

[42] CAAF is the contraction of the French expression *Contrat d'Approvisionnement et d'Aménagement Forestier* which means Supply and Management Contracts.

is imagined and experienced. Furthermore, this is not limited to the production of graphs, tables and grids, it is also applied through forestry practices such as harvesting and reforesting. The next sections will show how this spatial territoriality is organised and maintained through industrial forestry practices.

4.3.2 From cybernetic forest to logs: bringing the industrial imaginary to life

As we have seen in previous sections, the geography of Québec's boreal forest has been produced by entangled sets of institutionalised scientific knowledges. The boreal forest of Abitibi becomes a space that can be mapped according to categories and harvesting and reforestation scenarios that have been predicted and modelled by *SYLVA II*.

When harvesting and reforestation maps are transposed into electronic format — as occurs through the widely used Geographical Information Science (GIS) — the cybernetic boreal forest becomes concrete and foresters can plan their operations by relying on this representation of the forest. The first operation involves delimiting the forest area that will be harvested. The most conventional method used by foresters to delimit harvesting sites consists of "flagging". This practice allows foresters to materialise the boundaries of the industrial ways to experience by through a colourful series of flags attached to tree branches. These flags allow machine operators to orient themselves within the forest, telling them where to go and what has to be harvested. This means that through yield determination (produced by *SYLVA II* simulations and calculations), the boreal forest boundary is constituted by the coloured flags rather than by the trees that compose the boreal forest. Because "flagging" harvesting areas is a long process that requires skilled employees who are willing to walk in dense black spruce forests and who are able to cope with black flies and mosquitoes, there is an interest in converting this technique to a more mechanised (and so faster and less expensive) process. One solution was to introduce foresters to the use of navigation systems in their vehicles, offering direct access to a GIS representation of the forest.

Once the boreal forest has been defined through *SYLVA II* curve models, it is converted into GIS maps, on which all the biophysical features judged important for foresters (such as tree stands to be harvested, streams, slopes and rivers) can be seen simultaneously. These maps are downloaded onto the navigational systems of forestry machinery (i.e. feller-limber-bucker machines) and used by foresters in harvesting

operations.[43] The boreal forest is not only the curves on *SYLVA II*, but also what machine operators can see on their navigational system.

Instead of following the colourful flags as harvesting boundaries, machine operators follow GIS-designed ecoforestry maps on the navigation system in their vehicles. This suggests that the use of navigational systems in forestry makes it possible to maintain the boundary of the cybernetic boreal forest as a biophysical element that can be seen and touched. The materiality of the boreal forest seems to reside in cybernetic maps appearing on the screen, rather than in the shape of the trees that are perceptible from the windows of forestry machinery. As this suggests, the boreal forest does not consist of an amalgam of trees, plants, soil types and animals, but rather of a series of categories and boundaries that are computerised, simulated and transformed into the shapes of curve models, producing a cybernetic entity named "the boreal forest". This means that in the process of moving from the forest industry engineer's office through the reforestation chief manager and the feller-limber-bucker machines, the cybernetic boreal forest has been transferred from one screen to another, and in the process it becomes both mobile and fixed. This is what Latour has named the "immutable mobile" (Latour 1993, 1999a). This quality reinforces the constructed image of the boreal forest as a tangible entity as well as solidifying its fixity; it presents the forest as something that can be moved through different screens without altering its constitution, while by ignoring the multiplicity of interactions within it, the meaning of this space has also been imagined as fixed.

By seeing and experiencing the forest through their electronic navigation systems, machine operators harvest trees located in the cybernetic world, which has the effect of making trivial more drastic forest practices and harvesting techniques such as *Coupe avec Protection de la Regénération des Sols* (CPRS).[44] Although this harvesting technique does not leave many trees on the ground once harvesting machines (feller-limber-buckers) have collected the trees, foresters consider CPRS to be a component of the boreal forest. Because of *SYLVA II* calculations, foresters believe that they know exactly how the boreal forest will grow where it has been harvested in 20 to 80 years.

[43] Feller-limber-bucker machines are used to fell, delimb, top and slash trees and to stack the resulting softwood on the ground (Côté 2003: 437).

[44] CPRS are a kind of clear cutting in which machines are restricted to certain working corridors in order to protect natural regeneration on the ground. This is the main harvesting technique used within the boreal forest due to the even-aged structure of the forest. A basic translation of CPRS would be "Careful Logging Around Regeneration" (Côté 2003: 376).

Through this curve model and its representation as GIS maps, the forest is portrayed and imagined as something that always follows the same regeneration pattern: a fixed, continuous growing entity. This certainty suggests that although no mature trees are apparent on the surface of harvesting sites, the boreal forest is still imagined by foresters as present, appearing through the shape of regeneration models and on their navigation systems. For instance, while I was spending a day with a forester in his quotidian tasks, I was told that, according to their models and predictions, everything will be back in 25 years:

> "[…] you are doing some work and then, you turn around and there is a tree that has grown behind your back, the results are very impressive if you care about what you do" (SM, 12/08/05, my translation).

This forest user illustrates that although the boreal forest has been harvested and its principal physical features (trees) have disappeared, the industrial imaginaries of the forest produced through *SYLVA II* and GIS ecoforestry maps are strong enough to replace the current situation (CPRS) with envisioned reforestation. By fixing the forest through reforestation scenarios, foresters "know" that it will be there after the harvesting phase; they can see it on their maps and graphs.

By fixing the meaning of the forest through parameters, classifications and boundaries, industrial imaginaries of the forest (articulated through its cybernetic form) make it possible to see the boreal forest — predicted through models and digital maps — as an inevitable entity. More importantly, this shows that foresters and machine operators do not refer to trees and other biophysical elements when they speak about the boreal forest. Instead, they refer to the forest representations of *SYLVA II* modelling. The forest is represented through simulation models and made even more concrete through digital GIS maps perceptible on individual navigation systems. In this way, one vision of the forest is promoted while others (as I will show in the following chapters) are sidelined or erased entirely. The monopoly of the industrial ways of knowing and experiencing the forest is also noticeable when one pays attention to how industrial forestry activities are organised during harvesting and reforesting. The next two sections will show how reforestation activities become a way to dominate space with the industrial imaginaries and boundaries described so far.

4.4 Tree seedlings, tree planting and the colonisation of the boreal space

4.4.1 Towards genetically improved trees

Under the supply and management contracts (CAAF), the government of Québec is obliged to provide young stock plants to forest industries. These trees are grown in greenhouse conditions, making it possible for foresters and forest industries to control the quality of trees that will reforest previously harvested sites. This technique is not restricted to Québec; it is applied throughout North America and has been subject to detailed analysis in geography through the work of Prudham (2003, 2005) and Cohen (1999, 2004). In Québec, young stock plants are the products of pre-selected seeds collected from orchards strictly designed for this purpose. Two types of seed orchards exist: first and second generation (MRNFP 2006a, b). The former consists of a plantation in which only one selection of seeds has been done. Moreover, the trees selected as genitors are free from disease and have specific physiological attributes that are highly valued by the forest industries, such as straightness, good height and large diameter. These stock trees are the elements that compose the forest as an industrial imaginary, they are "the masses of trees, planted by those whose discursive reassurances […] lead us into a world, like Eden, in which [… n]ature holds no real mystery, no daunting complexity […]" (Cohen 1999: 438).

First generation seed orchards produce genetically selected seeds that result in larger and taller trees (3-8% taller for jack pine, black spruce and tamarack) which grow faster than non-selected trees (MRNFP 2006a). Second generation seed orchards consist of another step in the process of tree selection: this type of orchard consists of the best trees selected from first generation seed orchards. This means that the seeds produced by this type of orchard represent the highest standard of trees, capable of increasing market volume production. Forest geneticists expect these trees to gain 12% more volume than those growing without human interference (MRNFP 2006b). In effect, through the efforts of understanding tree genomes, foresters and ecologists have created specific territories in which the selected trees will produce the genetic patrimony for the next tree generations of boreal forest.

What forest geneticists call genetic improvement is produced through collaboration between provincial and federal governments and universities. In Québec, improved

seeds come through a productive synergy between the provincial government and the department of forestry of Université Laval (Rainville *et al.* 2003). The latter institution is greatly involved in the production of improved seedlings through the elaboration of "models [that] guide the transfer of seed sources as a function of risk calculation, or clonal techniques such as root cuttings and somatic embryogenesis" (Rainville *et al.* 2003).[45] The selection of physiognomic characteristics is articulated through a series of social relations of production residing within and without laboratories, generally considered to be unproblematic. Through forestry science discourse and its concretisation into field practices, physiognomic characteristics are conceived as pre-existing the production of knowledge; as palpable realms that can be seen in isolation through a microscope and then cloned into test tubes. Once the genetically improved seeds are selected and reproduced, another step needs to be taken before reforesting: this is the production of tree seedlings.

4.4.2 Greenhouses and the production of boreal forest trees

The production of trees, more precisely of jack pines and black spruce the most popular species for reforestation of the boreal forest (mostly because of their short growing period), is handled by Québec's Ministry of Natural Resources and Fauna and by private greenhouses.[46] In both cases, the genetically selected seeds are cultivated according to the Ministry's norms. In other words, the production process is highly regulated. In fact, these greenhouses are laboratories; they are spaces in which the concretisation of forestry science knowledge is possible and in which foresters can produce the boreal forest according to economic imperatives (Latour and Woolgar 1986). Although the government of Québec emphasises the fact that no industrial partners are involved in the seed improvement research program or the production of young stock plants, cuttings and plug seedlings, they are clear when they write that:

> "Québec is now able to increase its forest production by reforesting with improved material, thanks to the development of better-performing varieties, and acquiring scientific knowledge and expertise in many disciplines applicable at an operational scale. The diversity of improved material now available also allows us to maximize returns on fertile sites, mainly in the southern part of the province, or to profit from the immense areas available in the boreal forest. […] Managing high-yield plantations, combined with intensive sylviculture and the use of genetically improved material, remains a sure way to increase forest production" (Rainville *et al*. 2003: 7).

[45] Somatic embryogenesis is a "process by which clones are produced from cell growth of seed embryos" (Côté 2003: 597).
[46] Plug seedling production is mainly done in private greenhouses selected by the Ministry of Natural Resources (Tousignant *et al.* 1996).

This quotation demonstrates how productivity is an intrinsic component of the production of genetically improved seeds, young stock plants and plug seedlings. Through regulating the operations of production within both governmental and private greenhouses, cuttings and plug seedlings are naturalised by the legitimacy of forestry science that organises and determines each discussion, decision and action of their production.

The nomination process that occurs through the production of young stock trees, cuttings and plug seedlings entraps these laboratory creations within scientific definitions and suggests a materiality that is strongly attached to capital accumulation. This is exemplified through the names that greenhouse and tree planting employees use when they refer to tree seedlings. Through discussions with greenhouse workers and tree planters, I noticed that plug seedlings are not described as tree seedlings or even trees, but rather as “67-50”, which refers to the container in which they are produced — the space in which each tree become an instrument of industrial power. This shows that although plug seedlings, young stock plants and cuttings are conceived as trees, the industrial ways of knowing and engaging with the forest overtake their definition as trees; they are named according to their production process and their status as trees is greatly diminished. Thus the boreal forest is no longer associated with trees, but rather with the processes that produce and reforest genetically selected specimens suitable for construction timber.

These processes have allowed foresters to re-imagine the forest through a new geographical form that is called the “improved forest map” (Figure 4.10). The Ministry of Natural Resources and Fauna has designed this map, representing the genetically improved zones (see Figure 4.10) which refer to specific pedo-climatic conditions that I have demonstrated in Figure 4.5 These “new” territories make it possible for foresters and forest industries to reinforce their territoriality by producing the boreal forest according to their needs. In turn, this makes it possible to conserve the integrity of ecological zones (Figure 4.5) as well as provide sufficient forest for future harvesting operations and maintain the industrial imaginaries of the boreal forest.

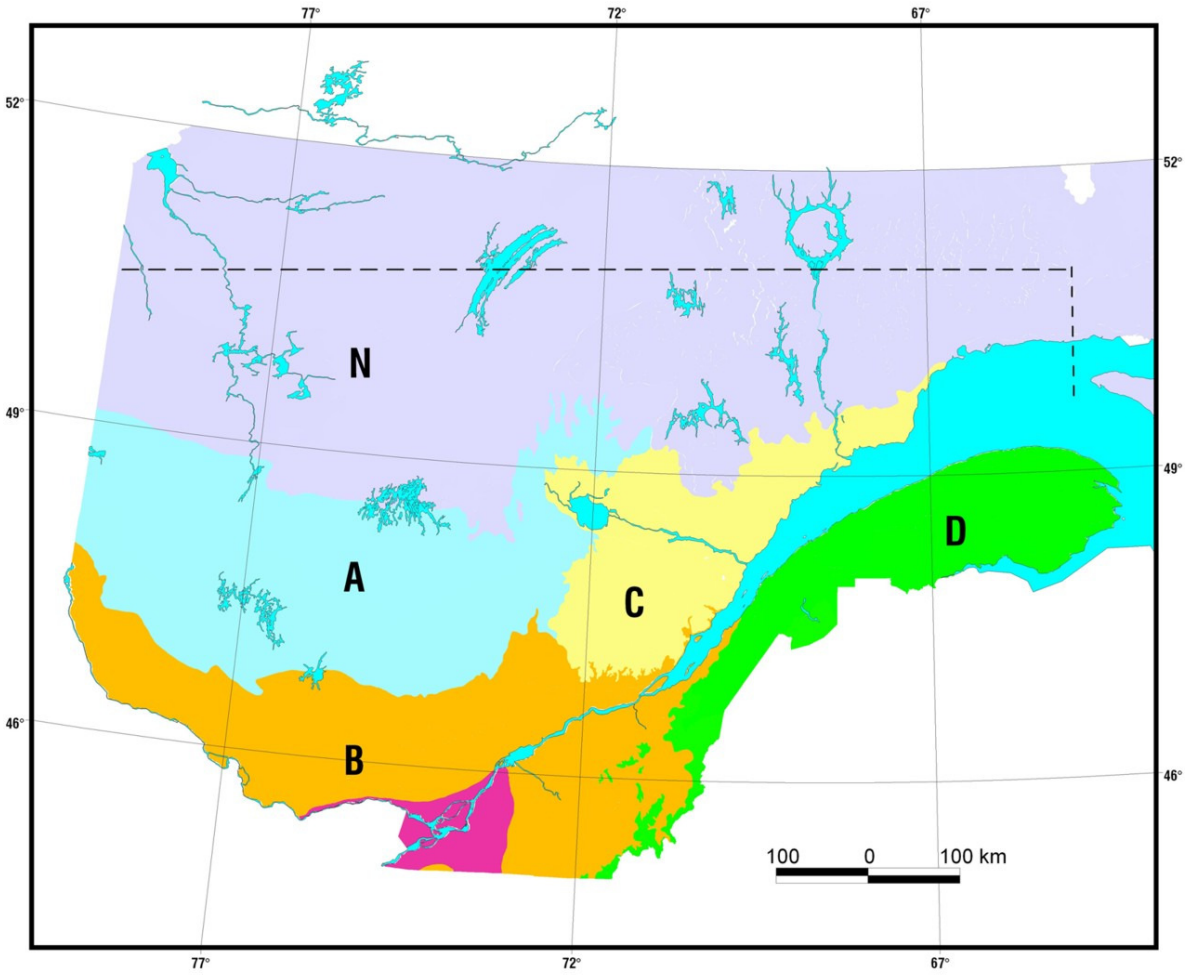

Figure 4.10: Map showing genetically improved zones provided by the Ministry of Natural Resources and Fauna. [47]

Although reforesting is seen as an act of "planting the right tree at the right place" after harvesting operations, the particular emphasis put on the productive capacity of the next boreal forest (to increase the market volume on reforesting sites) produces a forest of production; an entity known for, and by, its economic qualities (Cohen 1999: 433). Within this context, the geographic expression of the boreal forest is not only predetermined by scientific knowledges, it is also imagined through competition and productivity dynamics which make industrial relationships with the forest dominant. This means that the genetically improved boreal forest becomes not solely a scientific production, but also a space of commodities that is maintained spatially through practices and legitimised through regulations. In the next section I will show how reforestation practices not only allow foresters and forest industries to territorialize the forest according to their desires, but also how reforestation practices can be seen as an

[47] Despite numerous attempts to contact the offices of the Ministry of Natural Resources and Fauna in Québec City, I never have been able to know the exact source of this map and who produces it.

act of colonisation, colonising both the boreal space and the capacity to imagine this space with genetically improved trees.

4.5 Tree planting and colonising space

In their documentary film on the life of tree planters in the Abitibi region of Québec, Langevin and Pelletier-Gilbert (2004) show a tree planter who describes himself as a "mix of animal, machine and athlete". Although the authors make no attempt to deconstruct the meaning of this quotation, it shows that tree planters contribute to maintaining the dominance of industrial imaginaries of the forest. Concerns about speed, performance and competition dominate their work and have a subsequent influence on their identity as a distinctive group of boreal forest workers. This description also shows that their immediate environment (the boreal forest) plays no other role than to portray them as animal (instinctive and determined), but in which machine (productivity) and athlete (performance and competition) occupy significant places in the identity-building of tree planters. Through reforestation, tree planters are the instruments of labour who spatialize improved trees and legitimise the capitalist logic that lies behind the industrial imaginaries of the boreal forest space (see Cohen 1999, 2004; Prudham 2003).

The colonisation of space by forestry science discourse and capitalism can be associated with a sort of colonialism of ideas that is spread into space through highly regulated practices of tree planting. In Figure 4.11 for example, we see a tree planter colonising the boreal forest with the industrial forestry imaginaries imbedded in the improved seedlings being put into the boreal forest ground. At first glance, this photograph might look like an anodyne relation of production, but behind the repetitive physical movement of putting a tree in the soil (red circle on the photo) lurks the colonisation of the north of Québec.

Looking at the flag line that delimits the reforested areas (based on *SYLVA II*), tree planters orient themselves within the cybernetic boreal forest space. Then, while moving towards the end of the harvested site, every 1.4 metres (space required by the Ministry of Natural Resources and Fauna) a tree planter puts a tree in his or her tree cartridge, makes a hole with specifically designed shovel and, finally, puts an improved tree into the hole. Through the repetition of this series of mechanical movements, tree

planters allow a colonising of space, monopolising it through performance, high quality trees and field instrumentation.

Figure 4.11: Colonising the boreal space: Tree planting within the Abitibian boreal forest. Photograph taken by the author, Abitibi-Est region (17/07/05).

In this context, forestry science and capitalism are at the centre of the colonisation of the boreal space; they colonise the forest with an industrial imaginary and territorialize space through fixed boundaries and meanings. Like colonialism, tree planting asserts the presence of science and capital as well as fosters industrial imaginaries of, and relationships with, the forest (Cohen 1993, Cohen 1999, Prudham 2003, Robbins and Fraser 2003). Although colonialism is normally associated with the power of one group over another, in the forestry context (chiefly reforestation), the subordinated aspect does not consist of a particular group of people, it consists of other imaginaries of what the boreal forest is or ought to be.[48] I use the term colonisation because tree planting colonises imaginaries of the boreal forest. Hence, reforestation practices (through social relations of production) reproduce colonialism by putting the trees that perform the values of capitalism and the scientific production of knowledge (i.e. competition, accumulation, rationality, productivity) in the boreal soil.

[48] It is important to highlight that although the space created through harvesting practices is colonised by scientific knowledge and capitalism, the people who are not implicated in the discussions regarding management strategies suitable for the boreal forest can also be considered as colonised by scientific knowledge and capitalism. This will be discussed in more detail in Chapter 7.

In Figure 4.12, it is possible to see how capitalism and scientific knowledges are imbricated in the production of the industrial imaginary of the forest and in the colonisation of space. At first glance, this image reveals a pristine forest at the top followed by the expressions *Forever Green*® and *Impact Zero*®. These expressions correspond to two environmental management programs that Tembec has developed in order to obtain recognised third-party certification such as that offered by the Forest Stewardship Council (FSC). This latter provides a series of measures that allow consumers to choose their products according to some "environmentally friendly" principles (see Baldwin 2003: 423).[49] *Forever Green*® concerns forest operations and promotes the application of guiding principles as a series of "policy statements representing important values that must be applied in all [our] forest activities" (Tembec 2003: 3). *Impact Zero*® is related to manufacturing operations and tries to "establish environmental performance goals in six different areas: air quality and atmospheric emissions; water; fiber utilization and waste management; noise; energy consumption; and greenhouse emissions" (Tembec 2003: 3). In the centre of the image, there are two hands, between which we can see the details of a jack pine plug seedling surrounded by black earth.

Although this image publicises Tembec's efforts towards achieving sustainable forest management, it also shows how capitalism and scientific knowledges colonise space and the imaginary of space through *Forever Green*® and *Impact Zero*® practices. *Forever Green*® and *Impact Zero*® give the impression that the jack pines become what we can see at the bottom left of the image: a transformation into dense and healthy forest. The entire colonisation process is signed by Tembec in the right corner of the pamphlet and this indicates that, just like the jack pine seedling, the production of forest is in the safe hands of Tembec.

[49] It is important to make it clear that these measures are voluntary and profit-based.

Figure 4.12: Colonising space through industrial imaginaries of the forest. Reprinted with permission.

Although the hands taking care of the jack pine seedling are faithful representations of the gender and culture of those acting behind the colonisation of boreal space and within the production of the boreal forest in general, I would like to draw attention to the phrase "taking our environmental responsibilities beyond the boardroom". In the context that interests me here, this phrase suggests that Tembec's environmental responsibilities — mainly related to the promotion of the industrial imaginaries of the forest (*SYLVA II*, GIS maps) — are not restricted to the boardroom and to the forest industry, but are also extended to the boreal forest itself. The forest in this brochure is portrayed as something that can be improved by foresters and one way to improve consists of reiterating the power of forestry science and the forest industry over the

ways in which the forest is imagined and experienced. In turn, this indirect territorial claim allows foresters and the forest industry to monopolise the imaginaries of space, sealing it through environmental policies that privilege industrial relationships with the forest.

4.6 Pre-commercial thinning

The last forestry practice I will describe in this chapter is pre-commercial thinning. Pre-commercial thinning occurs in dense plantations which are between 10 and 20 years old. The aim of this practice is to clear the plantation of the trees considered bad for the growth of improved seedlings (such as deciduous species), or of those trees infested by insects, having diseases or simply failing to conform to the norms established by the forest industry. A series of measures must thus be taken in order to select the trees that need to be cleared. This is what foresters commonly call "quality density", referring to a methodology used through forest inventory whereby foresters assess physiognomic features of tree species within the plantations (i.e. branch length, diameter, general health of the tree). Within $4m^3$ sample plots 1.13m in diameter, foresters evaluate the presence of "desired tree species" (e.g. black spruce, jack pine, white spruce) that have grown without human intervention and that need to be kept in place for "natural" regeneration and a future forest uniquely composed of commercially desired tree species.[50]

When the time to clear unwanted trees has come, foresters look at the number and quality of reforested trees still present within the plantations, and they will also investigate the number of desired tree species oppressed by other type of vegetation (e.g., grass and heaths), the percentage of heaths and ligneous vegetation within the plots and the amount of sunlight received per year, according to a forestry radiometer (Dumont *et al.* 1994: 30). Having all these details in hand, foresters then elaborate a thinning plan that will be executed by independent contractors, clearing the vegetation considered bad for the growth of commercially valued species and everything that does not conform to *SYLVA II* simulation model predictions.

[50] The number of sample plots will vary according to the number of hectares covered by the plantation.

Figure 4.13: A plantation before pre-commercial thinning (A) and after (B). The French explanation of (A) can be translated as "pre-commercial thinning aimed to free the healthiest young trees in order to enhance their growing capacity." Source: Ministère des Ressources Naturelles (2002), L'éclaircie précommerciale, p. 1, diffusion code 2002-3037.

Through thinning operations, the colonisation of the boreal space is extended by the elimination of vegetation judged harmful to the maintenance of the industrial imaginaries of the forest. The landscape is modified to privilege genetically selected trees and priority groups of species over those having different physiognomies and economic values. This means that the trees and vegetation which disturb the industrial imaginary of the forest space are cleared from the landscape and left on the ground. Through their decomposition, they become nutrients for the selected group of tree species (see Figure 4.13). As thinning ends, the boreal forest reaches its mature stage (between 60-80 years) and will be harvested again. Through these forestry processes, the industrial imaginary of the boreal forest is constantly reproduced as a space of extraction.

4.7 Conclusion

Through the production of a circumpolar space in which the boreal forest of Abitibi exists, other imaginary places of the forest have been blurred by the predominance of certain discourses and practices. Like the landscape of the British Columbian west coast (Braun 2000, 2002; Harris 2002), the boreal forest of Abitibi has been framed by particular boundaries and therefore has included specific imaginaries while excluding others. This inclusion and exclusion is manifested in the representation of the dominant forest imaginary by models, statistics and scientific grids. David Demeritt (2001a: 445) has shown that the statistical representation of U.S. forests has framed the federal forest as a calculable object, a "territorially delimited quantity of resources". Through mathematical representation, the forest of the United States is homogenised by new

forms of governmental control, and thus becomes easily graspable as a rational economic object. Like Foucault (1991), and Braun (2000), Demeritt (2001a: 445) argues that what counts as nature should be seen as an imbricated body in constant reproduction, rather than as different entities with "pre-existing powers and predilections". Seeing mutability as inherent to nature makes it possible to recognise that the politics of nature cannot be thought of as homogeneous, but rather as a heterogeneous ensemble of interrelations.

This chapter has shown how the production of territory and the introduction of capitalist and scientific politics of rationality govern the boreal forest. The significant point that comes out of this work is how different scientific discourses have worked to territorialize a specific forest that promotes capitalism. Despite the significance of scientific discourses in the promotion of a capitalist forest, scientific practices also need to be investigated in detail in order to show how the territoriality of forestry science produces governance of thought and, consequently, of the imaginaries of Abitibi's boreal forest. Moving beyond an investigation limited to discourse and examining practices, makes it possible to understand how different ways of knowing and imagining the forest become materialised, and how these imaginaries can lead to other ends than capitalism.

These other forest imaginaries are blurred by the dominance of particular discourses and practices which produce the dominant territoriality of the boreal forest of Abitibi. In turn, other imaginaries of the boreal forest create other forms of territorialities that can be termed "places of resistance", which embody the other ways of knowing and imagining the forest that are resistant to the dominant homogenisation of forestry science discourses and practices. As Foucault (1979: 95) rightly argued, "where there is power, there is resistance […] a multiplicity of points of resistance" and it is these multiple points that become places of resistance in which forest users produce and articulate different imaginaries of the biophysical features that composed the boreal forest of Abitibi. In turn, these imaginaries have produced the forest as an unstable political entity that is constantly in construction, deconstruction and reconstruction of (Massey 1994:5).

As this chapter has shown, the way to get in contact with how different imaginaries of the boreal forest inform political struggles is to pay attention to how different

imaginaries and knowledges about the boreal forest become bounded as places through discourses and practices. In other words, recognising these places means seeing such boundary production *in situ* (Latour 1987) — it is about how mathematical models are manifested in the field, about how imaginaries of the boreal forest are articulated through leisure and working practices, and so on. This means that forest users and their imaginaries of the forest are part of the flux of interactions that characterise the social relations and the production of the boreal forest and of its politics. In the following chapter, I demonstrate how the industrial imaginary of the boreal forest described in this chapter is challenged by the multiplicity of other imaginaries that represent other relationships with, and ways of knowing, the boreal forest. The mechanism for advancing this argument is the microcosm of a lumberjack festival.

Chapter 5

Hot dogs, Saw-Dust and Smoke: The Essence of the Lumberjack Festival and the Production of Boreal Forest Politics

---

5.0 Introduction

The previous chapter demonstrated how forestry science and ecology have played a crucial role in producing the boreal forest as a geographical entity that can be managed and controlled through mathematical models and industrial practices. This regulation eventually leads to the production of what I have termed the cybernetic boreal forest. This cybernetic boreal forest is the materialisation of an industrial imaginary that has territorialized the forest as the domain of foresters, excluding other ways of experiencing and knowing it. Although it is possible to demonstrate how the industrial imaginary of the forest has contributed to the production of the boreal forest as a space dominated by forestry science and ecology, this chapter and the next temper the hegemony of this perspective. They show that the boreal forest is much more than a cybernetic product; it is, rather, an open space in which the meaning can have multiple senses and is produced by the interrelations of different imaginaries and their politics. This present chapter plays a crucial role in bridging Chapters 4 and 6 because it demonstrates how the boreal forest becomes the site of negotiations amongst different imaginaries that are constantly being deterritorialized and reterritorialized (in the sense of Deleuze and Guattari 1991), thereby producing a space in which different imaginaries exist simultaneously.[51]

To see how forest imaginaries are produced, manifested, and embodied through diverse materialities, and how their politics become constituted, it is important to pay attention to the social contexts in which they emerge. Amongst these contexts, festivals are highly significant because they are microcosms in which large-scale power relations become perceptible (Jackson 1992, Penrose 2003). Although the production of boundaries and their role in territorializing imaginary places of the forest has already

[51] For Deleuze and Guattari (1991), the movement of the earth implies a constant movement that capture a territory to deterritorialize it and creating new territories through reterritorialization. In this work I see this movement appearing between different forest users and their imaginaries of the forest.

been discussed in the previous chapter, this examination of festivals will further demonstrate how boundaries attempt to stabilise the meanings of space and place. By analysing the activities performed on a festival site it is possible to grasp the different ways in which multiple imaginaries produce a space such as the boreal forest. In turn, recognising how these different imaginaries are manifested and materialised means becoming aware of the politics they project. It also means being aware of how these politics can become alternatives to the relationships which tend to dominate the biophysical elements that produce the forest.

In this chapter, I offer the *Festival Forestier de Senneterre* (FFS) in the Abitibi region as a way of identifying the great variety of forest imaginaries that exist and that are performed in such cultural events. In my presentation of the festival I intend to explore how the different competitions and events need to be scrutinised in order to understand the materialisation of other imaginaries (de Certeau 1984). To do so, I will begin by presenting the festival in general, with a specific emphasis on the lumberjack performances that maintain the industrial forest boundaries through the festivities. Second, I will focus on other activities that are part of the festival and that embody different imaginaries and relationships with the forest. Through these discussions, it should become clear that the boreal forest boundaries described in Chapter 4 are not fixed but unstable, constituted by the continuous negotiation of the multiplicities of imaginaries and politics embodied in diverse objects found within the festival.

5.1 Festivals

Social events such as festivals, carnivals, and fairs are good contexts in which different imaginations, boundaries, and identities are performed through artistic expression (e.g., music, dancing, painting) and demonstrations of skill. They are also events in which participants celebrate both material and immaterial transformations of the normal situation that prevails on the sites of these social events. As Susan Smith (1993: 143) has rightly argued, many studies of festivals pay attention to how marginalised groups "win space within the mainstream metropolitan cores" (i.e. Jackson 1988, 1992, Sinn and Wong 2005), while less research has been conducted on rural identities in festivals and fairs. Amongst the corpus of work done on festivals in recent years, some have concentrated on how festivals are used to celebrate "local" identities that have become the product of different cultures and beliefs in a boosting local economy such as in rural

areas of Chile (Feléz 2005) or Trinidad and Tobago (Green 2002). Others have spoken about the social roles of animals and plants that are celebrated through food festivals and fairs (Mathewson 2000). Some have emphasised the importance of boundaries and the production of a politics of exclusion in multicultural countries (Jackson 1992, Penrose 2003), or a politics of inclusion through male sexual desires, such as in the *Gay Games* (Wait 2006) or the celebration of St. Patrick's Day in London (Nagle 2005). Most of these studies are concerned with the celebration of identity and culture in different contexts, and their role in the production of politics, but very few have explored or even discussed the role and political significance of imaginaries in the production of space (spatial imaginaries) in such social events.

In this chapter I am particularly interested in exploring how spatial imaginaries of the boreal forest and their politics are celebrated in the *Festival Forestier de Senneterre*. I want to examine how ways of imagining the boreal forest become central to power relations between different places, embodied through objects and representations of the boreal forest. Moreover, imagining and knowing the forest in different ways and through a myriad of objects destabilises and challenges the dominant industrial imaginary involved in producing the festival as a fixed and bound event. The presence of other forest imaginaries in the *Festival Forestier* and their materialisation through diverse objects shows that the forest is an open space.

5.1.1 The Festival Forestier de Senneterre

The *Festival Forestier de Senneterre,* or Senneterre Lumberjack Festival, began in 1994 and quickly became one of Abitibi's biggest tourist attractions. It draws an average of 20,000 visitors annually.[52] The festival itself focuses on competitions based around various lumberjack skills. Competitions are grouped according to age, sex and ability, and although the focus is on men, women and children also participate. For example, the "Jack and Jill" event involves a mixed-gender team competing with a two-handed saw to cut through a log that is at least 40cm in diameter. Other events include chain-saw contests (both 0-81cc and 0-140cc), in which competitors have to cut large logs as

[52] See http://www.festivalforestier.ca

quickly as possible; axe events such as axe throw, underhand chop and springboard;[53] and the use of two-handed saws and swedes to chop down trees in the shortest time possible.

Lumberjack festivals like that held in Senneterre are common in rural North America and are also present in countries like Australia and New Zealand. In all cases, lumberjacks celebrating their relationships with the forest often involve the materialisation of the power that the first European settlers exerted over the "great wilderness" in these "new" continents and countries.[54] By performing key skills of industrial forestry, with a range of associated tools and technologies, these lumberjack events are also celebrations through which the forest becomes re-territorialized as a space of extraction. Some of these events are even big enough to be broadcast on special television sport channels — for instance, the Lumberjack World Championships, held in the United States in Hayward, Wisconsin. The historical roots of this phenomenon are not particularly clear, since each hosting town or village has its own history and relationship with the forest and the forest industry. However, the web site of the Lumberjack World Championships makes it clear that the celebrations constitute a kind of homage to the forest industry, through the performance of vanishing skills and old technologies that have been slowly transformed into sporting events.[55]

Senneterre's Lumberjack Festival is not very different from the Lumberjack World Championships, but it includes an emphasis on improving the image of the regional forest industry. This can be seen in industry preparedness to subsidise the festival and making the Festival a family event (though families come to see and experience more than the competitions). The festival is held during the first days of foresters and other festival-goers holidays (commonly called *vacances de la construction* in French), who come to the festival to spend a day outside with friends and family in the beginning of July.

[53] Springboard competitions are axe events in which participants attempt to chop a log situated on the top of a post acting as a tree. Competitors use two long boards with which they ascend the post. To use springboards, competitors must notch their "tree", and insert their board tips into the incisions.

[54] Despite the presence of forest industries and forester cultures in South America, Africa and Asia, these celebrations seem limited to economically developed countries.

[55] See http://www.lumberjackworldchampionships.com/history/.

At first glance, the Lumberjack Festival appears to be an event through which the identities of foresters and first settlers are celebrated through a multitude of activities. Upon closer examination, however, this celebration can also be seen as an attempt to stabilise the meaning of the boreal forest and the people living in it through specific practices and skills that influence how one comes to know the forest. As Smith (1993: 295) emphasises, "it would be a mistake to interpret the festivities simply as reiteration of mainstream culture and an affirmation of the common good". There are a multitude of forest meanings and imaginaries that exist in the festival and that appear through different shapes (objects, representations, skills, etc.). The Lumberjack Festival is an excellent site for understanding how the politics of the other imaginaries and meanings of the boreal forest are implicated in the production of places; places that become politically charged by the construction and maintenance of boundaries. The regional importance of Senneterre's Lumberjack Festival resides in the production of boundaries that articulate specific imaginaries, relationships and politics of the forest. However, before analysing the politics and boundaries of the forest, it is important to know how the forest is associated with being Abitibian.

5.2 Abitibians and the boreal forest

Retracing Abitibian identity is a difficult task, as it implies the reduction of a great variety of histories to a number of features that supposedly represent a group of geographically defined individuals. However, it is possible to assert that the Abitibian identity has been imagined through the experiences that Euro-Canadians have had with the boreal forest in a multitude of activities (e.g., forestry, hunting, fishing and trapping). These have been immortalised through material culture such as memorial sites (see Chapter 4, Figures 4.1-4.3). In turn, the sites associated with the production of Abitibian identity (such as public memorials) act as boundaries that work to stabilise the meaning of the forest and to territorialize it as something associated with the forest industry. Additionally, this territorialization has produced the geography of the boreal forest — a forest that, as shown in Chapter 4, is bounded as if it were a static entity by the production of three bioclimatic domains used to map the boreal forest into three different zones. These points are particularly important in helping to understand the politics involved in the production of the *Festival Forestier*.

A brief intrusion into the past of the boreal forest and into the past of the Abitibi region makes it possible to see two important features that have contributed to the production of boreal forest imaginaries. First, surveyor reports and the colonisation movement territorialized the forest as an entity waiting to be exploited for its trees and biophysical resources. In the process, the forest was constructed as an entity purportedly empty of meanings other than those produced through the colonisation movement and the forest industry. Second, the production of Abitibian identity is closely related to the exploitation of the boreal forest for reasons of cultural identity (e.g. agriculturalist and Roman Catholic) and economy (e.g. low productivity of farms). This has maintained the imaginary of the boreal forest as something that is open to exploitation, and in the same vein, the forest becomes a product through industrial practices. Together, these two significant factors have contributed to the production of a collective history in which an industrial relationship with the boreal forest has been established as primary. Furthermore, this is the history of the boreal forest that is now celebrated in events like Senneterre's Lumberjack Festival.

As demonstrated in Chapter 4, the forest industry was the bread and butter for many Abitibian families during the colonisation period, as is still the case today. Its significance has contributed greatly to the constitution of Abitibian regional identities and played a role in the formulation of an Abitibian space. On one hand, the festival celebrates the past lumberjack identity; on the other hand, Senneterre's Festival also celebrates the relationships by which Abitibians come to know their biophysical world through present industrial forestry practices. The Lumberjack Festival celebrates the skills that contributed to regional economic development in Abitibi and that established a particular way of experiencing the Abitibian boreal forest. This link becomes clearer in talking with people who attend the festival and listening to why they felt "Abitibian" and a part of the festivities. One of my interviewees explained this connection through her personal history, speaking about where she was born:

> MT: I was born in a smaller village than here [Senneterre]. Clova — I don't know if the name means anything to you? [56]
> SN: It's at the fringe of the Mauricie region I think?
> MT: Yes, I lived there until I was six years old and later we went to live in Barraute.
> Then we came here, so…now… this means around twenty years and even more since I'm that old…it is even longer than that! We always…We are part of it; we have always been part of the forest. We grew up in the woods. We are really in the woods in Abitibi (MT,14/07/05).

[56] As with all names of interview subjects used in this thesis, this one is fictive.

For this interviewee, the forest — or what the majority of users refer to as "the woods" (*le bois* in French) — is the place of reference for her childhood. It is where the action comes from, it is where her personal history has its roots and becomes linked with both collective memory and the present notion of being Abitibian. Similar relations with the forest were expressed by other interviewees, who attended the Lumberjack Festival to celebrate their connection with the forest and their identity as Abitibians. The forest is not just the place where Abitibians go for special occasions or for recreational activities, it is the biophysical environment in which they experience a great part of their life; the place they hear about in various stories from relatives whose work was linked with the forest. Another interviewee described why he thinks of himself as being "in the forest" wherever he goes to Abitibi. In his office, with only a small window facing the forest, he said:

> AC: "I can tell you that here I am in the woods. […] Right now, today, I am in the woods. When I go home at night, I am in the woods again. However, when I go by [La Vérendrye] Park, then I feel I am not at home, I am in town.
> Sébastien: So there are no demarcations between one place and another?
> AC: No, not really, we are always in the woods" (AC12/07/05).

This quotation shows that the boreal forest — or what the interviewee considers "the woods" — is everywhere except in town. Whatever the movement in time-space, this interviewee argues that he is almost always in contact with the forest, as long as he does not leave La Vérendrye Parkor the space delimited as the Abitibi region.[57] It is also important to emphasise that it is only in the more populous regions, such as the Laurentide, located on the south of Abitibi, that the forest/woods becomes "the town". The Abitibi region is entirely "in the woods", and it is only once past the boundary created (materialised) by La Vérendrye Park that this interviewee feels himself "in town". According to this description, the non-humans such as trees, plants and animals that characterise the forest are not compulsory in the production of boreal forest. One can be in the town of Senneterre and claim to be in the forest. At the entrance to this forest-dependent community, wooden sculptures that represent coniferous trees (Figure 5.1) have replaced the trees that are absent from Senneterre's town centre. The presence of such sculptures suggests the significance of coniferous trees as something deeply rooted in the town's and region's patrimony. As with other memorial sites found in the region (see Chapter 4), these images show the industrial relationships that people have with the forest. Such monuments allow forest-dependent communities to represent the

[57] La Vérendrye Park consists of a fauna reserve of 12,589 km² situated between the Abitibi region and the Laurentide region (http://www.sepaq.com/rf/lvy/en/presentation.html).

industrial boreal forest imaginary, making it possible to commemorate their relationship to that forest and its relevance in the identity-building of the town's inhabitants.

Through these sculptures, the industrial imaginary is materialised and territorialized as something endemic to the landscape, something that reflects both the biophysical features of the forest and the culture of its inhabitants.[58] Instead of planting black spruces to highlight the role played by these particular trees in the economic development of the region, wooden sculptures representing these trees have been erected. In their static forms, these sculptures make abstractions of the ongoing processes of tree growth and death: they represent trees in their zenith (Figure 5.1), as though the forest surrounding Senneterre was uniformly composed of large and mature trees. As shown in their materiality and shape, these wooden sculptures embody the industrial imaginaries of the forest. They represent trees through a substance, wood, that has been transformed by the industry into a raw material used in the production of tree sculptures. In other words, trees have been transformed by the removal of their branches and bark into poles that look like telephone posts, in which holes have been drilled to introduce smaller wood pieces representing the branches of these "industrial trees". The form of these sculptures ("branches" positioned downwards) suggests the coniferous trees of the boreal forest, and in their materiality they embody the forest industry. These sculptures can be seen as a hybrid product of the boreal forest constituted of biophysical matter and industrial processes.

[58] It is important to emphasise that I describe these monuments according to what is celebrated through the festival; when I use the word "culture", I understand it as an open, ongoing process and not as something authentic and immutable. The fixity of these sculptures reinforces the perception that the concepts of culture and identity they embody are also fixed and stable through space-time.

Figure 5.1: Immortalising the boreal forest through telephone posts. Photo taken by the author along Road 113, Senneterre, Abitibi (16/07/05).

Ironically, these sculptures of trees are made of dead trees. As dead trees, it is easier to manipulate their shape, height and branch numbers, as well as their meanings. Although the boreal forest is indeed dominated by coniferous species, these sculptures ignore completely deciduous species, such as the white birch and balsam poplar that are also common and indigenous. In plantations, balsam poplars are typically hybrid poplars — balsam poplars that have been hybridised to accelerate the growth process (see Rainville et al. 2003). Interestingly, these trees are the raw material that has been used to produce the Senneterre sculptures. Their transformation to, and utilisation as, coniferous sculptures indicates that their mechanical qualities are more appropriate for sculpture than the trees they have been called on to represent. To a lesser extent, however, this also shows the small importance these trees have in the production of Abitibian identities and histories; poplar usage has never been as significant as that of black and white spruces in the forest industry (Asselin and Gourd 1995).

Reproducing spruces, the most significant tree for the regional economy, is reproducing the past of lumberjacks as well as the current significance of this tree to the local industries and its influence on how relationships with the forest are imagined. The presence of these black spruces at the entrance to the town that holds the *Festival Forestier* also adds weight to the ways of imagining the boreal forest that are linked to

this particular tree. The fixity of these sculptures projects a sort of security: that the forest, like the sculptures that represent it, will always be there and (implicitly, at least) that the forest will be maintained as a space of extraction.

As seen in Chapter 4, one of the reasons that may explain how the boreal forest becomes imagined as a space of extraction lies in performing forest industry practices in order to materialise industrial imaginaries. Here, those practices have been replaced by the sculpted trees that represent one dominant way to imagine and to experience the forest. Among the multiple ways of imagining and experiencing the forest, these manufactured trees embody and project the power of the industrial imaginary. These sculptures also constitute the forestry-favoured species that come into play in materialising the boreal forest space as bounded by industrial experiences that shape the meaning of the forest. For instance when I asked the mayor, he told me that these trees were the symbols of the forest industry's significance for the town. This is also evident when one pays attention to the signification of the town's coat of arms in which trees, more importantly the coniferous, are represented by their crown (Figure 5.2).

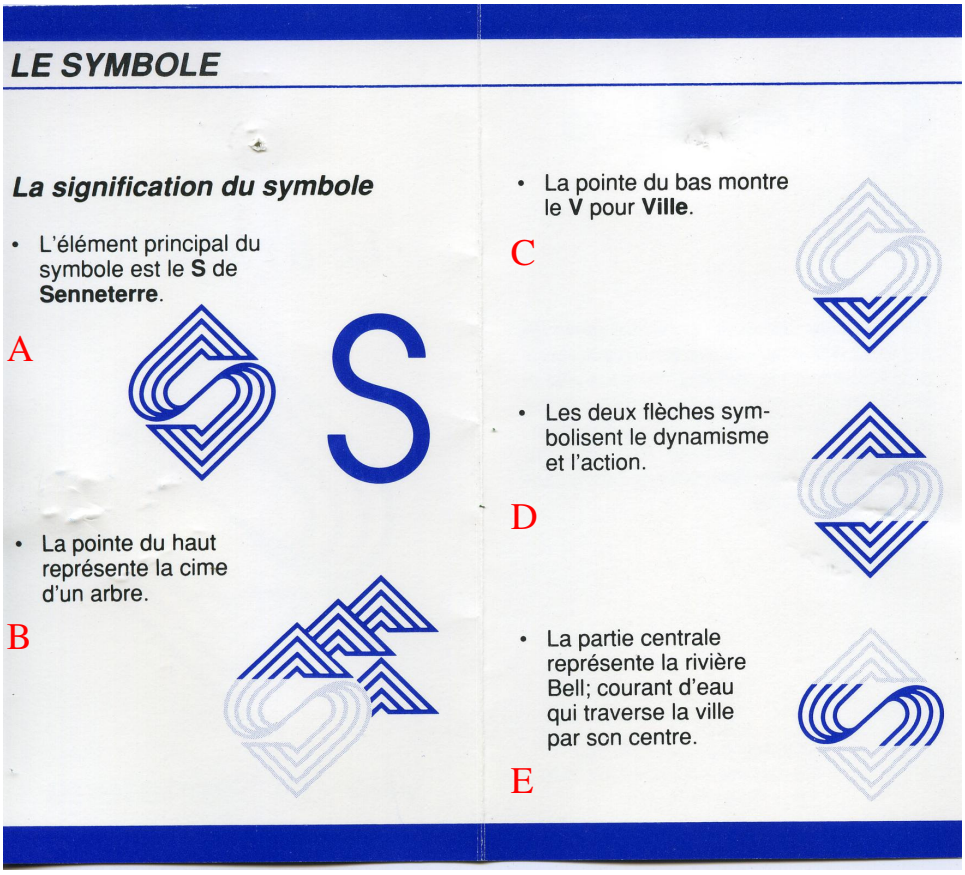

Figure 5.2: Signification of Senneterre's coat of arms: A: the shape represents the *S* for Senneterre; B: indicates the top of a tree, the shape indicates a coniferous species; C: shows the *V* for town in French (*ville*); D: shows arrows that symbolise the towns's dynamism; E: represents the Bell rivers that cross the town centre.

The imagination of the boreal forest as a bounded space of extraction has influenced the way in which Abitibian identities are imagined and performed. The boundaries of the region and the biophysical elements associated with the boreal forest are also celebrated through the Lumberjack Festival, since their presence stabilises the meaning of the forest as something that is experienced through an industrial imaginary. As with the forest, Abitibian identities are bound up with industrial relationships and these relationships become elements of the constructed boundaries (configured by interconnections between forest users and materialities/objects) that are celebrated through the various competitions of the Lumberjack Festival. By defining the boreal forest and the Abitibian identity through boundaries, forest users determine both forest and Abitibians through a specific type of tree (coniferous, mainly black spruce) and specific relationships with the forest that become part of collective memory. In turn, these relationships with the forest are celebrated in events like Senneterre's *Festival Forestier* and bounded through different social relations and objects embodying this imaginary (Massey 1994). As this section (5.2) demonstrates how the industrial imaginary of the forest and the ensuing relationships have participated to produce boundaries, the next section will explore how such boundaries are reproduced through lumberjack competitions in the town of Senneterre.

5.3 Welcome to the Festival Forestier de Senneterre

5.3.1 The site

Upon entering the place delimited as the *Festival Forestier de Senneterre*, one is confronted by piles of construction timber wrapped in white paper, on which it is possible to read the name "*Tembec*" — one of the largest timber companies in Québec and in Canada. These wood piles can be seen as a claim to territory and they are a clear indication of who is involved in bounding the Lumberjack Festival site where the performances take place (see Figure 5.3). This physical boundary created by the forest industry is even more obvious once visitors have passed the log hut marking the entrance to the festival site. Forestry machinery, such as a feller-limber-bucker, a forwarder, and lorries and tractors used in forestry operations, are positioned along the main street of Senneterre and they play the focal point through which visitors come to know and experience the forest. This prominent display of machines along the main street allows foresters to reiterate their territoriality. Maintaining the industrial

imaginary and asserting its role in producing the boreal forest as a space of extraction makes it very difficult for anyone to challenge either this dominant imaginary or the power relations that it reflects. There is little room — both figuratively and literally — for other imaginaries of the boreal forest.

The conversion of Senneterre's main street into an exhibition area for forestry machinery underscores the technological relations between many Abitibians and the boreal forest. This exhibition was also an opportunity for those less involved in forestry operations to learn about the mechanics of these vehicles, assisted by the experienced foresters who used them. These foresters explained the machines' purpose as well as why are they indispensable to contemporary forestry operations to the festival goers.

Figure 5.3: Bounding the festivities with forest industry products. Photo taken by the author, Senneterre, Abitibi (01/07/06).

This forestry machinery present on the festival site shows how the boreal forest can be experienced through the use of forest vehicles. This mechanisation of the boreal forest by various types of technologies and vehicles normalises the industrial relationships that are turn celebrated through the festival. The boreal forest becomes a place in which motorised equipment plays a large role in materialising imaginaries. In this context, the vehicles associated with industrial forestry are represented as common objects of an everyday relationship that Abitibians have with the boreal forest, which is what they are

celebrating at the Lumberjack Festival. The entrance to the festival directs visitors into a very specific way of engaging with the forest.

Walking down the main street to get to the competitions, visitors have to pass a big white tent in which local products and other souvenirs (such as t-shirts and baseball caps bearing the Lumberjack Festival logo) are sold. The first thing visitors can see when they leave the tent is a mosaic of signs announcing the Lumberjack Festival Sponsorships (Figure 5.4). Of these signs, the ones that do not represent forest industries indicate businesses related to forestry, such as those specialising in accounting for the industries, the manufacture of forest equipment and the construction of logging camps, as well as those companies which provide the staff for such facilities (cooks, concierges, plumbers, and so on). Included amongst the sponsorship signs are Québec's Ministry of Natural Resources and Fauna and the personal sign of the Minister of Natural Resources and Fauna and Deputy Minister of Abitibi-Est, Pierre Corbeil, who came in person to announce his sponsorship and give prizes to the winners of the professional competitions.[59] The presence of these two signs in the Senneterre Lumberjack Festival can be seen as evidence of the cohesion between the industry and the Ministry in charge of legislation for the management of the boreal forest.

Figure 5.4: Inscriptions of the cybernetic boreal forest: Sponsoring the *Festival Forestier de Senneterre*. Photo taken by the author, Senneterre, Abitibi (01/07/06).

[59] Pierre Corbeil was defeated in the provincial election on 26 March 2007 and replaced by Alexis Wawanoloat, a member of the Algonquin community and now deputy of Abitibi-Est for the *Parti Québécois*.

A closer analysis of these signs reveals that they are the material of very specific boreal forest imaginaries. They are what Latour (1999) calls inscriptions: objects that can be transported and superimposed without altering their meanings or the particular relations between them. Once again, the meanings carried by these inscriptions reiterate the industrial imaginary of the boreal forest and construct the forest as a place of extraction. By their presence on the site festival, these inscriptions not only reinforce the place of the forest industry in the collective imagination, they also reinforce the notion that the Ministry of Natural Resources and Fauna and the forest industry can each contribute to the same festivities without contradicting the other's way of experiencing and knowing the forest. Juxtaposing industrial forestry signs with signs indicating conservation of the public forest (through the Ministry) suggests that both are part of the same festivities and places, although they are not necessarily embodying the same imaginaries of the forest.

Further down the main street, visitors encounter large tiers of seating that can accommodate between 600 and 700 people. These bleachers are erected around an improvised scene in which chainsaw, axe, swede and two-handed saw competitions take place. The ground of the competition area is covered with woodchips, and beams or posts are positioned as competition replacements for the trees that lumberjacks normally confront. These beams (hybrid aspen poplar) can range from 12 to 18 inches in diameter depending on the type of competitions involved. Normally, their bark has been peeled off and their branches removed to facilitate the foresters' competitiveness. In their manufactured state, both beams and wood chips reiterate industrial relationships with the forest; they present trees as non-humans that can be handled and transformed into objects of competition. Through its use of manufactured nature, the Lumberjack Festival serves to celebrate people's industrial relationships with the forest.

Ultimately, these beams and wood chips stabilise the meaning of the celebrations. The interrelations between woodchips and beams do not necessarily reproduce the coniferous forest that surrounds Senneterre and the festival. This reproduction would be difficult, as the non-human components of the boreal forest — soil, animals, streams, rivers, lakes, mosses, plants and so on — have been evacuated from the festival's representation. The forest portrayed through the Lumberjack Festival is restricted to an industrial materiality: it is a forest that has been denuded of everything except the

objects used by foresters to represent the forest in their competitions. Through these interactions, the objects that mark the boreal forest as a place for lumberjack skills (e.g. denuded trees, woodchips, saw dust, clips that maintain trees in horizontal positions, chainsaws, swedes and so on) make it possible to maintain an industrial imaginary of the forest within the festival.

Moreover, the majority of people involved in organising and coordinating the Lumberjack Festival are either directly or indirectly related to the forest industry, from a forest engineer or machine operator to a simple official whose brother works for Abitibi-Consolidated. Through their roles in producing the festival, these people create the context that frames the way in which the boreal forest is imagined. This framing process is articulated through social relations, such as those occurring between competitors, the people charged with security and enforcing the rules and the people organising the competitions. It is through these relations between people normally in charge of forest management that the boundaries drawn by industrial forestry, which represent the boreal forest as a fixed place, are maintained during the festival.

When spectators watch the competitions, they can see foresters performing skills that reduce beams into saw dust in the shortest time possible. Through the demonstration of their skills and technologies, participants show how the boreal forest has been transformed into the Abitibi region. It is a demonstration of what allows Abitibians to take control over the forest and impose relationships upon it, and to imagine it as a product of these power relations. Although hand-technologies such as chainsaws, two-handed saws and swedes are very different from the feller-limber-bucker machine currently used in harvesting practices, race against time is intrinsic to forestry practices and is also highly significant in Lumberjack Festival. The presence of boards that calculate the time a competitor takes to chop a "cookie" with a hand tool,[60] or the use of lubricants on swedes and two-handed saw blades in order to minimise friction and accelerate speed, shows the significance of time and performance in these competitions. Like feller-limber-bucker machines that harvest, top and slash trees all at once in the shortest time possible, the Lumberjack competitions make participants performing harvesting practices that prioritise the speed and productivity found in industrial forestry practices.

[60] Cookies are the layers of timber cut by competitors in chain-saw, two-handed saw and swede competitions.

5.3.2 Competing and performing the industrial imaginary of the boreal forest

The festival's most heavily attended competitions are those of the professionals — more specifically, the men's chainsaw events. Interestingly, these contests involve chainsaws that have been modified to be more powerful than those found on the market (see Figure 5.5). These mechanical saws are designed to cut trees or beams up to 14 inches in diameter (35.6cm), and competitors show their skills by managing to cut three cookies (thickness of 2cm) in 6 seconds. The materiality of trees is reduced into cookies and saw dust in less than 10 seconds, leaving spectators to celebrate the efficiency of forest industry technologies over "trees" and the boreal forest. Performances in which these modified chainsaws reduce beams into cookies and saw dust in a noisy haze of blue smoke are powerful examples of how the industrial imaginary can attempt to control how the boreal forest is experienced and known.

Figure 5.5: Chainsaw competitions: Performing industrial imaginaries and relationships with the boreal forest. Photo taken by the author, Senneterre Lumberjack Festival (02/07/05).

Chainsaw contests are not limited to the competitions taking place on the main platform. Other events include the obstacle log cut, which involves a pair of parallel long beams positioned at about 30 degrees to the ground, across which a pair of lumberjacks run in order to cut the logs located at the ends (see Figure 5.6). This particular demonstration is a bit risky, since the lumberjack has to run on a cylindrical

surface, with chainsaw in hand, in sneakers with non-protective toe tips, in order to cut a cookie situated at the far end and then come back without losing their balance —with the chainsaw running throughout.

Figure 5.6: Performing the industrial forestry imaginary through an obstacle race. Photo taken from the *Festival Forestier* website: http://www.festivalforestier.ca/FR/album_photo_1.html.

If one of the competitors loses balance, he is automatically disqualified. The danger in this challenge is linked to the danger of working in the forest with machines created to cut trees. Although the great majority of competitions are performed by both women and men, performances that involve risky tasks such as running on a long beam with a chainsaw, climbing on spring boards or throwing axes at a target are normally restricted to men.

Although I do not have the space in which to discuss gender issues in relation to the production of the boreal forest imaginary, it is worth considering the marginalisation of women in the festival as analogous to their marginalisation in industrial forestry in general. Historically, women have never played a significant role in forestry practices. For example, it is uncommon to see them in photos and reports while exploring archive documents. When they do appear, they tend to wear uniforms or other clothing that identifies administrative staff, and thus their place in Senneterre's Lumberjack Festival reflects their history and marginality in boreal forest exploitation. Women are limited to specific competitions and in performing their skills, they simply reproduce those of the men, embodying the industrial imaginary of the boreal forest as one dominated by a

male-industrial imaginary. Their numbers remain limited in current forest exploitation practices: some are forest engineers, and others work in kitchen. In my field work I saw no women involved in operating machines such as feller-limber-buckers or delimbers; these were the domain of men.

However, women do participate in certain festival competitions with men, such as in the "Jack and Jill" events. It is through Jack and Jill competitions (see Figure 5.7) that the industrial imaginary of the boreal forest is shared between two members of a team. This specific performance demonstrates a way of experiencing the forest without distinguishing between sexes, as something that unites both genders. The Jack and Jill event is more than a couple using an oversized two-handed saw to cut a log in the shortest time as possible, it is also demonstrating an experience of the forest that has its place in industrial imaginaries and management. Jack and Jill can also be seen as the exchange between a man and a woman who share a common interest in protecting certain forester skills (and the role these skills play in constructing identity) that are vanishing with the increasing mechanisation of forestry. On the one hand, the shape of the saw (longer than those normally used for forestry practices) and its composition (a light alloy) make it more efficient in cutting the log quickly, but on the other hand, this also reflects a change in forestry practice, having little in common with the old two-handed saws used by the first settlers of the Abitibi region. As with modified chainsaws and special axes used in springboard and throwing competitions, Jack and Jill events allow the industrial imaginary to come alive: the material and design of the two-handed saw reiterate the industrial relationship with the boreal forest as normal, and as linked with a common history that allows the region and the town to survive and be alive.

Figure 5.7: Performing the industrial imaginaries of the boreal forest through Jack and Jill competitions. Photo taken by the author, Senneterre Lumberjack Festival (02/07/05).

In summary then, the industrial imaginaries of the forest is normalised and reproduced through the different competitions performed in the Lumberjack Festival. The next section will show how this imaginary, and the relationships with the forest it produces are extended outside the festival, into Senneterre town's centre.

5.3.3 Maintaining the industrial boundary outside the festival

The competitions performed in the Senneterre's Lumberjack Festival reflect the materialisation of industrial imaginaries of the boreal forest, and they also represent the pride in local identity and the history of the Abitibi region. The festival can be seen as an event that "attempts to get to grips with the unutterable mobility and contingency of space-time" and then tries to bound the ways of imagining the boreal forest with industrial forestry practices (Massey 1994: 5). The material objects used in these performances participate in bounding the boreal forest as a place in which relationships with the forest are dominated by industrial experiences. In turn, these performances and objects become the acts and instruments of power that allow the forestry industry to present an industrial relationship with the forest as the only way to engage with it. The interactions of objects, participants and foresters in the production of the industrial

imaginary are also involved in producing a boundary that surrounds the Lumberjack Festival and gives a meaning (industrial) to both forest and festival. This boundary is not restricted to the festival site: it is also present in the town's centre. For instance, it is possible to see it in everything from the banner announcing the festival and the town's "spirit" (Figure 5.8) to the paintings found on the walls of specific buildings (Figure 5.8). The presence of this boundary suggests that beyond the festival site, the representation of the industrial imaginary of the forest is reproduced as unproblematic.

The material boundary of this industrial boreal forest becomes visible through the interrelation between objects involved in the production of the festival — such as tents, caravans, stalls and so on. For instance, at the entrance to the town's industrial park, located outside the town centre, a long banner crosses the main road on which it is possible to read "*Notre forêt, notre avenir*!" ("Our forest, our future") on one side and "*Développons notre forêt, diversifions nos emplois*" ("Developing our forest and diversifying our jobs") on the other; (see Figure 5.7). This banner not only indicates that the economy of Senneterre is dependent on the forest industry, but implicitly promotes the industrial way of experiencing and imagining the forest. Although the banner calls for diversification, the centre of this diversification remains related to the forest, since the forest is the future of employment. In other words, while driving through Senneterre and passing under the banner, the boreal forest appears as a place that provides employment, a place that should be developed for economic reasons. According to the town's mayor, this banner was inaugurated in order to make people aware "that every tree that goes out of the town has an impact on the living of the community and that is preferable to keep jobs in here, in Senneterre" (MJM, 12/07/05).

Figure 5.8: Banner maintaining the industrial boreal forest boundary. Photo taken by the author, Senneterre (26/07/05).

For the mayor, the forest cannot be dissociated from the forest industry — this relation is vital for the survival of a town that has seen its population decrease significantly in

the past ten years (MAMR 2003).[61] By maintaining the industrial forest relationship outside the festival, the materialisation of the industrial imaginary transfers the power of the foresters into the town, beyond the biophysical environment where it normally holds sway.

The industrial imaginary of the boreal forest is also reproduced through popular and commercial buildings, like the main supermarket. Within this building, there is a painting of two lorries transporting timber to the mills (Figure 5.8), which demonstrates how the industrial relationship with the forest is vital to everyday life of the town, accessible to anyone who visits the supermarket to buy food. This normalisation of the industrial imaginary and its relationship with the boreal forest plays a crucial role in maintaining the forest as a space of extraction, the same space that is celebrated outside the building and outside the town. As with the banner, this painting and its placement is a sort of extension of the boundary performed through the festival, making it possible to frame the way the forest is imagined.

Figure 5.9: Painting the industrial relationships with the boreal forest: Lorries loaded with trees. Photo taken by the author in one of Senneterre's supermarkets (26/07/05).

[61] From 1996 to 2001, the population of Senneterre decreased 7.4 % (MAMR 2003). According to Statistics Canada, Senneterre's population was 4017 in 1986 and 3488 in 1996, whereas the last survey (2006) indicates that 3211 people live in Senneterre (CMQ 2001: 14, MAMQ 2006).

The banner (Figure 5.8) and the painting displayed in the supermarket (Figure 5.9) are not the only ways of experiencing the industrial forest outside the festival boundary. A guided bus tour of forest operations is organised by the most important forest industries of Senneterre (*Abitibi-Consolidated* and *Tembec*). Visitors are guided through different sites and transformation stages, such as tree planting, pre-commercial thinning and forest drainage, led by professional forest engineers who work for Abitibi-Consolidated and Tembec. They outline the necessity of these practices for maintaining the local economy and identity. While one guide presents the first stop on the tour, the second distributes a folder in which visitors find documentation about both companies and their practices. This folder contains information about public forest legislation as well as information about every step of forestry operations, including the harvesting and reforesting techniques used in the boreal forest of Québec. As their content suggests, these documents are directly involved in maintaining the industrial meaning of the forest and they participate in the construction of an illusory boundary set around the boreal forest. By their interaction with and circulation among of visitors, these documents allow an industrial imaginary of the forest to convey the industry's message and thus bound the ways in which the forest is experienced and known.

In visiting pre-commercial thinning sites, jack pine and black spruce plantations, and forest road infrastructures, the guided tour can be seen as a way to secure, protect and reinforce an imaginary of the forest as an industrial space. This place is also secured and bounded by reasserting the significance of industrial forestry for Abitibians. This was exemplified by the distribution of small gifts — such as notebooks, pens, baseball caps and t-shirts bearing the names of Tembec, Abitibi-Consolidated and the Ministry of Natural Resources and Fauna — at the end of the tour. This giving of gifts can also be seen as an exercise of seduction by an industry, promoting the economic and social benefits generated by the forest industry. In the same vein, this distribution of souvenirs allows the industry to project an image of forest caretaker, managing the forest for the good of the population. These gifts play a similar role to that of the security helmets which visitors have to wear while visiting forestry practice sites: they reiterate that the boreal forest is a place of extraction located at the heart of regional economic development. Distributing safety helmets also seems to reinforce the idea of the forestry industry as a caretaker, working for the safekeeping of forest users. It is also through the distribution of these gifts that the boundary of the industrial forest becomes visible.

Such items are the extension of the boundary into objects (t-shirts, baseball hats, pens) that will be used in everyday life.

Along with chainsaws, saw dust, banners and documents promoting the forest industry and its relationships with the forest, gifts portray industrial imaginaries as a common way of experiencing and knowing the boreal forest that is not restricted to the festival, but also obtains outside the festival. These different objects and their implications for the social relations involved in the Lumberjack Festival portray the boreal forest of Abitibi as a place framed by particular boundaries, which reiterate the role of foresters in taking care of the forest. In turn, by performing the role of caretaker, foresters and industry interests have full control of the boreal forest, not only by restricting experiences of the forest to those of industrial practices, but by controlling how the forest, and space-time itself, are imagined.

However, a closer look at the objects and performances involved in the production of the Senneterre Lumberjack Festival reveals that it is a microcosm in which different imaginaries of the boreal forest challenge the dominant industrial ones. It is through this microcosm that other ways to imagine and to experience the forest become possible, these latter already exist and the Lumberjack Festival provides the context in which they are quite easily visible. It is also by closely exploring interactions inside the festival that other imaginaries of the forest open up new possibilities of engaging with the forest, possibilities that are not suggested by the documents given to visitors on the forest tour or at the lumberjack competitions. These other imaginaries are present in the festival under different forms, forms that could be defined as resistant imaginaries.

5.4 The boreal forest of alternative imaginaries

Through Senneterre's Lumberjack Festival, various objects and material forms suggest that a variety of relationships with the forest exist. The presence of these objects indicates the difficulty of fixing and maintaining the meaning of the forest with industrial practices and machinery alone. On the main stage where the competitions are performed, the boundaries separating the participants from the visitors and from equipment and souvenir sellers become more apparent in the presence of places in which the boreal forest is experienced in different ways. These other places have little to

do with the performances on the main stage. For instance, game areas, sand pits and inflatable castles propose something completely different from what visitors can find in the lumberjack competitions. What represents the boreal forest is therefore not exclusive to the competitions and the production of an artificial forest that takes its shape from denuded trees and woodchips; it also consists of a playground through which children can experience Senneterre's *Festival Forestier* in a very different way than through the sound of chainsaws and a haze of exhaust smoke. Children and teenagers 9-15 years old can participate in Lumberjack Festival events specifically designed for them. Instead of being primarily associated with forest industry technologies, their challenge is limited to an obstacle race. Rather than a competition between individuals, these contests require teamwork if the participants want to complete their race. The interrelations between children, objects not related to the industrial use of the forest destabilise the industrial meaning of the festivities and the boreal forest. As shown above, the Lumberjack Festival celebrates the place created by an industrial imaginary of the boreal forest, created in performances that involve equipment and skills related to past and present industrial relations with the forest.

Inflatable castles, sand pits and tents full of games are not unique to this cultural event; on the contrary, they are the manifestation of what Massey (1994, 2005) has called a "global sense of place". According to Massey (2005), this global sense of place refers to an understanding of place as open, as made of interrelations between the local, the regional and the international; it is an "ongoing event" without finality or definite boundaries. The production of this open place or ongoing event can be seen through the local celebration of identity as it is proposed in the performance of forestry skills and knowledge of industrial forestry. The circulation of beer and fizzy drink cans, such as Pepsi, from the United States and other regions of Canada can be seen as the intrusion of particular products associated with the world outside the festival boundaries. These products circulate in many different contexts and their presence disrupts the local sense of Senneterre's festival. In the middle of the main street, between forestry machinery, fast food stalls sell hot-dogs as well as regional offerings like the *poutine du forestier*,[62] presented as a local specialty among several dishes coming from various areas such as pizzas, corn-dogs and hot-dogs.

[62] *Poutine du forestier* consists of a bowl of chips topped with cheese, on which brown sauce, mincemeat and bacon have been spread.

The circulation of different objects and meals of multiple origins indicates that events such as Senneterre's Lumberjack Festival construct unfixed places and identities, in perpetual reproduction through the interactions between these objects, their origins and those who participate in and attend the festivities. Through the lumberjack performances, the boundaries that maintain the boreal forest as a place where the industrial relationships are prioritised become porous and mutable, due to the intrusion of objects revealing the openness of the festival. This porosity is not only linked with the products sold and consumed on the festival site. It also appears behind the children's area, just on fringes of the bleachers, in the presence of a mechanical rodeo bull (Figure 5. 10) that has been roughly merged into the main festival scene. The presence of this mechanical bull, on which visitors are invited to ride, shows that the rodeo culture of western North America has crossed the country to become part of an eastern forester festival.

Figure 5.10: The openness of the *Festival Forestier de Senneterre*: Introducing rodeo culture to the boreal forest. Photo taken by the author (01/07/06).

As Penrose (2003) has demonstrated, rodeos are sites in which the biophysical elements of the prairie that are implicated in the production of "nature" — such as wild horses — are tamed by Euro-Canadians. By analogy, this taming process is embodied in the act of riding a mechanical bull; but the end result is not a taming of "wild animals" but of the boreal forest and the ways of imagining it. The rodeo culture perceptible in the presence

of this mechanical bull, and in the country music playing in the tent where evening shows are presented, has little to do with the forester identity of the Abitibi region. They are elements that come from another colonial power and stories that have not taken place in Abitibi. The presence of the mechanical bull, cowboy hats and western music (played in English in a Francophone environment), added to the inflatable castles and the circulation of hot-dogs, pizza, corn dogs and Pepsi, redefine Senneterre's Lumberjack Festival as an open place that is not bounded by local culture, and not limited to the performances embodying the industrial forest imaginary. The festival is the intersection in which various cultural imports and manifestations circulate, meet and interact to create something that is both unique to Senneterre and that links it with a more open festival space.

This festival openness means that the wide range of interactions associated with the Lumberjack Festival enable this event to disrupt any attempts to freeze its meaning and encapsulate it with a homogeneous definition or interpretation, such as a "local cultural product". On the contrary, this festival is an event capable of demonstrating the heterogeneity of space. This is perceptible in the multiplicity of interactions occurring between humans and between the humans, non-humans and objects that are involved in the festival production (Massey 2005). The political implications of representing the festival as an open rather than closed, fixed place are multiple, and this is what I will raise in the next section, beginning by concentrating on how the variety of forest imaginaries and engagements found within the Lumberjack Festival and Senneterre's town centre constitute challenges — however inadvertent — to the dominant industrial imaginary of the boreal forest.

5.5 Towards alternative imaginaries and places of the boreal forest

5.5.1 Birch bark, goose and canoes: the other shapes of the forest

Amongst the buildings located along the main street where forestry machinery is displayed, a building has been annexed for the lumberjack festivities, on which the words "*Art Boréal Expo-Vente*" (Boreal Art Exposition and Sale) are visible. This is a building for art lovers that has been converted expressly for the event; it is a place in which to go and admire the ways in which local artists have represented other

relationships than those of industrial forestry which dominate the festival. In other words, this building encloses other imaginaries of the forest through diverse objects and material forms such as sculpture and painting. The location of this building is highly significant: far away from the main competitions and not displaying any machinery related to forestry. The building is therefore isolated from the meaning of the boreal forest as performed through the mainstream lumberjack festivities. The isolation of this building can be seen in Figure 5.11, in the presence of lorries and the quad bike half-hidden at the edge of the picture: the building is located off the main street of the festival, and thus the imaginaries of the forest located inside the building are also peripheral to the main events, outside the dominant way of imagining and experiencing the forest (both literally and figuratively).

Figure 5.11: Enclosing the alternative boreal forest imaginaries: The production of the boreal art centre. Photo taken by the author at the *Festival Forestier de Senneterre*, Abitibi (01/07/06).

Upon entering the main room of the building, it is possible to see representations of boreal forest imaginaries in a variety of forms. For example, in one corner, objects made from birch bark, black spruce, animal skins and beaver fur are displayed on a small and remote table. These objects suggest relationships with the forest that differ from the industrial relationship performed through the lumberjack competitions. The material used in the creation of Algonquin art reflects skills and imaginaries of the forest that are absent from the industrial performances being celebrated outside the building. In

Figures 5.12 and 5.13 it is possible to see objects that refer to the cosmology of Algonquians, such as eagles, and the presence of bird feathers and bear teeth in other types of jewellery demonstrates the significance that these animals have in Algonquian culture. Animals have many roles in Algonquian society — they may, for instance, be the link or messenger between *Kitcie Manitou* (who many Algonquians associate with the Creator, the entity that created the earth and the life on it) and humankind (Spielmann 1993).

Figure 5.12: Embodying boreal forest imaginaries through native cultural objects. Photo taken by the author, Senneterre, Abitibi (01/07/06).

Figure 5.13: Embodying boreal forest imaginaries through native cultural objects. Photo taken by the author, Senneterre, Abitibi (01/07/06).

Animals play a significant role in the social organisation of Algonquians and their regular depiction in arts and crafts also indicates that the biophysical environment in which these animals live is highly significant. Thus, the boreal forest becomes the place that is indirectly represented by animals and the hunting material (e.g. moose calls) produced by First Nations artisans.

Miniature practical equipment, such as snowshoes and canoes, are two important objects that contribute to the Algonquian boreal forest imaginaries and indicate non-industrial relationships with the forest (Figure 5.12). This relates to the nomadic way of life often associated with traditional ways of experiencing the forest. In fact, snowshoes and canoes are two transportation systems that allow Algonquians to navigate not only the deep snow that covers the forest during winter but also the numerous rivers and lakes within their hunting territories. Above all, these are technologies and materialities that engage the Algonquians with the forest in ways that spectators cannot see on the main stage of the *Festival Forestier*. Although numerous Algonquian trappers have swapped snowshoes and birch-bark canoes for snowmobiles and fibreglass motor boats, these objects embody particular imaginaries of the boreal forest that have to do with *Aki*. This concept of Aki was described to me by an Algonquian community chief as follows:

> "'the one who gives life'. It is also about where to put your feet on the ground, in water, on trees, on leaves, all that is *Aki*. It's a concept that comprises all the elements. If you only talk about the forest, then you don't talk about all the other concepts that come with it. It's more than the boreal forest!" (PD, 11/06/05, my translation).

The imaginary of the boreal forest as *Aki* is made manifest through Algonquian art forms — not only through miniature birch-bark canoes and snowshoes, but also through wooden birds representing Canadian geese and ducks, or in the production of birch-bark containers and moose calls. These objects show the existence of alternative skills and ways of experiencing, engaging with and imagining the boreal forest.

These alternative perspectives are not restricted to trees, but also include animals. This can be seen in sculptures and in the skins, feathers and fur involved in the creation of shoes and ornaments such as bracelets and necklaces. The creation of Algonquian arts and crafts involves knowledges about the forest that are not present in the lumberjack competitions or in the industrial relationship with the forest celebrated through the main festival events. Things like knowing which type of tree and which kind of roots and

resin are needed (i.e. birch, white or black spruce) for making the moose calls (Figure 5.12, 5.13) snowshoes and other objects on display are linked with particular relationships and imaginaries of the boreal forest that are marginalised at the Boréal Art Centre, far from the main competitions and the social interactions involved in maintaining the power of the industrial imaginary of the boreal forest.

The forest imaginary represented by *Aki* is involved in the production of the boreal forest as a place in which relationships with the forest include almost all non-humans — plants, rocks, soil, wild fruits, trees and animals. Although *Aki* is described by Algonquians as completely different from the industrial forest celebrated through the Lumberjack Festival, they need and use the same type of technology as that used to materialise the industrial boreal forest imaginary — chainsaws, axes and so on. However, for Algonquians, the way in which chainsaws are manipulated differs from the industrial forestry practices demonstrated in Senneterre's Lumberjack Festivals. Trees are not transformed into cookies and saw dust, but rather into the shapes of animals, canoes, snowshoes and moose calls. All of these objects embody specific imaginaries of the forest that are closely related to hunting activities. These objects also reflect the traditional way of life of Algonquians as trappers and hunter-gatherers and they indicate that, through *Aki*, the boreal forest is associated with the animals, plants and trees found within. This is different from the Lumberjack Festival, which pictures the forest as uniquely the place of trees.

The presence of these Algonquian objects makes it possible to see that other ways of experiencing the forest exist but are overshadowed by the dominant industrial relations. Through their interrelations, the Algonquian objects work to maintain *Aki* as something concrete, something that can be seen and touched and also tasted (through traditional dishes offered in recipe books). The imaginary of *Aki* produces the boreal forest as a place bounded by a particular cosmology and ontology that comes alive through the production of a material culture differing greatly from the competitions presented at the Senneterre Lumberjack Festival.

5.5.2 Painting the Boreal forest

Opposite the Algonquian table, on the other side of the Art Boréal centre main room, there are paintings by local artists (Figure 5.14). As with the First Nations art objects,

these works embody still more imaginaries of the boreal forest and still other ways to experience and know the forest. Painting is, in itself, an innovative way of experiencing and engaging with the boreal forest, requiring skills that are not typically represented within the festival's representation of the forest. Experiencing the forest in this manner involves manipulating brushes, acrylic and oil paints on canvas and wood, using particular techniques, skills and knowledges to materialise imaginaries of the boreal forest. For instance, knowing the type of light one needed to create one type of effect on the canvas, or knowing how to capture the movements of animals or waves on a lake situated in the forest where trees are growing densely, is all part of the knowledges that are particular to painting. According to the local artists present at the exhibition site, some of their paintings were made in the forest, while others portray photos already taken and yet others were the simple products of imagination. Although the techniques and media used by the artists to reproduce imaginings of the boreal forest vary, their images all show relations with the forest that differ markedly from those being performed through forester's competitions outside the centre. Imaginaries of the forest are the products of different experiences painters have with the forest, experiences which they try to immortalise through the production of images (see Bachelard 1957).

Figure 5.14: Paintings representing the resistant imaginaries of the boreal forest. Photo taken by the author, Senneterre, Abitibi (01/07/06).

As with the Senneterre Lumberjack Festival and First Nations sculptures, some paintings pay homage to previous generations through representations of canvas tents and men wearing outfits and using equipment associated with the first surveyors. Also common are pictures of ice fishing and hunting scenes. Like Algonquian arts and crafts, landscape paintings represent the boreal forest as empty of humans and forestry machinery, which contrasts sharply with what is being celebrated just outside the building. These alternative imaginaries are largely marginal to the Lumberjack Festival and to the forest imaginaries promoted through the main festivities. The existence of such alternate representations of the forest destabilises the industrial ways of engaging with the forest and shows the multiple and complex imaginaries involved in the production of the boreal forest.

These alternative representations of the forest are not restricted to the paintings inside the Boréal Art Centre; they are also present in other buildings of Senneterre, such as hunting and fishing equipment shops, and shops repairing and selling vehicles like pick-up trucks. However, the most impressive representations of alternative imaginary places are inside Senneterre's supermarket, in the same building as the painting showing lorries transporting logs to nearby mills (see Figure 5.9).

On entering the supermarket, the first painting one can see features three moose: two bucks with their big antlers, in a lake, with a female in the background (Figure 5.15). The image of these animals in a supermarket indicates the common presence of the animal in the region, but the painting suggests more than a simple image of moose enjoying a lake. It shows an experience with the forest that has more to do with observing animals than with hunting (although observing is indeed part of hunting). In this painting, trees are the background, almost absent, leaving the significance to the animals. This painting also shows the absence of any feature related to the industrial imaginary of the forest.

Figure 5.15: Observing moose in the supermarket: Painting the other imaginaries of the boreal forest. Photo taken by the author in one of Senneterre's supermarkets (26/07/05).

The second painting (Figure 5.16) represents fishing and outfitting activities, recognisable by the cottages and the inn located on the hill on the right. This painting also contests the domination of the industrial imaginary of the forest; it represents the forest through its lakes, on which forest users experience the forest through fishing. This forest is exempt from chainsaws and other machines involved in harvesting operations. The motor boats, nets and fishing lines used by those illustrated in this painting are the objects that make this imaginary of the forest coming alive. The technologies used in fishing activities (e.g. sonar, reels, bait and fishing lines) require specific knowledges related to fish behaviour and to the forest that surrounds the lake. For instance, knowing where "hot spots" are located requires familiarity with the lake, but also an understanding of equipment and of the surrounding landscape. Things like knowing which bay is shaded in the morning or in the afternoon because of the presence of trees, or the use of a particular tree as a marker that indicates a hot spot such as a snag,[63] are all examples of knowledge of the forest region that is used by fishermen. These examples show the interaction between the different types of knowledges involved in a successful fishing day, but they also show that the place considered to be the boreal

[63] A snag consists of a standing dead tree either in an advanced stage of decay or completely dry, from which the leaves and most of the branches have fallen (Côté 2003: 593).

forest can be embodied through a painted (imaginary) fishing site displayed in a supermarket.

Figure 5.16: Experiencing and knowing the forest through the recreational imaginary: Fishing in the boreal forest. Photo taken by the author (26/07/05).

Despite the dominance of agricultural fields, the third painting (Figure 5.17) shows quad bikers on a dirt road that eventually leads into the forest. Although this painting does not reflect a direct relationship with the forest, it shows that quad bikes are not only used for forest operations; they are also the materiality and machinery of leisure activities that produce experiences with the boreal forest. Like the other paintings representing fishing, hunting and fauna observation, quad biking involves specific knowledges of the forest, for instance, the type of soil suitable for this activity, the distance between the trees that will allow bikes to pass easily, the topography, and so on. All of these particularities are important biophysical features that concretise the boreal forest imaginaries into a place bounded by the use of quad bikes. Such information about the physical properties of the forest need to be known by quad bikers to avoid potential problems and accidents, but the knowledge also transforms their imaginary of the forest into a concrete place in which they can practice their activity.

Figure 5.17: Experiencing the boreal forest through quad biking. Photo taken by the author (26/07/05).

The last painting (Figure 5.18) on the wall of Senneterre's supermarket refers to winter activities. The boreal forest can clearly be seen in the background but the emphasis is on the users enjoying the forest through cross-country skiing, snow-shoeing and snow-mobiling. The imaginaries of the forest portrayed in this painting are those of the forest as a place where one can enjoy spending time during the winter. The activities and the technologies that support these imaginaries are involved in the production of the boreal forest as a place for winter activities, a place that has nothing to do with forestry industry.

The paintings in the Art Boréal Centre and those displayed in the supermarket share many things in common, not only because they show different ways to imagine and experience the forest, but also because they all ignore the industrial imaginary of the boreal forest and the industrial relationships celebrated through the Senneterre Lumberjack Festival. Although the painting of lorries carrying logs (Figure 5.9) embodies the industrial imaginary of the forest, the other paintings found in the supermarket represent relationships with, and skills performed in, the boreal forest which are not celebrated through the festival competitions. Through these paintings, it is possible to see overlaps between the themes chosen by the artists representing the boreal forest in the Art Boréal centre and those in the supermarket in which the forest is a background for hunting and fishing activities, and in which industrial practices are largely absent.

Figure 5.18: Reproducing the boreal forest imaginaries through winter activities. Photo taken by the author (26/07/05).

This interrelation between boreal forest imaginaries and the places they embody in paintings makes it possible to destabilise the view that the boreal forest can only be experienced and accessed through industrial practices. For instance, in a region like Abitibi, quad bikes are vehicles used for multiple purposes, ranging from going for a short ride in the nearby trails, to gaining access to hunting and fishing camps, to making possible the materialisation of specific imaginaries of the forest. Driving these vehicles into the boreal space shows how the different imaginaries of the forest and the places they produce are interrelated and how they all participate in the ongoing event that is the boreal forest of Abitibi. If the boreal forest is something that exists only through its continuous production and reproduction by various users, then it must be seen as something that must be considered through movement and change. This means that the multiplicity of imaginaries and places embodied through various arts and crafts weaken the possibility to imagine the forest as a homogeneous space such as that which it is celebrated through the *Festival Forestier de Senneterre*.

By their presence, arts and crafts such as paintings, sculptures, miniature canoes and snowshoes show that the Lumberjack Festival is a more open event that it might seem at first glance. These objects are the products of multiple experiences that participate in the configuration of the boreal forest (de Certeau 1984, Harvey 1996, Massey 2005). These multiple experiences are the various interactions between people and objects that bring

different imaginaries of the forest into being. This contradicts attempts (consciously and unconsciously) by the forestry industry and the Senneterre Lumberjack Festival to present the forest as a singular and homogeneous place. Instead, the place identified as the boreal forest is negotiated by the presence of other imaginaries that make the existence of other boreal forest places possible. The meanings attached to the other boreal forest imaginaries metamorphose the industrial boreal forest place into a constellation of interrelated imaginaries, opening up the forest places to negotiation — the negotiation of the stability that is represented through the Lumberjack Festival.

5.6 Conclusion

In this chapter I have argued that the boreal forest is not simply framed through the boundaries of industrial forestry. On the contrary, the presence and circulation of objects that embody different imaginaries of the forest shows that the boundaries of the industrial boreal forest, as represented and celebrated through the festival, become porous and malleable. As a result, the forest is revealed to be a more an open place than forestry perspectives suggest. This interwoven amalgam of boundaries is created through the presence of imaginaries that view the boreal forest as a set of overlapping places, as opposed to the narrow view presented by the Lumberjack Festival.

The industrial imaginary of the boreal forest is contested by various alternative imaginaries that resist the homogenisation of the dominant vision of the forest. These alternative imaginaries are encapsulated through objects that become interrelated to the boundaries and imaginaries of the forest created by forest users and become involved in a contestation of the dominant sense of place celebrated in the Lumberjack Festival. As such, the microcosm that is the Senneterre Lumberjack Festival is a good starting point for the examination of the relational politics of the boreal forest, which will be discussed in the next chapter. By taking the Senneterre festival as an example, it is possible see the unstable identity of the boreal forest, contradicting the imaginary generated by scientific practices and discourses and used by the forest industry. Further empirical studies need to be undertaken to understand how the multiplicity of imaginaries displayed in the Lumberjack Festival come alive through practices in the boreal forest. These multiple and unstable imaginaries are the heart of political negotiations about the ways of knowing and experiencing the forest, and are therefore

crucial for opening up other ways of engaging with the forest that may provide useful alternatives to current forest management strategies. Through the use of the *Festival Forestier* as an example of how different imaginaries of the forest become manifested in objects that represent particular places, I have emphasised the link between different users and the materialities involved in the production of alternative imaginary places that different from the more dominant ways of experiencing the forest. In the following chapter I will expand on how these different places are negotiated in the production of relational politics of the forest.

Chapter 6

Renegotiating Territoriality: The Politics of Imaginary Places

---

6.0 Introduction

As seen in Chapter 5, the *Festival Forestier de Senneterre* shows how the boreal forest is made of multiple imaginaries that disrupt attempts to bind the forest as a fixed entity embodied solely by industrial skills and relationships. It is easy to talk about the heterogeneity of the boreal forest and underline the multiplicity of imaginaries involved in its production, but harder to demonstrate how these imaginaries are made manifest. This is why the exploration of the festival was important for understanding how marginal imaginaries of the boreal forest are reflected into places. The materialisation of these imaginaries through a set of highly mutable boundaries helps to conceptualise them as politicised places that embody alternative ways of experiencing and knowing the forest.

These places of alternative politics correspond to those in which marginal imaginaries are manifested and bounded through specific discourses, practices and technologies or materialities. Examples appear in almost every practice performed in the boreal forest which demands knowledge and skills not directly associated with the forest industry. Activities like trekking, hunting, bird watching, painting and trapping are tied to specific experiences, skills and knowledges of the forest, interrelated with imaginaries of the forest resistant to the homogenisation of industrial relationships. Places of alternative politics are produced through a chain of interrelations between humans and non-humans, creating constellations of relationships with the biophysical components of the forest. For instance, the age of forest has an impact on the type of animals trappers and hunters can encounter. Those encounters in turn generate new specific experiences, which in turn metamorphose the cybernetic industrial forest into something different. If Senneterre's Lumberjack Festival makes it possible to see how other imaginaries of the boreal forest are embodied through objects, the places embodied by these imaginaries need to be understood as centres of everyday activities expressed by many forest users.

This chapter is divided in three sections that show how the multiplicity of forest imaginaries is involved in the production of relational politics. The first section shows how different forest users materialise their imaginaries of the forest through everyday life relationships with the forest such as through hunting, canoeing and trapping. Section two introduces how these quotidian practices allow forest users to produce and negotiate the representation and meaning of the forest through diverse imaginaries. Finally, the third section shows how the politics of boreal forest imaginaries are interrelated and co-produced in the production of the boreal forest as an open space that should be politicised accordingly.

6.1 Tracing imaginaries through the forest

The region of Abitibi is recognised as a paradise for hunting and fishing activities, as this can be seen by the large number of outfitters who have constructed lodges and inns for tourists' hunting and fishing holidays. In Québec, there are two types of outfitters: those with exclusive rights and those without. Exclusive rights give an outfitter full control over the part of public land that the government has conceded to them. Without these rights, the task is more complicated, as the outfitter has to cope with a multiplicity of forest users whose interests may differ greatly from theirs. In this context, both place and territory are highly relevant, both because they are legal entities defined by concrete boundaries, and because they have a great effect on how forest users imagine the boreal forest and embody their imaginaries once in the forest. For instance, being within an enclave of the forest that is specifically identified as an outfitter's territory means that specific imaginaries of the forest (those associated with hunting and fishing activities) are free to circulate without being confronted by forest industry practices (at least, in the case of exclusive rights outfitters).

The activities and facilities offered by Abitibi's outfitters are predominantly associated with hunting and fishing activities, but they also organise snowmobiling in winter. Through these activities, specific skills, objects and knowledges of the forest and the technologies used in these activities concretise boreal forest imaginaries into places for holiday and adventure. These places become clearer when in the forest. For instance, it is very common for outfitters to attract game with food, especially in the case of bear hunting. The interconnections between hunting equipment, the material needed to attract

the bears and the biophysical features that compose the forest become part of the imaginary of the forest as a hunting place — producing what outfitters call "bait sites". An outfitter who managed a non-exclusive lodge, he explained to me how bait sites become interrelated to embody the particular imaginary of the forest sells to his clients:

> BR: I have about 7 or 8 territories that are on the lake, and I have territories in that direction *(pointing the southwest of the lake)*. Well I say territories, but it is bait, they are bait sites, it is not exclusive territories, it is really baits.
> Sébastien: What do you mean by bait sites?
> BR: It's a place where we attract the bears in order get them to the bait sites while hunters arrive… I start the bait with meat. I am a butcher, so all the waste from caribou, moose and white tailed deer, everything that is not good, is frozen and in spring I use it to attract bears. I also use fat, lots of fat… and doughnuts… So that is it, this is a bait site. I have photo I could show you if you want?
> Sébastien: Yes I would like to see this.
> BR: *(showing me photos)*: That's what a bait site looks like. Here *(pointing with his finger)*, is a bucket suspended on a tree that the bear visits, like here *(pointing to another photograph)* the bear is getting into the bait (RB, 22/07/04, my translation).

These bait sites become bounded and understood as places and hunting territories bounded by the elements used to make concrete hunting practices — elements such as butchering waste, doughnuts and fat in a plastic bucket that attracts animals and provides clients an exciting hunting experience. The majority of outfitters with non-exclusive rights interviewed for this project demonstrated that the places they produce through their brochures and adverts can be encountered through the activities practiced in the forest and the experiences visitors had with it.

This is reiterated by hunters when they describe their experience of hunting in the boreal forest. The hunting skills and knowledge about animals, the biophysical constituents of the forest (non-humans) and hunting equipment are important items that will provide good hunting opportunities. For instance, a hunter describes to me how to track down a moose in the forest, explaining that it is:

> [a]lways a challenge to find a way to push the animal out of the woods with a gang of guys, and it is very enjoyable. But to do that, you need to know how to work with nature, to know how to be silent while walking in the woods and playing with the elements such as rain and wind (BR, 22/07/04, my translation).

In the knowledges demonstrated (including knowing about equipment and climatic elements) and skills performed by hunters, the public boreal forest becomes territorialized as a place in which hunting practices become ways of engaging with the forest. By performing these knowledges, hunters materialise hunting imaginaries of the forest and produce the forest as a hunting place. Hunting technologies (e.g. rifles, moose calls, clothing and so on), used by hunters and outfitters to create the contexts that allow them to make their imaginaries of the forest into tangible entities, are also involved in

the production of other places, such as where hunters go to learn about the biophysical constituents of the forest. This means that despite the priority given to hunting, the forest is also the place in which they (hunters and outfitters) see connections between the forest and their lives; they make analogies between the biophysical constituents of the forest and humans and the society in which they live.

For example, an outfitter who likes going hunting in the Laurentide region of Québec (south of Abitibi) described how moose hunting also creates other forest places. These are places in which the forest is free from industrial machinery and equipment; places produced through the contexts created by the hunting equipment and the non-humans constituting the forest. This outfitter was describing well the significant role played by the biophysical features that make the forest a hunting and learning place. He told me that:

> BR: …there are people who say "me, I don't like moose hunting because you wait", no, no, this guy doesn't get it *(laughs)*. For me, this is what I like, since here *(talking about his lodge and business)*, it is rare that you can sit for a long time. [While in the forest] you look at what moves around you, and believe me, there are a lot of things that move in the forest: squirrels, otters, minks, the wind and everything that you can see. You watch all that is going on, you look at the clouds moving, it is there that you can see the real nature, it is when you take the time to sit down… when you take time to sit down, [you can say] "this thing is made this way"… I never waste my time in the woods! You learn without being obliged to walk [your hunting territory], it is the others that come towards you, you're listening, you're listening a lot.
> Sébastien: Listening to what is going on around you in order to understand what surrounds you when you're in the forest?
> BR: Yes, you observe and you say "Oh! This is made this way" and this is where you understand that there is not a single human that looks the same, that there is not a single tree that looks the same (RB, 22/07/04, my translation).

This interviewee emphasises that going hunting is not only killing an animal, it is also waiting in a tree stand for a moose and thus being immersed in relationships with the forest which appear to be grounded in the contemplation of the different elements that compose the forest.

The technologies involved in bounding a hunting place also play a role in the production of other imaginaries of the forest. By the existence of these other places (e.g. the forest as a hunting place and the forest as a learning place) it is possible to see the openness of the forest, which as I mentioned, consists of a forest that is open to definition; a forest that is not fixed by stable boundaries. The technologies and objects used to frame the forest as a hunting place are linked with the production of other places, and the boundaries between these places are not definite, since both imaginaries

and the places that they produce can coexist and influence each other. The forest becomes an unstable body that blurs the differences between places. The example of hunting shows that despite the presence of a hunting imaginary of the boreal forest, animals, biophysical elements, and hunting gear are involved in the production of other places that produce other imaginaries of the forest.

The above description of a hunting experience shows how places become constructed by the intensity of interactions observed and felt in a specific experience (in the infinite movement of the earth and in the living moment). Forest users have experiences with the forest (e.g. through hunting and fishing) and it is these experiences which give connotations to places. In the moose-hunting quotation, the forest is a place in which endemic movement in the heart of boreal forest can be observed. It is movement that can be seen through growth (young trees) and decay (dead leaves, soft snags), sunrise, zenith (midday), sunset and so on. The hunting place is the product of the interrelations between all the signs of non-human movement (e.g. blow-downs, animal tracks, etc.) and the action of participating in this movement by linking these events together through experience. These experiences occur in observing birds flying and hearing them singing, feeling wind on one's skin and smelling the plants and the dead leaves on the forest floor, all working together to produce various imaginaries of the boreal forest.

Through these experiences, the boreal forest becomes bounded by various connotations and overlapping boundaries that present the forest as an event in which interrelations between forest users, the biophysical components of the forest and technologies are essential for bringing the imaginary hunting place into existence. When hunters go into the forest, they go to encounter something they don't know yet, to materialise another experience inspired by a particular imaginary of the forest, but they also go to experience something similar to what they know already, something that takes form through the technologies and skills they bring in the forest.

6.1.1 Hunting camps

In the Abitibi region, most of those who practicing hunting activities possess what local people call a "hunting camp": a wooden plank house with a wood-burning stove where hunters go during the hunting season. This is generally in the autumn, though most use

their camps as retreats during the summer as well. The camp is often the place where family members meet. It is the place where the forest becomes associated with the history of particular hunters; it is where the imaginaries of the boreal forest take form through individual experiences. Along with hunting equipment, hunting camps are parts of the interrelations of objects and technologies that contribute to imagining the boreal forest as a hunting place. As buildings, hunting camps are places in themselves, they are the environments in which interrelations between humans and non-humans become central to the production of various stories that produce specific imaginaries of the forest. One interviewee explained what she likes about her hunting camp as follows:

> MBT: What I like the most is the tranquillity. We said we can hear all the little noises around us. And there are noises we don't know, I ask the question because I am quite fearful. In case it is an animal that…
> Sébastien: A bear?
> MBT: Yeah. I ask the question and [my husband] answers and I look if I can see it at the same time. It's very nice going in the woods, but you don't see all the animals in it. I tell myself that we learn everyday, each time we're in the woods (MBT, 16/07/05, my translation).

This interviewee shows that they do not go to their camp only for hunting; they go there because they like to relax in "the tranquillity". She talks about the forest around their hunting camp or what she call the woods, and it is interesting to note that what she likes is also related to what she learns from being in the forest on a daily basis. This supports what other interviewees also mentioned— mainly that a hunting place is not merely the place you go to kill an animal. Like tree stands, hunting camps are not only the building through which the relation between hunter and prey is established; it is also through the hunting camps that new knowledges are acquired in interactions with the forest.

6.1.2 Canoeing

Going into the forest to learn is not restricted to hunting activities. For instance, one interviewee indicated that while canoe-camping on lakes and rivers located in the boreal forest he always says:

> LC: Hey! I feel so good here, I'm crazy to work everyday in town and negotiate agreements and all of that… why don't I stay here, I would feel so great to live with clouds on nature's rhythm.
> Sébastien: So if I understand you well, it is the space understood as natural that you are incline to retire in…
> LC: Closer to me I think, closer to me, more relaxed with and less worried, well, not the same.
> Sébastien: Is it like a spiritual place?
> LC: Yes, yes why not! Underneath all of that, I've taught canoeing for many years and we were saying that we want to pass on a philosophy, a thought, a way of life… they are values like that we are experiencing, but at the time, I found them in nature and they

> are quite important to me, although I cannot live with them everyday, since I need to work. However, at work, I can succeed to change things because of them (LC, 10/06/04, my translation).

Through canoe-camping, this interviewee describes the forest as a place in which he can learn specific knowledges that contribute to the production of values he articulates through his work. The boreal forest is a place in which experiences with non-humans lead forest users to develop philosophies and ways of life that cannot be found in other places. Experiencing the forest through canoe-camping has led this interviewee to develop an imaginary of the forest in which the forest is a place he goes to disconnect with the worries related to his life in the city. According to him, the forest and the activities practiced in it bring him closer to who he is. As with the quotations about moose-hunting and hunting camps used above, the forest is the place in which knowledges are produced. Even though this interviewee was a biologist working for the Federation of ZEC,[64] his imaginary of the boreal forest produces a place bounded by knowledges that have little to do with the sciences used in the management of animals or with the forest trapped within the legal boundaries of ZECs. As it is the case with outfitters and the use of hunting camps, the equipment required for a canoe-camping trip (tents, canoes, paddles, waterproof bags, gas cookers, ropes, life jackets and so on) helps to territorialize the boreal forest as a canoeing place: a place to go back to one's roots. It is through these objects that canoe-camping becomes possible and it is through canoe-camping that the forest is imagined as a place that awakens consciousness of the non-human interactions that take part in the boreal forest — leading to a development of other relationships with the forest than those defended by industrial forestry.

In turn, these objects can be involved in producing a context that creates a philosophy of life. In the above quotation, the interviewee describes the boreal forest as a place where experiences with the biophysical elements of the forest instil values that become part of what I call a forest imaginary and part of the history of this specific individual. As the quotation used above (CL) the imaginary of the forest as a canoeing place is described without reference to the industrial forest or to the cybernetic boreal forest outlined in Chapter 4. As the next section makes clear, this absence is also apparent in imaginaries of the forest as a trapping place.

---

[64] The Federation of ZEC is the federation that manages the *Zones d'Exploitation Controlées* (Controlled Exploitation Zones), which are areas that can be on either public or private lands that allow forest users to do various activities especially hunting and fishing. Contrary to parks and fauna reserves, the financial management of ZEC is handled by a non-profit organisation and is self-financed.

6.1.3 Trapping

Other knowledges and ways of experiencing the forest produce different places — such as those created through trapping activities. One of the forest users interviewed for this project was formally representing Québec's Federation of Trappers. He refers to knowledges of the forest that come from the activity of trapping; knowledges that are related to being in the forest and again reinforce an imaginary of the boreal forest as place in which users go to learn something that is not delivered by forestry science and biology. This is particularly interesting as this interviewee is not only a trapper but also holds a PhD in biology (animal ecology). He described the ways in which he experiences the forest as follows:

> …in the forest you always learn something, if you pay attention, you will always see new things even after years, after 25 years, you'll see an animal doing something or a lump on a tree that you never saw, or a new kind of mushroom. There is always something new and this means that [going into the forest] is never, never, never dull (LS, 07/06/04, my translation).

As in other cases, such as hunters going to outfitter lodges, this trapper goes into the forest to learn about animals and the biophysical environment and through this description the interviewee refers to the movements that create space, movements that interconnect non-humans and produce boreal forest imaginary places. The forest becomes a learning place and a trapping place, which can coexist without clear boundaries. Another trapper adds a bit more on the knowledges produced through trapping activities, claiming that:

> "there are things I don't believe until I don't see them. I learned that from animals" (MP, 09/07/05, my translation).

This type of statement comes from a trapper who has spent 25 years in the boreal forest trapping animals and it shows that the experiences provide types of knowledges which produce the forest as a place in which humans can learn by paying attention to non-human interactions.

This learning quality is often restricted to the experiences trappers have with the forest animals living in their trapping territories, or what they commonly call their "trap lines". Trap lines are the physical (stream, trees, animal trails) limits used by both Algonquian and Euro-Canadian trappers as markers that delimit the area in which they can "harvest" animals for their fur and meat. In order to make trap lines or trapping territories concrete entities, trappers will use different biophysical referents to transform the forest into a place of hunting/trapping, and the relationships with that place produce specific

knowledges about the forest. As Speck (1915: 290) has emphasised, Algonquian hunting territories are materially constituted and bounded by biophysical features (e.g. lakes and rivers), and are "handed down from generation to generation". This differs from Euro-Canadian trap lines that are:

> …the townships lines, the water lines… There were the lines along the roads it was written [on a sign] "townships of X", these were my trap lines. When you were in these lines, game was located on each side, there was nothing damaged, it was always nice… It was written on a map, but now you cannot tell where the line is [because of forest exploitation]" (PM, 09/07/05, my translation).

In both cases, trap lines are the elements that allow trappers to identify places of knowledge production. Trap lines are the references for the imaginary place described as the boreal forest; the forest in which trappers install traps for the types of animals they want, according to the vegetation, light, the presence (or not) of water and humans.

Just like foresters delimiting the areas of the forest that will be harvested through forestry practices, Euro-Canadian trappers bound their sites with orange flags, they paint signs on trees to mark their traps or they use other material (such as plastic sheets nailed to a tree) to indicate the presence of a trap. All these objects converge in the production of zones that territorialize the forest into various trapping sites in which the relationships with animals and other non-humans are central to the meaning attached to place. For Algonquians however, trap lines are a little different. This is mainly because their traditional territory has not been legally recognised and only a small portion has been transformed into two small reserves (Leroux 1995, Chamberland *et al.* 2004), in which some members have trapping lines that were owned by family members. Algonquian trapping territories are the places in which the imaginary of the forest becomes connected to the *Aki* explained in Chapter 5: the imaginary of the forest that it is not only associated with the forest but with all the non-humans that create the forest. For example, a member of the Pikogan reserve explained the significance of trapping territories to Algonquians as follows:

> …when you're born in a tent instead of a hospital, the trapping sector of your father, that was your grand father's before, has not the same connotation [as the boreal forest]. The sense of belonging to a territory is difficult to explain because it's like something innate. It is like walking… When a company harvests it, it is part of this that disappears (CB, 26/07/05, my translation).

This interviewee speaks about the traditional trapping and hunting territories between which Algonquian groups migrate from season to season, and stresses that the ways in which they engage with the forest are innate epistemologies that cannot be dissociated from it. These territories are places in which Algonquians can connect with their history

and with their identity. This constructs the boreal forest as something more than a place that provides food, it is also the place in which they can find their cosmology and sense of belonging (which is something that is rather difficult for the Algonquians of Abitibi and for First Nations people in general).

During my field work, I had the opportunity to spend some time with two trappers of the Lac Simon community, on a trip mainly organised to explore the territory of one of the trappers. While driving, both trappers were continuously looking for animals and animal traces. They described their territory (trap lines) and the snowmobile trails they use during winter, as well as pointing out the areas in which there are concentrations of moose (browsing areas). They also identified the kind of areas were suitable for a fox trap (such as on a tree that crosses a river), and what kind of skills they need to trap *Canidae* species such as wolves and foxes. Through this exposition of knowledges, I noticed the eldest man's ignorance of the French Euro-Canadian terms that designate certain animals (like "buzzard") or certain types of tree (like "cedar" or "balsam poplar"). This trapper knew the forest through other experiences than mine; he always carried a gun in case he encountered prey (or predator) in the forest. Within the area where harvesting operations are conducted, he showed me what he considered to be important and what worried him about how forestry operations are conducted. The principal concern for him and other trappers involved the exploitation of a moose browsing area (or *ravage*) located on a hill that was recently harvested by forest industries.

It is in moose browsing areas that it is possible to see how the boreal forest as a learning and trapping place takes form through the objects that delimit the boundaries of Algonquian trapping territories. This can be seen in the presence of "cairns" that trappers use to recognise the browsing areas located in their territory. For instance, moose antlers were used by the Algonquian trappers to indicate the browsing areas that fell within their hunting territory (Figure 6.1), and this cairn allows Algonquians to know exactly where the most valuable animals can be found and where they can hunt them. Like the memorial sites and objects used by Euro-Canadians to indicate and maintain their relationship with the forest (see Chapters 4 and 5), moose antlers are used by Algonquians trappers to mark the browsing areas within their territories (see Figure 6.1) and in turn, these antlers materialise the existence in the forest by locating them in the boreal landscape.

Figure 6.1: Marking browsing areas through “cairns” such as moose antlers, delimiting one of the Algonquian imaginary places of the boreal forest. Photo taken by the author, Abitibi, (28/06/05).

The multiplicity of interactions between Algonquians trappers and the biophysical elements and features such as moose antlers used as markers; mosses used by their mother for baby diapers; the type of branches needed to make good snow shoes; and the presence of moose trails; are connected together in the production of a place they described as their hunting territories. This connection becomes more obvious when Algonquian trappers talk about the trails made and used by moose (Figure 6.2) as biophysical features that Algonquians use to track down animals and delimit their trapping and hunting territories.

The multiplicity of biophysical components of the forest allows Algonquian trappers to develop many relationships with the forest, thereby enabling them to claim the forest as trapping and hunting territories. For instance, when I was with Algonquian trappers, they showed me that they have developed particular relationships and experiences with the biophysical environment which can be seen by the way they use objects to make their territory alive. For example, this is represented by the moose antlers they use to delimit their hunting territories or by mosses used in diapers or, when dry, to start a fire in absence of paper. Other uses of the non-animal features of the forest — such as white spruce branches for snow shoes for winter activities or various species of plants

and roots for medicines or birch and cedar in the construction of canoes — were also described to me once in the forest. Although these relationships were not necessarily alive for every Algonquian trapper, the knowledge was nonetheless shared by members of the community and the presence of these alternative uses of the forest's biophysical elements was all part of the same territory, an Algonquian trapping territory.

Figure 6.2: Experiencing an Algonquian trapping territory through moose trails. Photo taken by the author, Abitibi, (28/06/05).

The trampled line followed by Algonquian hunters (Figure 6.2) is more than a simple sign of moose presence, it is also a sign that hunting and trapping activities can be practiced and that Algonquian identities can be performed. It also serves as a boundary through which their culture and hunting relations with the forest animals is defined and made visible. Through this moose trail, the boreal forest becomes the place in which a "traditional" way of life and hunting knowledge are materialised and maintained by the Algonquians. Through what Algonquian hunters and trappers call traditional activities (hunting, fishing, gathering wild fruits and mushrooms), and associated relations with specific biophysical features of the boreal forest (mosses, trees, plants, the minerals composing the soil, etc.), the imaginary places produced by the Algonquians take form and influence, in politics of everyday life. In other words, the contestations of power

over the representation of forest between Algonquians and professional foresters can be understood by paying attention to the ways in which Algonquians experience the forest through everyday life activities such as trapping. In trapping context, the contestations of industrial forestry power reside in the acts of engaging with the forest in various ways that have other endings than those of industrial forestry. By experiencing the forest for multiple purposes, Algonquians define it as a place for trapping, hunting and collecting (mosses, branches, sap and so on); a site in which imaginaries and the politics they inspire to Algonquians trappers is materialised.

Drawing on Doreen Massey's (2005) work, I see a politics of places emerging through the actions of practicing places. As used here, this politics is the politics of imaginary places and it includes the positions that forest users take in order to defend the existence of their imaginaries of the boreal forest. The politics is what forest users stand for, the product of various trajectories of objects, things and people merging at definite geographical points that become places. It is through a "myriad of practices of quotidian negotiation and contestation" that the politics of places are articulated (Massey 2005: 154). It is by performing places and the imaginaries that forest users animate everyday politics. As for Euro-Canadian hunters, the imaginary places by which Algonquian hunters and trappers stand in their everyday life practices are being negotiated with other places and boundaries. For instance, by removing the flags put by foresters to delimit areas of their trapping territories that will be harvested, Algonquians trappers are contesting the forest industry practices and are reterritorializing the forest as a place exempt of industrial forestry operations. This experience of the forest and the social relations produced through hunting and trapping activities are what Algonquians want to see preserved and protected. This is not necessarily because it is their food, but because what animates these relationships with the forest is the knowledge of the older people, constituting their cosmology and imaginaries of the forest.

The knowledges and instructions that come from elderly trappers and hunters come alive in the hunting of animal species that are particular to the Algonquian culture, such as beaver, muskrat and to a lesser extent, porcupine. Theses animals are part of the Algonquin diet and trapping places, and they also help construct the boreal forest as a place in which Algonquian trapping culture is produced and maintained. This Algonquian boreal forest imaginary is performed through particular knowledge about the forest and about the animals that live in it, and through different trapping equipment

like traps and snares. This is demonstrated by an Algonquian trapper who gave the following description of what he experienced while in the forest trapping with his father:

> WG: I've walked my territory in snowshoes during the winter… we were loaded with equipment, we would bring our lunch, traps and we were getting back around 10-11 at night *(laughs)*. For me this is the pleasure; if you like it you don't count how tired you are and all that comes with it… Often, we would just leave [for the forest] with sauce pan, fat, potatoes flour, salt, pepper and sugar.
> Sébastien: A handsaw?
> WG: Not even, just an axe, a very small axe, not a huge axe, a small axe, and we always succeeded. Also, [we would bring] a sheet of polythene with us. We slept outside.
> Sébastien: Did you put balsam fir on the ground?
> WG: Yes, we put balsam fir on the soil, but that was all.
> Sébastien: And during the winter what did you do?
> WG: A lot of balsam fur, but [my father] used to make a large fire, so the snow would melt and we used to put the balsam fir branches on the heat created by the fire until dawn" (WG, 19/07/04, my translation)

This place that WG described through trapping activities shows that his knowledge of the forest (such as knowing how to use balsam fir for insulation purposes, which tree is suitable for lighting a fire in winter conditions, and how to reuse the heat of a fire to keep warm during the winter nights) shows that hunting and trapping are not only about knowing animals. These activities also include knowing how to use equipment (axes and traps, snowshoes) and the forest's resources in multiple ways, in order to enable Algonquian trapping activities to exist and to produce an imaginary of the boreal forest born from everyday relationships with the forest. This in turn influences the production of a politics of place that represents an imaginary that is different from the industrial imaginary of the forest. Through these skills and equipment, the imaginary of the boreal forest territorializes the boreal forest as an Algonquian hunting and trapping place.

As Massey (2005: 141) makes clear, places are open events that correspond to "constellation[s] of processes rather than […] thing[s]" with pre-given coherence. This means that the various imaginaries of the boreal forest described by many different forest users are not as bounded as they suggest. On the contrary, these places are negotiated by and interrelated with each other. This multiplicity of interactions between objects, forest users and non-humans produces various imaginary places in which boundaries such as those used to delimit bait sites, trap lines, quad bike trails or moose trails and browsing areas (Figures 6.1 and 6.2) become connected and coexistent with each other. This in turn destabilises the fixed meanings of the industrial boreal forest as a place of extraction.

Knowledges of the boreal forest involved in the materialisation of various imaginaries of the forest are also implicated in the production of everyday life politics by helping forest users to define their positions over what represents the forest and what they would like to see represented in forest politics. These politics claim the existence of various places and the territorialization of the forest as something different from what the forest industry and forestry science has created (see Chapter 4). The experiences and knowledges involved in the production of various places described so far indicate the instability of the cybernetic boreal forest, but also show that the places described by forest users are not impermeable to other places and boundaries. In other words, multiple imaginaries of the boreal forest coexist in the same time-space. This political process is well presented in Figure 6.3. Although this figure simplifies the chain of relationships involves in the creation of imaginaries and politics of the forest, it is possible to see how different forest users create imaginaries of the forest and how these later are mobilised into politics of everyday practices of the forest.

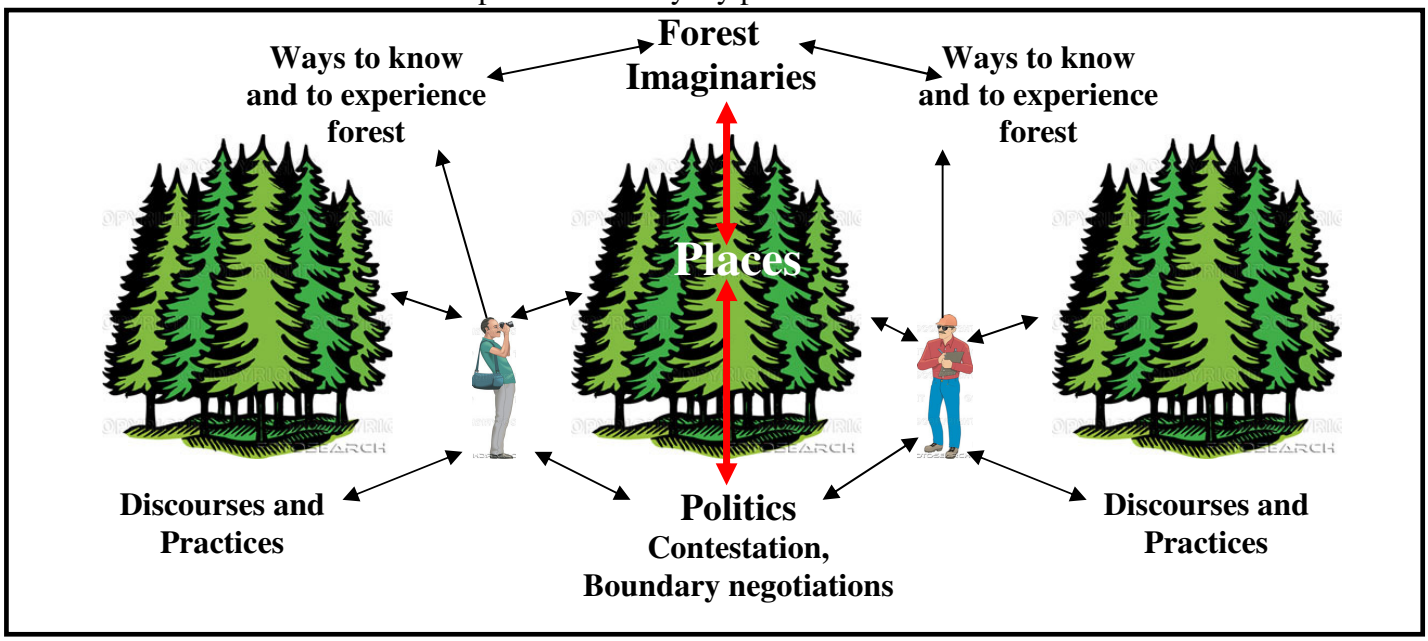

Figure 6.3: Fixing the chain of interrelations involved in the production of the boreal forest politics. Graphics taken from http://www.fotosearch.com.

The interactions described in Figure 6.3 shows that discourses and practices allow users to produce the ontology of the forest and their experience with this forest create imaginaries that become involved in the production of places (and vice versa). These forest imaginaries are boundaries of these places and become involved into contestations and negotiations over imaginaries of governance of the forest. In the next

section will describe how imaginaries of the boreal forest become articulated by forest users as political vehicles.

6.2 The politics of the imaginary places

Experiences with the boreal forest produce imaginary places, such as paintings on the walls, which are framed and fixed, but when investigated in more detail this immobility is not an accurate representation of the politics engendered by the boreal forest imaginaries. This is because the politics of the forest are in continual relations with the dominant industrial imaginary of the boreal forest — the forest that is materialised through forestry practices and discourses. The politics of imaginary places become concrete when they are understood as the product of interactions that occur through the circulation of, and interaction between, materialities, forest users, and non-humans that are involved in the production of places. These politics are products of the intensity of movement occurring between people, objects and the biophysical elements constituting the forest. However, it is only through the deployment of things by forest users to achieve particular ends that politics become produced. The politics of imaginary places are also the politics of alternative, and this is clearer when forest users talk about their places.

Amongst the numerous examples that emerged from the interviews I conducted with different forest users, the right to experience the forest differently than through industrial forestry was frequently claimed. The politics of imaginary places take form when expressed by forest users, since they stand for something else — such as when a woman explained to me what she experienced while canoeing on a local river:

> Two years ago, I went on the Mégiscane river [in a canoe trip], and all the way down we heard forestry machinery. It was less enjoyable as a trip. But this is nature (CS, 13/07/05, my translation).

Through the noise of forestry machinery working 24 hours a day, seven days a week, the industrial imaginaries becomes difficult to displace with imaginaries that ignore industrial forestry.

It is also important to highlight the interviewee's remark at the end of this quotation. For her, the presence of this industrial imaginary of the forest, and the materiality that

makes it powerful, corresponds to what she describes as "nature". Thus, the term nature has a resonance in the industrial boreal forest, showing how industrial imaginaries can dominate ways of experiencing the forest. Admitting that industrial forestry represents nature also acknowledges that the possibility of imagining and experiencing the forest in other ways is very limited, since nature includes forest industry imaginaries — exemplified by the presence of machinery in the definition of nature.

However, canoeing on a river in the heart of the boreal forest has also allowed CS an experience of the forest that excludes industrial forestry. This is clearer when she says that:

> It is clear that when I go into nature, I don't want to see waste everywhere. I want a nice forest, [in which] there are no harvested trees, [in which] there are no red flags at every [tree's] extremities. In such places, there are not people everywhere […]. (CS, 13/07/05, my translation).

This imaginary excludes elements that associate the boreal forest with harvest sites, such as the red flags delimiting the boundaries of forestry operations and the extent of the industrial boreal forest. The place defined by this interviewee as "nature" or "the forest" is exempt from human beings and the technologies that interrupt the production of an imaginary in which canoeing is the way of experiencing the forest and the non-humans that constitute its body.

The politics of this place, which is articulated through a removal of human and industrial signs (flags, quad bikes, waste) become explicit when CS talks about the current management of the forest, and it is through these words that her imaginary of the boreal forest becomes negotiated with the dominance of the industrial forestry. This politics of the place described by the interviewee becomes clearer when she explains what she thought about the public status of the current boreal forest.

> It is obvious that here we are in an environment in which there is so much forest; there is still a lot of forest indeed. There is no one who couldn't ride quad bike ride or canoe in the forest. But, if you go closer to big centres [like Abitibi's towns], it's another story. Surely there is still forest left, but if we think long term, I don't know if we can talk about long term… Around streams, forest bands are not respected.[65] [Laws are] not respected everywhere, this is not right. You go walking, you go canoeing, you see carnage, bulldozed areas all over, the soil [is] completely destroyed. And replanting, it doesn't work; a replanted forest cannot work that way. The forest is not a monoculture, it's not rows [of trees], and the animals do not live in such rows. I know that there are other

[65] Forest bands consist of 20-metre bands of vegetation left intact after harvesting operations. These bands are normally located along roads, lakes and rivers in order to attenuate soil erosion and winds, and to protect the integrity of landscape, especially after clear-cutting operations.

> [trees] that grow [after reforestation operations] but… this is not the forest (CS, 13/07/05, my translation).[66]

Through this quotation, the interviewee asserts what many users think when they describe the public boreal forest. That forest is conceived as something owned by industrial forestry, an entity exclusively controlled by foresters. The politics that come from this quotation are the politics of the quotidian life, articulated through negotiations of the places occupied by non-industrial ways of imagining and experiencing the boreal forest. This is evident in the above quotation when the interviewee describes the overlapping of two imaginaries of the forest. This overlap can be seen as industrial forestry, described by the destruction of soils and the presence of monoculture, and the other imaginary, materialised through canoes and a relationship with the biophysical environment that rejects the machinery and noise associated with forestry. The politics of imaginary places, what I refer to as the negotiation and contestation of the quotidian, are associated with the negotiation of overlapping boundaries and the displacement of monolithic ways of knowing and experiencing the boreal forest.

In the work of Bruce Braun (2002: 260), the displacement of "*other* systems of signification that imagine the forest very differently" (emphasis in the original) is shown to have opened up "cognitive failures" that work to erase First Nations relationships with the rainforest of British Columbia. What Braun omits to say, though I do not think this was his intention, is that the other systems of signification are involved in the production of imaginary places which are politicised by forest users through their everyday life practices. In Québec, the erasure of multiple forest places by foresters, in ways which sustain the industrial imaginary of the forest, can be revealed by talking with contractual foresters (often regrouped as cooperatives) working for the forest industry. For instance, one of my interviewees explained how the negotiation of the place he considered to be the forest is difficult to protect.

> FD: I would like to see what [foresters] did before reforesting. You cut a tree, you replant it.
> Sébastien: They don't do that at the moment? I thought this is what Tembec's engineers told me and…
> FD: I'm not ready to say that they reforest all the trees they harvest. There are sectors they don't reforest, they call this CPRS.[67] They don't reforest in CPRS.
> Sébastien: Do you do other activities in forest? I mean, do you go fishing?

---

[66] It is important to note that what this interviewee describes as "not the forest" refers to the genetically improved trees used in reforestation operations.

[67] CPRS is the French abbreviation for "careful logging around regeneration", which consists of a harvesting technique that prioritises the regeneration of forest from the young trees that have been protected through the harvesting phase.

> FD: Yes I go fishing, during the winter I go snowmobiling on the trails. I go moose hunting during the autumn… This is what I told you a bit earlier, about being careful about how industries harvest the forest. The industry must not hear what I've just said.
> Sébastien: No, no, it won't be heard by the industries…
> FD: Because I'll tell you straight away, what the industries need is timber for the mill. At the time they face a shortage of timber these big multinationals will just close their mills.
> Sébastien: So you fear that they'll close their mill and go without notice or…
> FD: They will face a shortage of stock, I am sure that fifteen years from now, fifteen to twenty years, they will face stock ruptures.
> Sébastien: And when you're in the field, have you told them: "Listen, perhaps it is not the best way to do…"
> FD: I don't have enough political weight in this. I am only a contractor for them. I cannot involve myself into these things.
> Sébastien: Yes I know, but if you're in the field, if there is an engineer nearby just saying "are you sure?"…You won't go that far?
> FD: No, I won't go that far for sure!
> Sébastien: Because you could be sacked?
> FD: Yes… I don't want to talk about that (FD, 14/07/05, my translation).

This exchange reveals a number of elements that work in the production of the politics of negotiating an imaginary place. Through this conversation, the interviewee informs me that the industrial imaginary of the boreal forest imposes a specific way to interact and to know the forest. The politics of places in this quotation is evident in the first sentence, when the interviewee admits that forest industries should reforest a tree every time they harvest one and that their methods are not giving the results intended by the CPRS. These statements are not unique to this particular user; in my field work, I found the majority of those working directly in the forest, or those who experience the forest through different outdoor activities, expressed the same concerns about forestry practices.

This quotation shows how the politics of alternative imaginaries becomes active through contesting the current forestry system, but it also provides a good example of how the industrial imaginary marginalises other ways of knowing and experiencing the forest. For some, the risk of claiming that the boreal forest is a place in which the forest can be experienced and known differently than through industrial forestry is the possible loss of livelihood. In the context described above, the politics of alternative imaginaries of the forest becomes a product of contesting the boundaries of the boreal forest's places. This is exemplified when the interviewee challenges forest industry practices, performing the forest as a place that could exist differently than in the current forest system — every tree harvested could be reforested. This interview excerpt contests the boundaries that allow foresters to maintain their territoriality and the imaginary of the forest described in Chapter 4.

The politics of place that is challenging industrial forestry is the idea, born from experiences and imaginaries, that the forest represents something different from what industrial forestry claims and creates through forestry science discourses and practices. This contestation suggests the exclusion of many different features and non-humans, such as animals that become, in Edward Said's words (1999), "out of place". This means that the boreal forest defended by the forest cooperative worker becomes a "lost or forever forgotten world", even though he uses the same discourses and practices as industrial forestry (Said 1999: xi). These lost and forgotten features are excluded by the boundary created by foresters and policy makers and through forestry legislation; the interrelations between people, objects and things involved in the production of other experiences are made "out of place" and become the centre of the political production.

Figure 6.4 Postcard representing the politics of resistance of outfitters: displacing non-industrial imaginaries of the forest. Taken at the Domaine Forsythe, Abitibi, 15/07/05. Reprinted with permission from the artist.

In Figure 6.4, a postcard I found in an outfitter's lodge, shows how alternative imaginaries of the forest can be seen as out of place, out of the industrial imaginary of the boreal forest, represented in the line of coniferous trees on the left of the image and secured by foresters from the Ministry of Natural Resources, Fauna, Forest and Parks

(RNFFP),[68] represented by the pink van in the background (A). This postcard portrays the imaginary of an outfitter who represents the Association of Outfitters of Eastern Abitibi. The dialogues on this postcard explain the territorialization of the boreal forest by the industrial imaginary and the exclusion of the outfitters' imaginary forest places, which are full of animals being pushed out of the forest, out of the industrial place.

In the middle of the postcard it is possible to note the presence of a character wearing a suit and a tie (embodying the Minister of the Ministry of Natural Resources and Fauna) as well as a baseball hat on which the letters RNFFP can be read. This character holds two moose by the neck; the animals are portrayed as struggling (notice the sweat on the forehead on the left moose) and suffocating (tongue out of mouth), which can be interpreted as signs of stress caused by the presence of industrial forestry practices associated with the RNFFP. Talking to these two animals, the minister informs them in balloon (B) that "You will need to find a new home, we keep our forests for multinationals!!". This message is reinforced by a second balloon (C), but this one is addressed to the rest of the animals inhabiting the boreal forest: "That also goes for you too!!" Scrutinising the animals drawn on the post card, it is possible to notice signs of sadness in their body language — looking down, with sad eyes on the fox, deer fawn and porcupine. Animals are portrayed as refugees (some species, like the squirrel, transporting their food reserve with them) walking towards another character embodying a forester from the RNFFP (again written on his baseball cap), who provides them on a sheet of paper from a guide (D) on which it is written "how to survive in a desert". In this postcard they animals are like refugees from another place, a place in which the forest is not limited to the trees, but instead considered a holistic entity that includes interactions between all sorts of non-humans.

The background to this scene is a desolated landscape: trees have been completely cleared, a group of birds is shown leaving the denuded mountain on which a vehicle that resembles to a forwarder can be seen and there is also a lorry transporting timber on the far right. The presence of tree stumps and a moose skull lying among them represents the "desertification" effect produced by the industrial practices and imaginaries of the forest. Thus, the industrial place represented on the postcard is displacing the imaginary

[68] The current name of this ministry is the Ministry of Natural Resources and Fauna . The term forest is not used since the term Natural Resources includes forest, mines, land surveys, energy (mainly hydro-electric and wind power).

place of outfitters, a place bounded by meanings and experiences of the forest through various outdoor activities. The unwritten politics of this postcard are those protesting for the existence of the places that are usurping outfitter imaginaries of the forest. This politics is also a demonstration of the meaning attached to this place, in which animals play a significant role — not only for hunting practices and the revenues that come with them, but because their presence allows forest users to make a link between them and their world, allowing users to imagine the world that surrounds them in various ways. By contesting the effects of the current forestry system on fauna, outfitters advance imaginaries which propose an alternative politics of the forest. For instance, outfitters see the forest as made of:

> …several types of animal, as opposed to what the government of Québec says. For the government of Québec there are three types of animals in the province, there are two and perhaps another one. For the government of Québec there is moose and white tail deer. There is also the possibility of caribou. Bears, marten, mink, rabbits do not exist. When they [the government] talk about forest management we think strictly of big game because people that think about moose and deer are of an age to vote. These are the hunters. "Ah there is a moose!" and there, they [the government] look at that, a mink, they are less interested. But these animals also have the right to live ! (BLJ, 15/07/05, my translation).

The latter quotation does not only contest the forest industry, their practices and imaginaries of the forest, but also the government of Québec and the regulations of forest exploitation. The alternative politics put forward by BJL becomes alive through the contestation of the industrial ways of engaging with the forest and particularly with animals. This critique of the fauna protection laws allows this interviewee to claim for a new form of governance that will also recognise the significance of small animals such as mink. It is also through this contestation that an alternative politics of forest emerge from another set of imaginaries that is not recognised by the current Québec's legislation.

According to Massey (2005:155) "[i]maginations of space and place are both an element of and a stake *in* […] negotiations". It is through the imaginary of places and their interrelations that the alternative politics of imaginaries are produced and challenge the dominant industrial relationships with the forest. The manifestation of these alternative politics of imaginaries is obvious when talking with interviewees working directly in the forest, such as those working in timber transportation. For two workmen working in an industry specialised in transporting and maintaining forestry machinery to the field as well as transporting harvested timber to the mills, the industrial imaginary of the forest and its performance through the various operations

become contested and negotiated. According to these interviewees, the government gave:

> "too much power to the mills… to the forest industries, and when there is too much power, at a certain time this becomes a dictatorship… the industries are fearless and that's the thing" (AR, 12/07/05, my translation).

Talking about the forest industries and their lack of consideration for subcontractors, who provide services such as maintaining forest operation equipment and timber transportation, the same interviewee and one of his employees go further in showing how this "dictatorship" is becoming part of subcontracting operations. These subcontractors emphasise that:

> AR: Although you work for them for ten years, tomorrow morning if they want to kick you out, they kick you out.
> AC: It's as if you're trapped
> AR: You're almost not…You cannot speak. If you stay there, it's because you do a bloody good job. But there is no [sense of] belonging and this is what I deplore about the industry…
> AC: There is no group, we don't have…
> AR: There is no group. Big industries… what you were talking earlier, committees of… I know nothing about that! I do not know how […] I can express myself about the forest [management]. Listen, my boss is named Jacques Comptois. There is another foreman, [a forest engineer], he talks to me, Jacques Comptois doesn't even know who I am and he pays me.
> AR: The forest engineer, in my head he is a commissioner, the [boss] says [to him go and] tell him that, and it takes an eternity to do anything. And they move these guys [forest engineers]… There is nothing that limits them from doing whatever they [the industry] want, because they have a commissioner […] and they found a dirty trick because the commissioner we have here…
> AC: The [industry] changes the commissioners during the year.
> AR: The [industry] changes these commissioners either in eight months or in six months!
> AC: They [foresters] found a solution to their problem for [negotiating with us].
> AR: I've changed 31 times of commissioner […] Pop! a new commissioner and we start at the beginning, we start again and all that I negotiated [before] needs to be renegotiated again (AR and AC, 12/07/05, my translation).

This exchange shows that the politics of forest industries, which is the power and strategies adopted by the industry to maintain their imaginaries of the forest, described by these workmen as a dictatorship, extends to the way forestry practices are organised and how forest management is performed. The significance of this quotation lies in the difficulty these forest workers have in negotiating with industrial forestry and the limited possibilities for contesting and challenging the industrial imaginary of the forest. They also talk about feeling trapped and not having the voice to contest the meaning of the place they imagine as the boreal forest; a place they see as monopolised by the goals and politics of the industry. For these users, the boreal forest is a place that gives jobs to forest-dependent communities, but that should not be monopolised by forest industries. This is made more explicit when one of these workmen describes how he feels about the power forest industries have in the management of the forest. He says:

> "I feel like a slave in the United States, the guy who collects cotton. I feel like that but with the industries, [instead of cotton] it is with big machinery. Because […] I have no right to speak" (AR, 12/07/05, my translation).

Another example that illustrates the difficulty in speaking about other imaginaries of the forest comes from a painting found on the wall of an outfitter lodge not too far from a forest-dependent community in the eastern part of Abitibi (Figure 6.5). This painting demonstrates how the right to express other ways of engaging with and knowing the forest through alternative imaginaries has become almost forbidden.

Figure 6.5: Postcard representing the painting *Le Calvaire du Pourvoyeur,* by Daniel Gagné, displayed at Pourvoirie Forsythe Inc., Abitibi. Reprinted with permission.

This painting is extremely rich in symbolism; it represents both the politics of alternative imaginaries that can be also phrased as the politics of resistant imaginaries defended by the outfitter. This scene shows Jesus Christ collapsing under the weight of his cross, on which one can read FAPAQ (Fauna and Parks of Québec)[69] which is responsible for the protection and management of all game and fauna in the province. The character who represents Jesus Christ corresponds to the outfitter (and by extension, all Québec outfitters) who tries to cope with FAPAQ and the politics of the

[69] Today the FAPAQ is no longer independent of the Ministry of Natural Resources; they have been joined together in what is now the Ministry of Natural Resources, and Fauna.

industrial imaginaries of the forest that it embodies. According to the owner of the lodge who ordered this painting from a local artist:

> …people from the Natural Resources [MRNF] should monitor forest industries but they don't do that anymore. It is certain that the government of Québec is being run… by the multinationals and the forest industry" (BLJ, 12/07/05, my translation).

In this painting, the politics of the industrial imaginaries of the boreal forest are protected by two characters that personify the governments of both Québec and Canada. The former is represented by a cavalier riding a tamed moose and the latter by the devil.[70] The character who tries to help the outfitter by lifting the cross and by challenging the power of the industrial imaginary of the boreal forest represents the outfitter association located in eastern Abitibi (APES on the character). In this painting, it is clear that the character (and the association it represents) does not share the same imaginaries as the forest industry. By lifting the cross and what it embodies, the outfitter is involved in a highly political act, since this indicates disagreement with the industrial imaginaries of and relationships with the forest, as well as a challenge to the impossibility of claiming the existence of other forest places. The collapse of the outfitter (Christ), translated by the painter as the outfitter's Calvary, represents the impossibility of going to the parliament and thus of seeing their imaginaries of the boreal forest legally recognised.

Displacing the cross and the politics of forest imaginaries that it represents is portrayed as nearly impossible, since the road of change (the road to the parliament) is blocked by two characters who represent the government of Québec and the government of Canada. The uncomfortable position in which the outfitter lies translates the vulnerability of their positions and their imaginaries of the forest. Through Figure 6.5, the politics of outfitter imaginaries of, and relationships with, the boreal forest present Christ as someone who claims the existence of another world, an afterlife, through a marginal cosmology (much like the New Testament). This in turn leads the outfitter to be persecuted for claiming a boreal forest that refers to other imaginary places and a politics other than that supported by the forest industry. Using the Calvary of Christ as an analogy for the politics of outfitter imaginaries of the boreal forest is interesting in this sense, since this scene makes it possible to understand that the persecution of outfitters is linked with the imaginary place they claim.

[70] Although there is a strong political connotation attached to these characters, I will not discuss them in this chapter. However, Québécois nationalism can be seen by representing Québec as a cavalier and Canada as a devil, even though the federal government is only legally responsible for 3% of the entire province exclusive of the boreal forest.

Challenging the status quo of how the forest is imagined, performed, known and experienced creates problems in forest-dependent communities and the painting reflects this very well. For instance, the other characters portrayed with suitcases bearing the names of the associations they represent are all turning their backs on the scene as something they do not want to face. Many interviewees mentioned to me that challenging the industrial perception of the forest is a sort of taboo. Few people will risk losing their jobs and even perhaps their sense of community by talking about the dark side of industrial forestry practices, and this is exemplified in the painting. Only the tourist association of Abitibi-Témiscamingue (ATRAT), represented by Mary-Magdalene is portrayed as looking at the scene but her role is limited to crying, powerless in front of this Calvary.

The Québec Fauna Federation (FQF) and the Québec Outfitter Federation (FPQ) wash their hands in front of the persecution, symbolising their non-association with the imaginary places (and their politics) defended by the APES. Finally, the character that embodies the regional township municipality (MRC) also turns his back to the APES character and instead of helping, walks in the direction of Québec's parliament. The meaning of this painting is clear: the image of the forest defended by the APES and the main outfitter (Christ) shows the marginalisation of their imaginaries of the forest and the difficulty in challenging and negotiating the meaning of the relationships that users have with the boreal forest. The inaction of the other characters in the painting shows the power that the industrial imaginaries of the forest have over other users concerned with the boreal forest. This inaction also indicates forest users' fears about contesting the dominant imaginary of the forest. This is made explicit by a contract forester:

> FD: If the industry could hear me this morning, I told you that…
> Sébastien: It would be difficult at work?
> FD: Yes.
> Sébastien: Oh, it is to that point, is it that constraining? If you go to the shop you don't talk about it?
> FD: No, we don't talk about this in town.
> Sébastien: Is it like a taboo?
> FD: Yes a bit, because everybody… there are a lot of people who work in the forest here.
> Sébastien: So this means, let's say you go shopping and you start to talk, some people could say "hey, he's talking…"
> FD: Yes it could happen that… a small meeting [would be organised] in the Abitibi-Consolidated and Tembec bosses' offices…
> Sébastien: Is this true?
> FD: Yes, yes
> Sébastien: So you feel as if someone has an eye on you continuously?
> FD: We're all trapped, especially in sylviculture operations; we're all strangled by the neck (FD, 14/07/05, my translation).

In this dialogue, it is clear that contesting the dominant imaginaries of the forest is a taboo that could threaten the jobs of those who do so. This is made clear when the interviewee explains that contesting the industrial imaginary would result in meeting the bosses of the two dominant forest industries of his town. Feeling strangled and trapped by the power of forest industries also means that the freedom to imagine the forest as something other than a space of extraction is very difficult. However, although this description of the imaginaries of the boreal forest portrays the politics of imaginary places as a dichotomy between the oppressed and the oppressor, it is important to see that all these imaginaries are mutually constituted and relational, as will be explained in the following sections of this chapter.

For instance, Figure 6.3 demonstrates a removal of the other ways of knowing and experiencing the boreal forest that contribute to the production of imaginary places. Such places (for instance, those claimed for hunting by the presence of animals) are not completely displaced by industrial forest management practices and imaginaries, since they are produced in interconnections. This can be seen in the absence of objects showing the existence of the other boreal forest places. This absence means that the one way outfitters can show their own imaginary forest places lies in the industrial forest place created by the industrial imaginary. What constitutes the forest claimed by the outfitters has to be described through industrial forestry. They are not divided by an absolute boundary, completely opposite to each other; they complement each other, are co-produced and mutually constituted, and this will be articulated in more detail in Section 6.3.

Relying on industrial forestry to prove the existence of a multiplicity of boreal forest places means that user-defined boreal forest places are relational and it also means that their politics are interconnected. The production of relational politics means that the various boreal forest places described by a great variety of forest users are contingent and related instead of being completely separate. For example, through discourse analysis it is possible to see this interrelation of places when forest users talk about the boreal forest in industrial forestry terms. Although forest users use the same terms, the meaning generally differs, and thus the forest places and imaginaries are different from those of industrial forestry. For example, when I asked forest users if they think that the boreal forest was “public”, as it is normally know through forestry regulations, I noticed

that the meaning of what is "public" was varying immensely between the definition used by the industry and the government and what the forest users had to say. In turn, this means that the boundaries used to frame the meaning and the spatiality (or spatial extent of places) of both industrial and of the other imaginary forest places become intertwined. This also means that the boundaries and politics of the places defined as different from the industrial forest are also interrelated, they are not automatically antagonistic. For instance, while in the field, outfitters and other forest users employ the lexicon of the forest industries to negotiate the boreal forest places they claim as different from those of the industrial imaginaries forest such as the acronyms used by the industry or the types of harvesting techniques that forest users interpret differently. As the places produced by industrial forest imaginaries, the alternative boreal forest places are not fixed either, but rather mutable and in constant "negotiation and contestation" (Massey 2005: 154). It is this constant mutation that allows the co-production of imaginaries and politics of the forest.

6.3 The relational politics of the boreal forest imagination

Amongst the work done on the relational politics of nature, Sarah Whatmore (2002: 3) argues for a hybrid geography that rejects the dichotomy between "word and world" and shows how difficult it is to rethink environmental politics. However, as Castree (2003: 208) rightly points out, Whatmore's "necessary deployment of neologisms and metaphors that challenge existing mind-sets can be difficult to digest", and this is particularly true when it comes to applying these ideas outside of academia. However, looking at how imaginaries are transformed into concrete events and places through the interrelations between humans and non-humans (including objects), it is possible to understand how the politics of imaginaries and places become relational. For Bruce Braun and Lisa Dish (2002: 505-506), relational politics can be achieved by "reimaging politics as a site of unprecedented political connections among groups whose aims and identities are not given in advance but forged in and through political struggle". These political struggles are those found in the everyday life relationships with the forest; they are not strikes, revolutions or wars; they are the fruits of anodyne tactics practiced by which forest users contest and negotiate the more dominant power of the forest industry and their imaginary of the non-human world. Michel de Certeau (1984: 34-39) stresses the significance of strategies and tactics in the organisation of space, in which strategies

are actions linked with the dominant organisation of space by establishing place of power "offers to the erosion of time" and tactics are procedures or "clever utilisation of time" that allow one to transform the organisation of space (normally done by strategies) and foundation of power. Relational politics is linked with the tactics of everyday life since "the space of tactics is the space of others". Tactics are in continual movement, they take power over space-time and transform it into something that reorganise the power relations of space (de Certeau 1984: 37).

Relational politics are undeniably linked with the co-production of boundaries places and associated various imaginaries of the forest. As discussed earlier in this chapter, the politics of imaginary places are performed by forest users by taking positions over the representation of the forest through their discourses and practices. Through the circulation of various types of objects such as chainsaws, quad bikes, GPS and so on, and their deployment by forest users in materialising the boundaries of imaginary places, places become related to each another in ways that make the boreal forest an unfixed entity. The instability and contingency of boundaries can destabilise the dominant industrial imaginary of the forest, as well as the ways of experiencing and of knowing the forest that this imaginary induces. To show how the politics of the boreal forest become relational I will use two examples: first, the use of GPS receivers by diverse forest users, and second, the use of a converted school bus by forest workers as a meeting point for their lunch break.

6.3.1 Global Positioning System

The example of Global Positioning Systems (GPS) put to use by a multitude of forest users makes it possible to see how the politics of imaginary places are manifested and interrelated. Some work has been done on the use of GPS for surveillance activities, such as monitoring the movements of particular mammals (like moose) and their seasonal habits with telemetric collars (e.g. Moen *et al.* 1996, Dussault *et al.* 2005). Similarly, various other uses — such as positioning archaeological sites and Aboriginal ceremonial sites (see Parks 2001: 210) — suggest how the positionality of places through GPS might provide a way to understand how the politics of different imaginaries of the boreal forest become relational since GPS users use tactics of everyday life to reappropriate the reorganisation of space through differential uses of

GPS technology. Research which looks at the politics of GPS has been done by Lisa Parks (2001: 211), who investigates the "politics of location and positionality" in order to "offer new ways of imagining and visualizing social difference that […] enable us to conceptualize more precisely how identities are constituted through material rather than figurative movements". Through her work, Parks (2001: 119-220) mentions that GPS is a technology that "can become interactive" by inviting users to "become active readers of the landscapes they write with their bodies", inscribing their "personal trajectories onto the text of the social and on the world of the everyday".

Nigel Thrift (2004: 588) argues that the technologies of both GPS and Geographical Information Science (GIS) have participated in a standardisation of space-time, making it possible for particular places to become "locatable and transposable". This mobility of place and space-time muddles the division between the technologies employed by forest users and the biophysical environment, such as the boreal forest. As seen in Chapter 4, the forest becomes technologised through models and digital mapping. The use of GPS makes it possible for different forest users to claim different imaginary places (and politics) of the forest while using the same technology as one another (MacDonald 2007). Thrift (2004: 590) exposes how places become the "subject of calculations in which each calculation could potentially be redone several times a minute". This is linked with what Knorr Cetina (2003: 4, quoted in Thrift 2004: 590) sees as places becoming a "'melt' of material that is in continual flux, that exists only as it is being projected forward and calls forth participants' reactions to flux". In the context of Abitibi, this means that imagined places and the politics they inspired to forest users become visible, transposable and transportable on GPS, and are superimposed on the dominant industrial forest. This means that in this "melt" of imaginary places and the politics articulated by the GPS users, it is possible to see how different forest users use the politics inspired by imaginaries to constitute tactics that disrupt any chance to "freeze" the forest with a dominant imaginary.

The dislocation of the industrial boreal forest is made explicit by the use of GPS in, for instance, hunting activities. Although GPS is used in forestry operations, numerous hunters also use this technology to orient themselves in the forest. However, the ways in which they are engaged with the forest make it possible for them to use their GPS to materialise their hunting places within the same places that have been politicised as an industrial forest. In other words, while hunters look to position themselves with their

GPS receivers, the materialisation of their imaginary hunting places into digitised geographical coordinates disrupts the homogeneity of the boreal forest as created by the industrial relationships performed through forestry operations. Positioning hunters' imaginaries of the boreal forest through GPS technologies (and the new geography that these technologies produce) means that hunters can localise their experiences with, and knowledges of, the boreal forest on the same map used by the forest industry. Politically, this means that coordinates which embody different imaginaries of the boreal forest can appear simultaneously in the multiple uses of GPS for activities that may or may not be related to industrial imaginaries and places. It is through this simultaneous presence of different geographical positions reflecting different imaginaries of the boreal forest, and through the negotiation of these positions that forest users articulate their tactics to open space to other definitions. In the case of the forest, these tactics and differential use of the GPS receivers by various users open the forest to something different than a space of extraction as indicated on GIS maps. This in turn means that the politics of these different tactics materialise negotiations and contestations of places that are interrelated through the same technology and that represent various practices and social power relations (Massey 2005).

Although the use of GPS could be seen as a manifestation of the hegemonic cybernetic boreal forest space, the plurality of tactics that can be materialised and localised through this technology means that "new kinds of socio-spatial interaction are able to be generated because so many actors [and their forest imaginaries] can be easily located" (Thrift 2005: 471). This means that GPS makes it possible to see the co-production and interrelation of imaginaries that make the boreal forest a heterogeneous entity. The possibility of locating actors in the forest also means that their imaginaries and the places constituted by them can also be located. Through what Thrift (2005: 471) describes as "new kinds of socio-spatial interactions", one can see the relational politics of imaginaries as visible and alive simultaneously through the series of points (on GPS receivers) that embody the interrelations of places (and their changeable meanings) with imaginaries and quotidian forest practices. In turn, these GPS socio-spatial interactions mean that the boreal forest is far from a constellation of closed places; on the contrary, the boreal forest is an open space in which all its imaginaries and their politics are visually accessible and intervening with each other.

In *Matière et Mémoire* (translated in English as *Matter and Memory* in 1994), Henri Bergson (1941) describes matter as composed of an infinity of images that become fragmented into pieces by movement. Each image acts on and reacts to other images in various ways. In looking at how matter is produced in these multiple ways, Bergson uses an analogy of light reflected on mirrors, arguing that the light is reflected in a multiple of ways simultaneously, always in movement and in ongoing reproduction. Like light reflected on a mirror, the multiple points and coordinates that appear through GPS reflect the imaginary places of the boreal forest as well as the politics articulated by GPS users (by using tactics), and as with the light rays, the interrelations need one another in order to exist and create the forest. These interrelations mean that the politics of imaginary forest places become interconnected and form the relational politics that can be seen in the adoption of GPS by a multitude of users for locating their own places and politics of the boreal forest.

Because places and politics are always in mutation, it is also normal to see forest users embodying more than one imaginary place, sometimes simultaneously — again, made evident through the use of GPS. For example, while hunters use GPS to locate their hunting places in the cyberspace produced by satellite coordinates, the power of the industrial imaginary of the forest used in forestry becomes connected to a hunting place. Through the use of GPS, multiple knowledges and ways to engage with the boreal forest are territorialized and located on the same coordinated grid used in industrial forestry operations. The interaction of GPS receivers with the other hunting materialities (from rifle to moose call) produces various trajectories of social interactions that territorialize specific biophysical features (ponds, lakes, moose trails) as things that have very little to do with the industrial boreal forest. These “anodyne” biophysical features are segments of the hunter’s hunting forest place, but they are also biophysical elements involved in the production of places of adventure and tranquillity for hikers, cross-country skiers, canoeists, quad bikers and so on. When forest users want to locate various places and the biophysical features that compose them on their GPS receivers they make it possible to demonstrate the relational quality of the boreal forest, which has territorialized the boreal forest as a space of relational politics. Furthermore, this territorialization is not restricted to Euro-Canadians or hunting activities. First Nations people also have their ways of making concrete their imaginaries and knowledges of multiple boreal forest places with GPS technology. Knowledge about the forest and the terrestrial and aquatic animals living therein can be located at specific points through the use of GPS receivers.

This can be seen when Algonquians circulate in their pick-up trucks, jeeps, quad bikes or snowmobiles with GPS receivers that position the locations of trap lines and hunting camps.

However, GPS receivers are not the only objects that demonstrate the interrelation of imaginaries and their politics of place articulated by users in the boreal forest. The technologies usually associated with forest operations and the industrial imaginary (like chain saws, axes and swedes) are significant entities involved in producing and negotiating the politics when forest users deploy them in space to claim different imaginary places (Latour 2005). By being utilised in practicing places by forest users, these objects make the multiple places of the boreal forest visible, and it is through the stands taken by forest users that they play their political roles. This means that as hunting equipment, the multiple uses of these objects of quotidian forest practices embody various relationships with, and imaginaries of, the boreal forest — and consequently, they are involved in producing the relational politics of the forest.

As with GPS, multi-usage objects normally associated with forestry operations reveal their shifting identities and their significant role in the production of various places that enable specific imaginaries of the forest to exist. The use of axes, rifles, traps, snowshoes, quad bikes, and snowmobiles for current hunting and trapping activities transforms the dominant industrial boreal forest into a juxtaposition of various open places, central to the production and negotiation of politics of the boreal forest of the Abitibi region.

6.3.2 Lunch time in the school bus

A final example that can be used to show how the politics of imaginary places become relational is the place where foresters go to discuss ongoing operations for the day, and to eat their lunch. As in foresters' camps (Chapter 4), three main subjects dominate the conversations: hunting, fishing and forestry operations (in this case, drag scarifying). In the converted school bus used by drag scarifying operators as a shelter and lunch area (Figure 6.6), shifts in conversation bring the operators into different imaginaries of the boreal forest, different places and, thus, into different terrains each with their own social relations and consequent politics. Sitting with these operators for lunch, it was

interesting to hear their hunting stories, in which the descriptions of hunting places merged into those of forest operations without contradiction, overlapping each other and revealing their interrelation.

Figure 6.6 Lunch time in the bus: Mixing imaginary places and politics of the boreal forest. Photo taken by the author, forest operation east of Senneterre, Abitibi (02/08/05).

Through these stories, the relations between different imaginaries of the boreal forest and of the particular places in it, shows how the forest is an open space in ongoing transformations and constructions, which can take different forms and meanings. This openness disrupts any attempt to frame the boreal forest with inflexible boundaries and policies. The boreal forest is constantly territorialized by different imaginaries that shift from one to another without contradiction. This constant movement of territorialization is difficult to discern because it is constituent of the same object (the boreal forest), and each territorialization implies another.[71]

Applied to the context in which drag scarifiers come to take their lunch break in a converted school bus, the territorialization of an industrial forest imaginary is constantly disrupted and territorialized anew in different ways, indicating the interlacing of places

[71] Here I have been influenced by the work of Gilles Deleuze and Félix Guattari (1991), who talk about movements of deterritorialization and reterritorialization, but in the context of this work, I prefer using constant territorialization since I want to emphasise the constant change in the meaning of the forest.

and politics used to territorialize the imaginaries of the boreal forest. By shifting from one boreal forest to another in conversation, drag scarifiers show the contingency of different imaginary places and their complementarity in the production of the boreal forest space. From the hunting forest place to the quad bike forest place, the constant territorialization of the boreal forest becomes a body of multiple and interrelated politics of imaginaries, contesting the homogeneity presented by industrial forestry as the sole reality (see Chapter 4).

6.4 Conclusion

In the *Festival Forestier de Senneterre* (Chapter 5), the explorations of how different imaginaries of the forest come to life through the interactions between different representations and materialities showed that resistance to the dominant industrial relationships with the forest are manifested in every facet of the festivities. This promotion of multiple imaginaries produces the boreal forest as an open space which suggests the exact opposite to what the festival, on the surface, celebrates and suggests. In the present chapter, I have emphasised the significance of understanding how imaginaries of the forest are involved in the production of places central to the contestations and negotiations (what I see as the politics of imaginary places) between different boreal forest users. The materialisation of imaginaries into places has been demonstrated through the interrelation of forest users and different kinds of equipment and objects, creating the contexts that concretise imaginaries of the forest as places for hunting, learning, fishing, quad biking and so on. In demonstrating how multiple places are made concrete through interactions between objects, non-humans and forest users, the boundaries between what is and what is not the boreal forest become blurred and difficult to discern. A closer analysis of the boundaries and places produced by different imaginaries of the forest shows that the places and politics of boreal forest imaginaries are mutually constituted — which is highly significant if one is interested in developing new environmental politics (an idea I will develop in Chapter 7).

As I have also shown, the dominant industrial imaginary of the boreal forest and the ways of knowing and experiencing that come with it, are produced by a set of negotiations in which different imaginaries, places and politics interact with each other. The political significance of such interactions lies in the simultaneous production of politics and places that constantly challenge the dominance of industrial forestry and

prevent one from seeing the forest as a simple division between dominant and dominated forest users. This relational politics is revealed in the use of technologies such as GPS, which rely on a worldwide coordinated grid to localise the multiplicity of places produced through different imaginaries of the forest, which in turn challenge the industrial boreal forest and its politics. The politics of the boreal forest is thus in continuous flux: multiple and open, in a process of constant construction that requires every imaginary and its politics in order to constitute the forest. The politics of imaginaries exist because they are not self-constituted; they are a series of interrupted lines, in which each interruption leads towards an unknown direction where new ways to conceive politics become possible (Deleuze and Guattari 1991). This abstraction of the relational politics also means that every user has a role to play in the forest management question, mainly because place is constitutive of negotiation and of the boreal forest.

The questions that should be asked here are: Where do we go from here? and, how can these ideas about the relational conception of space, place and imaginaries have influence outside the academic walls, go beyond the critique to open ideas about new form of environmental governance? These questions need to be addressed in order to see where such ideas can lead — which is the aim of the next chapter. There is a need to find a path that could integrate these theoretical reflections and benefit the people involved and affected by the current boreal forest management politics.

Chapter 7

The Place of Imaginaries in Forest Management: Towards Other Political Possibilities

---

7.0 Introduction

As demonstrated in Chapters 5 and 6, the boreal forest is constituted by multiple, interrelated imaginaries and places, which disrupts attempts to fix the meaning and the spatial representation of the forest. The current chapter builds on this knowledge to show how a relational politics of forest imaginaries could be developed in ways that are more practical than is normally conveyed in discussions of these ideas. As such, this chapter sets out to demonstrate how the ideas discussed throughout this thesis could be applied in ways that would reform Québec's current forest management system.

The emphasis on social theory in geography, and more particularly in nature-society circles, has allowed researchers to raise important debates about the relationships between humans and non-humans. They have done this in a socio-political context in which humans will need, sooner or later, to imagine different relationships between ourselves and the rest of the biophysical world. However, very few researchers put themselves on the line by articulating how their often abstract theories and concepts could be applied in practice. Having said this, the formulation of institutional frameworks and detailed politics do, in fact, lie beyond the scope of this chapter. However, by drawing on the everyday life practices of forest users, I intend to show how imaginaries of the forest could influence the ways in which the forest is managed. To do so, I have divided the chapter into four sections with a short conclusion. This first section will come back to the corpus of work that highlights the significance of producing other relationships with non-humans, which will lead me to re-emphasise the significance of conceiving environmental politics as relational. I will also stress the significance of relational politics and of utopias in an attempt to demonstrate that other ways of engaging with, and knowing the boreal forest are possible.

The second section introduces the political power of utopias in rethinking environmental policies and their role in re-imagining the politics of forest management

in Québec. Utopias can be used as directions that mobilise social actions and political debates. By demonstrating how different imaginaries of the forest can be introduced to forest management, I outline how they might influence what forest management would look like. Section 3 introduces the idea of re-defining the role of forest cooperatives as potential structures by which "deliberative democracy" (Elster 1998) could be achieved and through which different forest imaginaries could be integrated into a new politics of the forest. Finally, Section 4 explains how a cooperative structure could open up new political possibilities and how such a structure might be governed by drawing on an "associative democracy" (Hirst 1994).

7.1 Rethinking environmental politics with imaginaries

In recent years, following the flow of 1990s literature written on social nature in human geography (Smith 1990, Castree 1995, Cronon 1996b, a, Peet and Watts 1996, Castree and Braun 1998, Wolch and Emel 1998, Whatmore 2002), geographers have emphasised the importance of rethinking relationships between humans and the biophysical environment (animals and vegetation alike). This has been done on various theoretical grounds that bring about interesting debates in the academic arena, especially on how a politics of the non-human could be elaborated. Although these works argue for a "new political theory of nature" (Smith 1996: 49, quoted in Castree 2003: 203) that disrupts the duality between society and nature, this quest for a renewal of environmental politics rarely takes place in everyday life practices or within the political spheres of parliaments and national assemblies. A critique of the current economic dynamics and values that influence human relationships with, and knowledge of, the biophysical world has pushed some researchers like Neil Smith (2007) to argue for a revolutionary politics as an alternative to capitalism, in which "the revolutionary intent has to prefigure in practice". As Smith (2007: 193) explains it, a revolution is above all about discontinuities, and this is how imaginaries can contribute to a discontinuate status quo about forest management, and provide pathways to revolution. This is because "imaginaries go beyond the imagination, in some way, they do violence to the instructions of the real, they substitute for the permanence of facts the permanence of rights" (Bachelard 1929: 43, my translation). This simply means that by contesting reality, imaginaries become not facts, but rights — the rights to reject the ways in which

reality is thought, produced and imposed as well as the right to accept it as it is presented by dominant discourses and practices.

The substitution of imaginary facts for imaginary rights reveals a discontinuity of the ways in which reality is conceived and constructed. However, this substitution also indicates that imaginaries are at the centre of revolts and revolutions; they open up pre-fabricated reality to other political possibilities (Deleuze and Guattari 1991). Acknowledging how particular imaginary places are politicised in practice makes it possible to renew the ways in which the political or what it means to be in common is understood and performed outside of academic terrain. Imaginaries make it possible to introduce new places in the project (or revolution) of rethinking environmental politics and to the political in general. This political renewal should not, however, be restricted to challenging the legitimacy of capitalism, as put forward by Marxist writers and theorists (Harvey 1996, Smith 1996, Lefebvre 2000, Smith 2007). Instead, it should also challenge the ways in which humans engage with their biophysical world and the entities involved in the construction of that world. Recognising the existence of different imaginaries of the biophysical world, such as of the boreal forest, means accepting that diversity and heterogeneity are inherent to the production of places and politics. Acknowledging the diversity of imaginaries involved in the production of space could help to refashion the debate about environmental politics and could also help to rethink imaginaries and the social relations involved in the production of politics (Massey 2005).

7.1.1 Relational politics

As shown in Chapter 6, forest users materialise their imaginaries of the forest through various objects, which in turn allows them to produce places where their specific ways of experiencing and knowing the forest come alive and contribute to the production of the politics of places (Massey 1994, 2005). In turn, these places are interrelated and co-constituted in many different ways through the everyday life practices performed in the boreal forest. Seeing politics as relational has already been discussed through the work of Massey (2005), in which she shows that a renewal of politics needs to include a rethinking of the notion of space and place as open, and in an ongoing process of construction. Whatmore (2002) also draws on this concept of relational politics through what she identifies as “hybrid geography”. Mainly inspired by the work of Donna

Haraway (1992a) and Latour (1993), she describes this hybrid geography through the words of Haraway (1992: 66, quoted in Whatmore 2002: 2) as "the spatialities in which the ontological separation of nature and society inheres are woven through all manner of scientific, policy, media and everyday practices that enact a nature as 'a physical place to which you can go'". Despite the great intentions behind these theoretical works, especially Whatmore's, it is rather difficult to bring their ideas into quotidian practice. As Noel Castree (2003) highlights, "[i]t is one thing to have a new political vocabulary, but quite another to have substantive political concepts that ground new forms of practice". Castree (2003: 209) also points out that geographers have to "move beyond metaphor" to show what a politics of "socionatural hybridity" really means and how it could be achieved. This is particularly true for any forest user interested in finding out how the current environmental politics can acknowledge the existence of multiple imaginaries and ways of knowing and engaging with non-humans that are co-constituted and relational. It is therefore important to understand how everyday life cultures operate and how multiple imaginaries and their politics are co-constituted and relational in quotidian practices (de Certeau 1984).

The multiple imaginaries are deployed politically by forest users as interrelated and simultaneously produced, offering alternatives to the current understanding of the pervasive dominated/dominant power relations. This means that the politics influenced by imaginary places cannot be thought of separately, but only as interrelated, as a corpus of unfixed entities in ongoing construction through social relations that rely on each other to exist. Ethnographic experiences become important for capturing how these politics are articulated in practices and how their interconnectedness in the production of multiple places could open paths for rethinking environmental politics in general (Chapter 6). By paying attention to how forest users practice their imaginaries of the forest through the technologies of the quotidian, it is possible to understand how users address the rights of presence/existence of particular forest places (Amin 2002: 973). By using technologies that can function in multiple contexts and places (such as quad bikes, chainsaws and axes), forest users take a stand and address their places' right to exist, confronting the homogeneity of industrial forest management and its ways to imagine and know the forest. It is through the movements of forest users, and the multiple uses of objects and their roles in performing diverse relationships with the forest, that the politics of places and imaginaries become relational and unstable.

The conception of stable and structured politics thus needs to be challenged by something that incorporates movement as a fundamental element of its production. This is why relational politics, by incorporating movement in its production, makes for an interesting challenge to the stable notion of politics, offering instead something that is always changing through contestation and negotiation (Nancy 1991, Massey 2005) — something that is the fruit of exchange in which every element needs every other to construct and take part in politics. In short, politics is the product of this continual exchange and interdependence between forest users, objects and non-humans involved in the production of imaginaries and places.

When scholars argue for rethinking politics, and especially environmental politics (e.g. Castree and Braun 1998, Smith 2007), they imply a rethinking of the role of instability and the role of the constant movement involved in the production of social and non-human activities (seasonality, birth and death, etc.). This also means rethinking the suffocating duality of the political right and left. Such a duality categorises the unorganised world and darkens the possibility of seeing the politics of imaginary places opening other relationships between humans and non-humans. It would be hazardous to exploit the existence of a boundary dividing the political in two separate camps, since this prevents thinking about Québec's boreal forest and forests in general as juxtapositions of interrelated boundaries in constant movement and it also prevents thinking the political as "the site where what it means to be in common is open to definition" (Nancy 1991: x).

Conversely, as the example of GPS receivers demonstrate in Chapter 6, there are no boundaries that separate imaginaries; all of them can be related on the same coordinate grid, allowing forest users to materialise a multiplicity of forest imaginaries through the same instrument (Thrift 2004, 2005). By using GPS to locate points that represent forest places and imaginaries which differ from the industrial forest, forest users contest the industrial forest with the same technological means. By using a GPS device to materialise something having a different meaning and different political connotation than the current forestry system as described in Chapter 4, forest users construct the boreal forest as open and constituted by a variety of imaginaries that produce "new kinds of socio-spatial interaction[s]" (Thrift 2005). Through GPS receivers, forest users are not divided between pro- and anti-industrial forest imaginaries. On the contrary, the circulation of multiple forest imaginaries makes the forest a space in movement, in

which multiple imaginaries are "intersections of mobile elements" that can be visualised and localised in relation (de Certeau 1984: 117). For instance, the trees that environmentalists want to see protected can be located on the same geographical coordinates used by foresters during the planning of their harvesting operations. Through GPS, these two very different imaginaries of the forest and their own sets of power relations can become interrelated, despite the different places and politics they represent.

Through the use of GPS receivers, forest users can see how the politics inspired by imaginary places are put into motion and implicated in negotiations that lead to associations between different users, places and politics in maintaining certain power relations with the forest.[72] For instance, by using the same tools, such as GPS, forest users can indicate the position of the places they consider and contest as distinct from the industrial forest. Also, while the forest industries present their harvesting operations plans on GIS maps, other forest users can indicate accurately (according to the grid of numbers used by GPS) the places whose presence they want to present to foresters. By indicating the presence of other places in which the forest is experienced differently than through industrial forestry, forest users employ the same technologies and discourses, and thus become interrelated to each other. As mentioned above, renewing environmental politics means thinking about alternative ways in which the multiplicity of imaginaries, their co-constitution and the boreal forest places they embody can be integrated in forest policies. To make this possible, the boreal forest needs to be understood as an open space that destabilises any preconceived power relations (such as those of forestry science and industrial practices) in the construction of the forest entity.[73]

To summarise what has been argued so far, rethinking environmental politics and the politics of the forest means accepting the multiplicity of interactions and imaginaries that constitute the non-human world. This multiplicity makes it becomes possible to see antagonistic politics exploding into an assortment of interrelated points and political positions. By acknowledging the interrelation and continual movement inherent to the

[72] Although I use GPS here, there are other ways that allow forest user to see their politics as co-existing such as encircling areas that represent specific places and imaginaries of the forest on a paper map and paying attention to the overlaps and multiplicity of these places.

[73] I am aware that the changes proposed in this chapter will certainly face resistance from the powers in place (i.e. forest industries and government). This is why I want to reiterate that the significance of imagining the forestry system differently should be seen as a start and not as a final solution.

constitution of imaginaries and politics, it becomes possible to rethink the politics of the boreal forest.

7.2 From utopia to politics: the road to change and the place of imaginaries

In an essay on the power exercised by food multinationals in the developing world, a problem highlighted much earlier by Neil Smith (1990), Jean Ziegler (2005) used an interview given by the philosopher Henri Lefebvre to *Radio France Culture* after his well-known 1975 publication *Hegel, Marx, Nietzsche ou le Royaume de l'ombre*.[74] Ziegler uses this interview to show how utopias can help the western world to rethink the politics of development. He emphasises how utopias are charged with political meanings and how they are essential to the construction of another world. Ziegler quotes the journalist who introduced his first question to Lefebvre by saying that:

> "I don't want to upset you… but you are known as a utopian", Lefebvre happily replied: "On the contrary, you honour me… I claim this quality… Those who stop their glance on the horizon limit themselves to what they see, those who claim pragmatism limit themselves to what is available to them in the first instance and have absolutely no chance to change the world… Only those who look towards what we don't have, those who look beyond the horizon, are realistic. These people have a chance to change the world… Utopia is what is beyond the horizon… Our analytical reason knows with accuracy what we do not want, what absolutely needs to be changed… But what needs to happen [*ce qui doit devenir*], what we need, the world totally different, new, only our inside glance [*regard intérieur*], only the utopia inside us can show it" (Lefebvre 1975, quoted in Ziegler 2005: 32, my translation).

Drawing on Lefebvre's conception of utopia and *La production de l'Espace* (2000), geographers such as David Harvey (2000) and David Pinder (2005) showed how utopias play crucial roles in mobilising political actions, reconfiguring space and proposing new worlds in which dominant social processes and orders become challenged. Although Harvey (2000) and Pinder (2005) refer to imaginations, imaginings and imaginaries without paying attention to their intrinsic singularities, they both recognise the interrelation of these terms to propose alternative politics of the city. Like the ideas that Lefebvre (quoted below and 2000), Harvey (2000) and Pinder (2005) apply to urban environments, I believe that thinking beyond what is described as reality is an essential exercise in rethinking environmental politics and the management of the boreal forest of Québec. Showing how other imaginaries and the places and politics that they embody could be inserted into forest policies might also be considered utopian,

[74] This 1975 interview was re-broadcast on *Radio France Culture* on Friday, 21 May 2004.

because it is very difficult to change or replace the structures that allow the industrial imaginary of the boreal forest to be maintained and reproduced. For instance, convincing the industry that the changes articulated in this chapter will be beneficial for them is a utopian idea, requiring a change not only in relationships with the forest but also in the epistemology of forestry science (Harvey 2000).

Nevertheless, there are many advantages in using "utopia" in a sense that does not correspond to the pejorative popular definition. These advantages are related to what Deleuze and Guattari (1991: 96) see as a sort of revolution (like that proposed by Smith 2007), as an infinite movement that is connected with what it is considered to be "real here and now" in the struggle against the homogeneity of thought (what Deleuze and Guattari see particularly as the struggle against capitalism). For them (1991: 96), utopia indicates the "conjunction of philosophy with the present middle ground", or what they associate with political philosophy. Utopias were also used by Paul Ricoeur (1969) who sees them as linked with imaginations as projections to open political horizons (*des champs politiques*).

By seeing utopia as the product of political philosophy and as an element that composes everyday life, it is possible to understand how boreal forest imaginaries and the places they embody can be transformed into elements of change. Utopia makes it possible to awaken possibilities for thinking about the forest beyond the present management system and the current well-established power relations of industrial imaginaries, as presented in Chapters 4 through 6. The renewal of environmental politics and forest management is not only linked to the protection and conservation of the non-humans that constitute the forest (animals, trees, mosses, soils, etc.), it also concerns the role of non-humans in providing experiences that construct imaginaries and utopias (Marin 1984, Harvey 2000). Considering an environmental politics that recognises the forest as constituted by an interrelation of imaginaries and places that have equal rights to exist in forest management policies would be a utopia. However, this utopia could be materialised if one makes the effort to imagine how forest management would be if a multiplicity of imaginaries and places were implemented in forest policies and practices. By using different examples, the following sections will propose a way to imagine what a different forest management system would look like.

7.2.1 Utopia: making space for multiple imaginaries of the forest?

The multiple imaginaries involved in producing the boreal forest places and in influencing politics of forest users offer ways to rethink politics and enlarge the possibilities for knowing and experiencing the forest. The question to ask is how forest management would work if a multiplicity of imaginaries, places and politics were to be recognised? For instance, what if harvesting techniques and management practices were to recognise the forest as a space in which users go to learn all sort of things about the forest that are not necessarily translatable through forestry science and ecology? The concretisation of this space implies abolishing predetermined conceptions and knowledges of the forest. This abolition becomes possible in part through the relations between imaginaries and utopias which work together to demonstrate that other forms of knowledges and ways of knowing and experiencing the forest are possible and can be used to rethink forest policies.

If forest users were to decide to create such a space, this would mean being aware of what people enjoy while in the forest, being more open to phenomena that are not necessarily quantifiable or that do not fit easily into categories. This means trying to grasp things that can be understood outside rationality and objectivity, the two qualities that are essential to forestry science and current forestry policies. To be seen as open minded and progressive, the government of Québec has produced indicators to inform the forest industry what should be protected for the social character of the landscape, but these features are rather rare in the boreal forest of Abitibi since the population density is so low in this region.[75] Moreover, the production of categories that allow the government to qualify what should and what should not be protected fixes the imaginaries and the politics of the forest, delimiting a boundary between what is acceptable and what it is not (e.g. MRNFP 2003b, Pâquet 2003). For instance, the Ministry of Natural Resources and Fauna has established criteria to protect the aesthetic quality of landscape, and generally these criteria are applied to areas in which eco-tourism is part of the regional economy — which is not the case in the Abitibi region.

This means that the special features of the forest — such as critical winter ranges (or browsing areas) for moose, which have cosmological connotations for Algonquians

[75] Indicators are categories created in order to respect certain biophysical features of the forest, among which there is a series of Latin names corresponding to animals and plants that need to be protected in order to maintain the landscape quality (*qualité du paysage*).

(Leroux 2003)— should not be reduced to a simple element ticked in a box on a governmental sheet of paper. Instead, critical winter ranges should be recognised as sites that have a role in the reproduction of culture and social relations involved in the production of imaginaries, which open new possibilities for thinking about the forest. This is what will be described in the next section, which introduces two alternative uses of the forest that could be easily inserted in the current forest management, but which are inspired by other imaginaries of the forest.

7.2.2 Canoes and guitars

Numerous interviewees proposed multiple uses of the forest that differ from the fabrication of construction timber. Amongst these propositions, some mentioned the use of cedar — trees not used by the forest industry for construction timber but often harvested by mistake during extensive operations and consequently their numbers have considerably diminished (Larouche 2006). The alternative uses of cedar depend on their mechanical characteristics (such as flexibility), which are attractive for those interested in the construction of canoe frames (for both canvas and birch bark canoes) and furniture, as well as on the medicinal properties that are obtained in the use of their sap. Reserving certain tree species for building canoes in which one can explore and experience the forest's rivers and lakes constitutes a manner in which to claim the existence of other ways of knowing and experiencing the forest. An Algonquian trapper makes it clearer when he presents an alternative use of the forest, mentioning what he would like to see protected during harvesting operations. He says:

> I'd protect almost all trees, if it is not for instrumental purposes, then, it is for medicinal purposes. […] This is why we say that trees should be used for their complete values, by complete values I mean the bark, the timber and the extraction of sap and syrups and things like that. It is all those sorts of things that are part of complete values of trees and this is what comes from the elderly people (WG, 19/07/04, my translation).

Another example that shows how different boreal imaginaries can be applied in quotidian relationships with the forest consists of the production of musical instruments. One interviewee spoke about an instrument maker who is forced to go:

> […] in Maine to get trees, he [the instrument maker] pays $2000 for a standing tree, for one tree! After that you [realise] and say "bloody hell", we've missed a lot of transformations. All we've done [with trees] was to use those that were surely good to make guitar tops or harmony tables [for violin and cello] and we made 2-by-4 [planks] with them. You know, as the [forest] industry buys trees at less than $5, it costs an average of $1 for a tree, I think we've missed the boat. This means one harvested [Maine] tree for 2000 [Québec] trees (JH, 07/06/04, my translation).

This same interviewee also notes the possibility of using certain areas of the forest for fruit picking, such as for the wild strawberries, raspberries and blueberries that are abundant in this region. In his words, it is possible to re-use harvested areas by:

> Setting on fire the former harvested sites and then, you know that in certain areas you'll find raspberries or blueberries or wild strawberries. We could say "this sector would be used for blueberries", from this period of the year and fruit pickers can come. Same thing for the raspberries that grow after harvesting operations and so on. […] If we were selling our own pies and jams made of a mix of raspberries, blackberries, and blueberries on the market, we could see a lot of small economic possibilities. Obviously, after a certain time, these areas do not produce fruits and trees can grow again and be harvested later (JH, 07/06/04, my translation).

Although the quotations above do not necessarily rethink the industrial relationships with the boreal forest, and the information given might not be completely accurate (e.g. the price paid for timber by the instrument maker), it is important to pay attention to the outcome of the practices highlighted as solutions by the imaginaries of these forest users. Instead of imagining the boreal forest as a space of extraction or a space of conservation, these forest users agree that their imaginaries and the politics of these imaginaries can co-exist. The forest is not only a place in which the trees are transformed into construction timber, it is also a space that includes the fabrication of canoes, medicines and musical instruments, as well as fruit-picking practices. It is this sort of interrelation and co-constitution that inspires Jennifer Robinson (Robinson 2004) to say that the politics of South African cities is made of interrelated spaces and imaginaries that destabilised the seemingly fixity of cities. This is also highlighted by David Pinder (2005) who shows that the interrelation of imaginary spaces and utopias of the city were inherent to the composition of urban politics. In the context of environmental politics, the recognition that the forest is co-constituted by multiple imaginary places opens up a great opportunity to rethink the ways in which humans engage with it and how it might be managed.

The introduction of other commercial uses, so called non-timber products, of the forest means that various types of relationships with the forest could coexist and be co-constituted. The forest space looks more like a fluctuating medium in which different imaginaries interact than like a well-defined entity made of antagonistic relationships. By using specific trees for uses other than industrial forestry, canoe makers and musical instrument makers do not necessarily need to harvest the entire forest; they only use specific trees. By practicing politics, forest users allow other imaginaries to be materialised, and thus, the forest acquires other meanings that open other forms of politics which are more inclusive than the current forestry system. These other politics

give certain status to trees and the other biophysical components of the forest (such as plants and wild fruits that can be used for forest practices) by which multiple imaginaries of the forest are concretised. If the examples above make it possible to see interrelated imaginaries of the forest, then it is important to keep a system of knowledge that will maintain this flux of interrelations alive. Instead of encapsulating the forest and its multiple imaginaries in terminologies that predetermine its meaning, a new form of governance could try to construct and adopt another terminology that would allow thinking of the multiple imaginaries of the forest as co-constituted, allowing the concretisation of utopias in which the forest is legally recognised as something else than a resource of extraction.

7.2.3 Resources management and sustainable development: how to avoid the trap of predetermined ends?

If alternative imaginaries, places and politics of the boreal forest were integrated into forestry practices, this could help to establish ways of conserving the forest's capacity to produce multiple experiences. By trying to keep the boreal forest as an open site in which many different imaginaries and meanings become formalize in order to protect the forest as an organic whole of imaginaries that could influence the development of future environmental politics. However, if this type of forest management is to include multiple ways of experiencing and understanding the biophysical world (and the interactions that bring it to life), it is important to avoid a terminology reproduces the same type of power relations as those utilised by forestry science and the forest industry. For instance, the ecosystem approach claimed by environmentalists, forest engineers and ecologists as the "new" type of forestry relies on concepts that ignore the unorganised interrelations occurring within the forest. The ecosystem approach tries to replicate the biophysical results of a forest fire through harvesting techniques. According to environmentalist groups and professional foresters, it is a way to diminish the impact of clear-cutting. Interestingly, this approach replicates the knowledges of forestry science and ecology as well as their respective power relations. Through this approach, the forest is maintained as a site of expertise and new politics are difficult to imagine.

The expressions used by many environmentalists and forest engineers for defining what should be protected produces the world and the life in it as something that is "without

novel possibilities, without a future of hope, a world where everything is regulated in advance" (Lévinas 1985: 28, quoted in Popke 2003: 312). Thus, what comes to form the heart of forestry management policies in Québec has a pre-determined end. Using expressions such as "biodiversity", "ecosystem approach" or "sustainable development" to talk about the interrelations occurring within the forest fixes the infinite flux of interactions between different users that make the forest open. Using these terms (biodiversity, ecosystemic approach, sustainable development) makes it easier for a group to regulate its major functions and meanings. Talking about the forest in terms of biodiversity and ecosytemic approach — as is the case in environmentalist discourses and forest policies — encourages imagining the forest as a space that is finite and regulable (Foucault 1991, Braun 2000, Demeritt 2001b, Braun 2002). These terms also encourage imagining the forest as a space in which the interrelations between biophysical elements can be predicted over space-time through parameters and models, as discussed in Chapter 4. In other words, this terminology would need some modifications if the relationships with the forest aim to be changed and this is particularly significant for environmental NGOs and to forest users who are interested in renewing environmental politics (Cronon 1996a, Proctor 1996).

One of the first steps, then, in rethinking boreal forest management policies consists of trying to change the terminology that in forms forestry practices (knowing that this is a difficult task). For instance, use of the word "management" to describe the relationships that humans have with the forest suggests a dominant/dominated relationship in which the forest is seen as a space of "resources" over which humans have a particular right of exploitation. Moreover, the words "management" and "resources" perpetuate an imaginary of the forest as something inert, something that needs to be taken charge of through regulations and controlling sets of rules. Both terms epitomize the industrial relationships with the forest (McManus 2003). If rethinking the politics of the forest implies integrating other imaginary places, forest users should bring in other terminologies that can help break down the dominant power relations. This needs to be done without using highly specialised neologisms, which risk obscuring and maintaining forest policies as the domain of experts (see Whatmore 2002). Thinking about opening up new forms of forest politics without thinking in terms of "management" and "resources" might also be seen as utopian, but as with a great majority of utopias, it is a necessary effort to open forest management to other possible relationships with the forest. For instance, resources could be taught in terms of source

of life for animated entities (including water and soils) and as fossil environment for minerals, precious stones and petroleum.

This utopic terminology could influence the production of other possible forest relationships coming from various forest users that could influence the acknowledgement of other forest places than those presented through "management" and "resources". Spaces of "resource management" clearly indicate the commodity value attached to the elements involved in making the boreal forest a biophysical entity. Trying to think about forest politics outside of "resource management" requires thinking about the use of the forest in ways that acknowledge the multiple imaginaries as unfixed. Indeed, ignoring the terms "resources" and "management" in the current socio-politic context is extremely difficult. However, it is a starting point for anyone who is interested in going beyond the predetermined relationships with the forest these terms suggest and in proposing how "new" environmental policies can be created.

If terms such as "resources" and "management" are redefined in environmental politics, "resources" could become entities that are not *managed*, but *experienced*. They would be at the centre of the production of other knowledges and experiences with the biophysical environment that redefines the relationships between humans and non-humans. Where resources are *experienced*, the forest becomes a site of reflection and stimulation in which a multiplicity of other imaginaries and places perform other relationships with and politics of the forest. For instance, this is represented through hunting experiences, in which hunters like to go hunting for what they can learn by observing interactions between the different biophysical elements that compose the forest (Ingold 2000, Lorimer 2006). Acknowledging the existence of these other imaginaries of the forest makes it easier for forest users to become aware of the responsibilities they have in creating the forest. The current dominance of industrial forestry makes it difficult for the other forest users to see their multiple imaginaries and places integrated in policies. Thus, by recognising the existence of multiple places that reflect forest users' imaginaries of the forest, the forest becomes an inclusive site in which the responsibility for creating its meaning does not lie only with foresters. This also means that the roles of trees, animals, plants, rocks, lakes and streams which are involved in making the forest also contribute to reflections about what can be done to produce a "new" politics of the forest that will include a great variety of imaginaries. Creating legislation that would act upon, and give legal power to, such imaginaries

implies not only reforming the institutions that recognise these imaginaries, but also rethinking the epistemologies and ontologies that have contributed to construct the forest as site of expertise.

Many scholars (e.g. Escobar 1995, 1996, Peet and Watts 1996, 1998, 2004) emphasise the significance of social movements in rethinking the relationship between humans and non-humans. But too often, these social movements "replicate new hegemonic discourses" that undermine the effort to rethink environmental politics as relational (Forsyth 2004: 421). This is the case with the notion of sustainable development. In Québec for instance, "sustainable development" is a very popular term that most people embrace without questioning its provenance (Rio Biodiversity Convention 1992), validity or usefulness, and this is particularly true when it is time to talk about environmental politics. The popularity of this expression can be seen through university programs, funding bodies and university staff research interests. The most striking example is the decision of Jean Charest's Liberal government to change the former Ministry of the Environment into the Ministry of Sustainable Development and the Environment. In the latter case, the use of "sustainable development" and its economic imperatives allows the government of Québec to "transcend the uncomfortable claims of environmentalists and critics of [greedy] development", and to claim the protection of the biophysical environment through capitalist projects (Chartrand and Rodrigue 2006).

By using "sustainable development" and "resource management" as the keystones of environmental political discourse in Québec, the relationship between the biophysical world and the logic of capitalism that drives these terms is left unchallenged. Moreover, the high level of ambiguity offered by the term "sustainable development" is enhanced by its lack of legal definition, allowing anyone interested in the development of the biophysical environment to claim that their actions constitute "sustainable development". This means that sustainable development, like resource management, should be seriously rethought in order to escape from the highly capitalist meanings they impose on environmental politics. Additionally, employing these terms and the systems of knowledge that create them reiterates the power of specific imaginaries of the forest, eclipsing the possibility of an environmental politics that aspires to building different relationships between humans and non-humans. As the next section will show,

the task of rethinking this terminology should be inspired by the everyday life of those implicated in the political changes proposed by a relational politics of imaginaries.

7.2.4 The Road to Change

According to Arturo Escobar:

> [t]o think about alternatives in the manner of sustainable development, for instance, is to remain within the same model of thought that produced development and kept it in place, one must then resist the desire to formulate alternatives at an abstract, macro level; one must also resist the idea that the articulation of alternatives will take place in intellectual and academic circles, without meaning by this that academic knowledge has no role in the politics of alternative thinking (1995: 222).

Although Escobar wrote these sentences in the context of developing countries (while working in Colombia), I agree with his view that new relationships need to be forged between academia and those living outside this limited circle. I also agree that thinking about alternatives in the same "model of thought that produced development" means closing down possibilities of integrating other imaginaries and experiences of the biophysical world. Sticking with the current model of thought means renouncing the other possible worlds and politics proposed by utopias (Lefebvre 1975, 2000). Rethinking environmental politics through the same frame of mind that contributed to the construction of sustainable development and resource management would mean acknowledging the legitimacy of a market-oriented quality of non-humans that underlies these terms.

Perhaps more importantly still, I also share Escobar's view that an articulation of alternatives takes place in the social interactions that compose everyday life practices. This is also why I emphasise that thinking about alternatives to the current forest management of Québec implies understanding how forest users use the forest. It is, moreover, important to pay attention to the social and economic contexts in which alternative notions of management might be manifested. For instance, in the Abitibi region, forest-dependent communities cannot adopt alternative relationships with the forest over a very short period of time. The ways in which knowledges of the forest and of the biophysical world are structured, as well as their dissemination within universities, forestry departments, governmental institutions and the various sources of information, can only be changed through a "long term perspective". To summarise the argument so far, building up environmental politics that would acknowledge other imaginaries as well as other ways of knowing and experiencing the forest than what

dominates the current forestry discourse and practices requires an attempt to articulate an utopic project, in which a relational politics would be implemented.

If forest users decide to develop this type of politics, however, it is important to avoid using terms that are predetermined and to try to go beyond forestry science and ecology in search of political vessels that can lead towards implementing a new politics of the forest. If utopias and imaginaries can open up new possibilities of forest management, it is important to base these "new" possibilities on concrete ground (Harvey 2000) — this is what the next section of this chapter will do. A potential ground on which important political changes could be undertaken is the cooperative structure already in place in the province of Québec and in the Abitibi region. As I will show, this structure can enable more than one imaginary of the forest to be performed and materialised through forestry legislation.

7.3 Cooperatives and alternative management of the forest

In the Abitibi region, there is a long tradition of forest cooperatives that started during the colonisation period (in the 1930s, encouraged by the Catholic Church), and that still exists today in many communities throughout the region and elsewhere in the province of Québec (Lower and Innis 1936b, Mercier and Marquis 1995). Cooperatives are traditionally associated with workers grouping together to share equal responsibilities and tasks. They also have an interest in developing employment where it is scarce by encouraging alternative regional economies through sharing labour force and equipment costs. Beyond their economic dimension, cooperatives are also known for their capacity to build social cohesion (Gingras and Carrier 2006). These characteristics make cooperatives good starting points to rethink and explore their role in concretising new relationships with the forest that could lead to a different form of environmental politics. The dominance of industrial forestry in discourses and practices in Québec's forest regime has limited the role of forest cooperatives to simple sub-contractors. In turn, this has reduced their multiple roles to single activities such as harvesting, road construction, reforestation and increased their dependence on industrial forestry investments, which push cooperatives to become specialised in specific fields like reforestation operations (Gingras and Carrier 2006).

Their dependence on the forest industry has made cooperatives important actors in maintaining the dominance of the industrial imaginary of the forest through discourses and practices. If forest cooperatives could be vectors of social cohesion, their role would be something other than the little sister of industrial forestry; they would instead be advocates for recognising the existence of boreal forest places made by different imaginaries. In their social interactions and by the equal distribution of power between their members, forestry cooperatives could be the structure that allows alternative imaginaries of the forest to be circulated in the everyday discourses and practices of forest-dependent communities. Their potential for acknowledging other imaginaries of the forest and other ways of knowing and experiencing the forest is highly significant when compared to the current forestry system. As I will demonstrate in this section, cooperatives allow their members to share their imaginaries of the forest, thus allowing alternative practices to be implemented later.[76]

Through forest cooperatives, the boreal forest could become re-territorialized as a space in which its members and other forest users could decide what type of relations they want with the biophysical components of the forest. This re-territorialization of the boreal forest would not mean that cooperatives would necessarily implement alternative and multiple imaginaries of the boreal forest. However, the horizontal distribution of power that is particular to cooperatives makes them more likely to articulate different forest imaginaries (and their politics) than a system in which decision making is organised on a hierarchical structure. It is in its horizontal distribution of power and exchange between members that the cooperative model offers an alternative to the homogenisation of forest experiences and imaginaries. This is because a horizontal structure allows a multiplicity of imaginaries and their politics to circulate amongst members, forestalling homogeneity.

Another interesting characteristic of cooperatives is their ability to be financed by members who are forest users and who would decide to support the discourses and practices of particular cooperatives because they reflect what I described as their own imaginaries of the forest. It is important to note that this management could be supported by local people first, only admitting a certain percentage of outside funding in order to keep decision-making within the region rather than with large urban

[76] It is important to not romanticise cooperatives, since like any other economic structure, they can be the source of unequal power amongst members.

environmental NGOs. This scenario does not lead necessarily to an opposition of capitalism, since cooperatives can decide to adopt the relationships with the forest advocated by the industry and envision the forest as a space of extractable resources. However, it is important to highlight that even though cooperatives may embrace the industrial imaginary of the forest, they can still be distinctive and more adapted to regional needs and other imaginaries can co-exist with dominant one.

By presenting cooperatives as a way out of the current forestry system, I mean to suggest that all the imaginaries, places and politics of the forest could be interrelated and freely debated between invested users. This moves the forest system closer to one of "deliberative democracy"[77], in which cooperatives are the structures that allow every forest imaginary to be heard and known by members through regular meetings about what kind of relationships members want with the forest (Elster 1998). The dissatisfaction of general public regarding the current liberal democracy, especially about the generalised lack of power of citizens, makes say to Graham Smith (2003a) that deliberative democracy became an alternative to the liberal democratic system by becoming a form of deliberation through which citizens become responsible for their own future. Articulating a deliberative democracy through cooperatives could mean enhancing "[t]he freedoms of speech and association [that] not only provide the guarantee of a more extensive political activity than the vote" but also enable the free circulation of imaginaries in the social sphere (Beetham 1992: 48 quoted in Smith 2003: 55). Because of the social cohesion created by cooperatives, members would have a responsibility to think about the possible imaginaries and subsequent politics of the forest they would like to adopt for their cooperatives, villages or towns and regions (Gibson-Graham 2006). For instance, if a forest-dependent community would decide to apply practices that promote other imaginaries of the forest —where certain areas could be used for activities other than forest exploitation — it would be the responsibility of the community and of the cooperatives involved to look after the interests of both community and forest. Examples from the Spanish Basque Country show that cooperative structures are essential for the sustainability of employment and for the balanced development of the region by encouraging workers to "see themselves as

[77] Deliberative democracy argues that "democracy is best achieved through public deliberation over policy issues in which voices, rationalities and positions form part of the decision-making process" (Smith 2003b).

agents of industrial, and ultimately social, transformation" (Mathews 1999: 189, quoted in Gibson-Graham 2006: 125).

To become involved in the production of political change, forest cooperatives should be seen as institutions through which different imaginaries of the forest come alive. The free circulation of imaginaries makes the cooperative an organic institution, in which all members and their imaginaries of the forest are parts of the same body. All of them need each other for the functionality of the cooperative, and all of them have the potential to rethink the ways in which the politics of the forest are performed and what kind of relationships with the forest these politics embody (Morrison 1991). As mentioned in the beginning of this section, forest cooperatives are normally constituted by foresters that work as sub-contractors for the large forest industries. One potential improvement in the role of cooperatives as replacement structures for the current forestry system lies in the communal quality of cooperatives. Because the power of cooperatives members tends to be equally distributed amongst its members, decisions are made according to consensus, not corporate interests. This, in turn, creates a decision-making dynamic different from that which dominates current forest management.

In terms of membership, any forest user could become a member of any forest cooperative. However, if such a structure would be adopted, it would be important to limit the percentages of members coming from urban environments, such as Montréal, in order to allow the users who experience the forest on a quotidian basis to control the destinies of their communities and of the surrounding forest. This is particularly important when one compares the demographic significance of the Montréal region with the small population of Abitibi. Another key point regarding the composition of cooperative members relates to producing a forest management strategy in which women are represented more equally (which is not the case in the present system). The boreal forest places imagined by women have always been overlooked, and it is likely that a cooperative structure would allow women forest users to participate more actively in management strategies since their imaginaries (and political positions) would be heard by other forest users (both men and women). If a cooperative structure allows deliberative democracy to exist, it is more likely that women's imaginaries and experiences of the forest would participate in the debate about what type of relationships with the forest could be included in forest policies.

If cooperatives could allow forest users to realise their responsibility in imagining the world they want to construct and inhabit, they could also reconfigure the geography of the boreal forest through negotiations and associations between different forest cooperatives and their members. Such negotiations would take place between different cooperatives and different cooperative members who would agree on the type of forest imaginaries that should be transformed into forest management practices. For instance, each member could use his or her voting right and deliberate within cooperatives, or in meetings of at least two cooperatives, to discuss which types of relationships with the forest they would like to implement legally. This means that certain areas of the forest might be used for hunting, walking, bird-watching and so on, which in turn enables the free circulation of imaginaries. Crucially, this free circulation makes it more likely that users will invent and develop relationships with the forest than can then become instrumental in the future of the forest such as increasing the number of areas allocated for other purposes than forestry (Gibson-Graham 2006). In the following section I will briefly describe how the presence of cooperatives in forest management could also help to restructure the current geography of the boreal forest.

7.3.1 Territorializing the forest through forest cooperatives

In the cooperative structures introduced above, the multiplicity of experiences and imaginaries inherent in the production of the boreal forest and its politics would take form through negotiations within the cooperatives — that is, through a deliberative democracy. Because the cooperative members, their imaginaries and their politics of the forest are in constant relation and movement, they can also interact with other forest cooperatives grouping other forest workers with similar and dissimilar imaginaries. By practicing different imaginaries of the forest, the interrelations between several forest cooperatives give a multiple and heterogeneous portrait of the boreal forest, which differs from the more homogenous image produced through forestry science and industrial forestry.

Cooperatives are the places in which a dialogue between multiple forest users and their imaginaries of the forest would be possible. This is because cooperatives can be the actors or institutions involved in reforming boreal forest spatiality and geography by inviting members to create coalitions on particular relationships with the forest that in

turn, could disrupt the current monopoly of industrial forestry. The case studies of Mondragón, in the Spanish Basque Country, show that working together, cooperative have developed associations that allow them to construct a community economy through which new spaces have reconfigured capitalist economy and the social relations of production (Gibson-Graham 2006, Chapters 5 and 6). Drawing on this reconfiguration, it becomes easier for forest users to acknowledge how multiple practices and forest imaginaries coexist in ways that encourage the renewal of politics. For instance, this means that the current Forest Management Units, the same units used to produce the geography of the forest industry and its territoriality (see Chapter 4), can be disrupted by the interrelations of several cooperatives working together to reshape the power relations that have constructed the present geography. By associating themselves with a redefinition of forest geography (i.e. disrupting the boundaries that permit the territoriality of forestry imperatives) forest cooperatives and their members would territorialize the forest as something more complex than a space of extraction.

This alternative form of territorialization would make it possible to articulate the significance of non-humans in the environmental politics of the boreal forest. For example, the reorganisation of boreal forest geography by coalitions and associations of users and cooperative members would make it possible to represent the forest — particularly its non-humans — as something that could be experienced in a great variety of ways. This contrasts greatly with current forest politics, which prioritise industrial imaginaries. For instance, instead of categorising the boreal forest according to stages of readiness for harvesting operations (e.g. mature, over-mature and so on), the decision taken by a forest cooperative could organise harvest operations in consideration of other imaginaries, such as the forest as a place for animals and their habitats, which would allow users to have all sorts of experiences with the forest. By redrawing the boreal forest geography (and power relations) according to a consensus by forest cooperatives capable of recognising various forms of imaginary (the forest as a place to learn, as a spiritual place, etc.), these cooperatives would be embracing a deliberative democracy (Elster 1998), in which members could voice their conceptions and imaginaries of the forest. The result would be to allow forest users to make their imaginaries through fauna observation, bird-watching, trekking, canoeing, hunting and so on.

This cooperative territorialization may, for instance, mean leaving many mature and over-mature trees up in order to provide shelters for animal populations. This would be

a very different strategy than the argument used by the forest industry, and supported by the Ministry of Natural Resources and Fauna, that over-mature forests are dangerous because they are "likely to catch fire very easily" (GC, 09/08/05, my translation). Beyond the threat of flammability, what can be seen here is a threat to the industrial imaginary of the forest and to the power relations that maintain this imaginary as dominant. The industry's argument is obviously based on scientific evidence (e.g. Bergeron et al. 2001) and nothing can guarantee that this type of assertion will not become dominant in a deliberative democracy. However, by allowing alternative management possibilities to be deliberated between cooperative members, it is more likely that multiple types of forest imaginaries and practices could realise other forms of forest politics and inspire other geographies of the boreal forest of Québec.

Although this scenario remains theoretical, forest cooperatives, organised in a way that enables multiple imaginaries of the forest to circulate through a deliberative form of democracy, reveal an interesting path for developing a new form of forest politics. As I will demonstrate later, it is important to decentralise the decisional power from governmental institutions to forest cooperatives. The association between different forest cooperatives which embrace similar imaginaries of the forest is also advantageous for articulating a new form of environmental politics. Different forest cooperatives can interact with each other and become interrelated in redrawing the boreal forest and the power relations that shape its politics. This is a necessary change, as the current forest management system is going downhill (Rayner and Howlett 2007) and the consequences of replicating it will be disastrous for the economy of forest-dependent communities and the political sovereignty of Québec and Canada — as demonstrated in more in detail in the following section.

7.3.2 Adopting forest cooperatives and moving from the dead-end path

Thinking about how other imaginaries and politics of the forest could be implemented in forestry discourses and practices in Québec's forest regime implies making substantial social changes, which would have a significant impact on forest-dependent communities. The status quo of the ways in which the forest is experienced and known needs to be changed for something more inclusive than what the current forestry system suggests, and this can only be done through a collective effort and communal project. However, when the forest industry states that:

> In resource-dependent regions, [Québec has] 250 municipalities, towns or parishes which [are] 80-90% depend on forest activities. Of this number, 100 are exclusively dependent [on forestry]. It is quite obvious that if we were to say tomorrow "the forest [industry] doesn't exist anymore", [this means that] 150 thousand jobs in Québec, direct and indirect, [would be lost]. This means 14 billion of annual economic activity that won't be there. It is more than 3 billion dollars in wages. So you don't play with that, we cannot be irresponsible (GC, 09/08/05, my translation).

Suggesting major changes in the ways in which the boreal forest is experienced and known may be considered unrealistic by those who maintain the power relations that animate the industrial imaginaries of the forest and who have constructed the forest as a regulable entity. As the above quotation shows, intellectual efforts to open up new possibilities of human interactions with non-humans are seen as irresponsible and as a threat to the existence of the taken-for-granted forest of extraction. However, it is important to emphasise that it would be much more irresponsible to believe that the current forestry system and its politics can survive in a socio-political context in which concerns about the state of the biophysical world is increasing (e.g. climate change and the role of forests in stabilising CO_2 emissions), and in which forest trade becomes more difficult due to the high price of exports and extraction operations.

This is particularly true in the difficult context of the forest industry of Québec. For instance, the recent rise of the Canadian dollar makes the timber exported to the United-States and to international markets more difficult for the Canadian forest industry. This problematical context has been accentuated by a saturation of the international timber market, created by timber products from emerging economies that can produce timber at a very low cost (Urquhart 2001). Moreover, and even more strikingly, the softwood lumber trade dispute between Canada and the United States (started in1982) shows the extent to which the present forest system and the industrial imaginary have created significant vulnerability in the Canadian forest industry (Berstein and Cashore 2001).[78]

This changing context has clearly shown the dependence of Canadian forest industry on the export of wooden products to the United States. This economic dependence is even

[78] This trade dispute primarily concerns the two different systems of forest ownership: public in Canada and private in the United States. This difference makes industrialist in the U.S. believe that Canadian provincial governments such as Québec subsidise their forest industry without taking into account the market prices. The U.S. has thus imposed punitive taxes on Canadian lumber "to offset perceived subsidies" (Bernstein and Cashore 2001: 69). This dispute has degenerated into many juridical battles between the two countries, at the NAFTA convention and more recently at the WTO (CIFQ 2007), and the results have shown that Canada was not illegally subsidising the softwood industry (see Bernstein and Cashore 2001: 69-74).

more obvious when one looks at Canada's exports and foreign investments. In both cases, the United States is the key player in buying products made of Canadian "natural resources", either raw or already processed (Hayter and Holmes 2001). For instance, many saw mills operators told me that although the forest is transformed into construction timber in the Abitibi region, this timber is transported to the United States and then put back on the Canadian market without any modification except for wrap paper. Similarly, I have been told by saw-mill workers that trees are transported to, and transformed in, the United States to be re-sold on the Canadian market through large home improvement retailers such as Home Depot. This means that investments in the development of the industry are primarily done for the U.S. market and thus Canadian forest-dependent communities are at the mercy of the U.S. economy. This is dangerous in a context in which the Canadian dollar is almost at parity with the United States dollar.[79]

Although this is not new and not restricted to the timber market, it is particularly explicit when one looks at how Canada has behaved since the last agreement with the United States on the softwood crisis. From May 2002 to August 2006, the U.S. Customs Service collected more than five billion U.S. dollars in duties, and with the last agreement (July 2006), Canadian provinces preferred negotiating "an out-of-court agreement" that allowed the United States to reimburse four billion of these duties to Canada (FAITC 2006, CIFQ 2007). In other words, the Canadian forest industry has agreed to give a billion dollars to the U.S. forest industry in order to stabilise the flow of exports and foreign investments, which allows many forest-dependent communities to survive and restart economies that have been greatly affected by this dispute.

In this context, it is difficult to agree with the current forestry system put into place by the government of Québec. The power relations involved in deciding how the forest is experienced, known and regulated for the next seven to nine years (the length of time the 2006 agreement will last) are those of the forest industry; the same industry that has territorialized the boreal forest as a space of extraction and dependency. However, previous overexploitation is also mainly responsible for the recent reduction in the allowable timber volume to the forest industries of Québec (Rayner and Howlett 2007). In turn, this has created a very difficult context for the forest industries as well as for forest-dependent communities and regional economies (see CEGFPQ 2004). Because

[79] At the moment I am writing this sentence, one Canadian dollar is worth 94.4 US cents.

the forest industry will have to cope with a reduction of the allowable volume of forest for the next five years, this also means a drastic reduction of the profits necessary to keep the forest industry alive in regions such as Abitibi, as well as a subsequent reduction of employees. It will become more and more difficult to maintain this large industry without subsidies from the government, which could lead to further juridical battles with the United States.

In contrast, cooperatives would not need the large structures of industrial forestry, because their existence has more to do with the social cohesion of their communities and their capacity to occupy rural areas for the long-term benefit of forest-dependent regions (Gingras and Carrier 2006). Additionally, the quantity of forest harvested in a year is not dictated by shareholders, but rather by the inhabitants, cooperative members, who have the survival of their community, as well as of the forest, as points of interest. It is also important to note that the forest harvested by cooperatives is sold on a more local market, which could work to produce a self-sufficient economy within Québec and Canada.

Through this summary of the state of the Canadian and Québec forest industries, I have stressed that the industrial imaginary of the forest and the subsequent practices that enable its materialisation have led the forest industry close to its own destruction. On the other hand, the path suggested by forest cooperatives enables forest users and forest-dependent communities and regions to move from the dead-end directly created by those maintaining the current forestry system in place. If forest cooperatives allow their members to be immersed in a deliberative democracy, in which many imaginaries and ways of knowing the forest can circulate and be articulated through forestry practices and policies, it could lead to a reform of the present forest system of Québec. By using utopias in order to reform the current forestry system and to propose new relationships with the forest, it is possible to reflect on the type of governance these new relationships with the forest would need in order to allow cooperatives to transform forest politics and make possible a disruption of the division and marginalisation of forest users.

7.4 Multiple imaginaries and exploring other possible paths of governance

As described earlier, many academics have made an effort to rethink the relationships between humans and non-humans, but very few have proposed a system of governance that would articulate these reinvented relationships. In this section I will propose a path that could make the forest cooperative structure into a form of governance. As argued in this thesis, governance that recognises the relational dimension of politics and imaginaries of the forest can offer new ways of politicising unrecognised forms of knowledges and spatial imaginaries of the forest.

Bruno Latour (1999b) has attempted to show a new form of governance in which Western democracy would be re-organised and renewed by rethinking the role of science. He emphasises the relevance of thinking about the relationships between humans and non-humans through a "new" constitution, based on a sort of republican structure in which every member can speak and hear the others. Although Latour's project is rather blurred, it is a worthwhile effort to imagine a democracy that extends to non-humans and to attempt to disrupt the duality between humans and non-humans and between the political right and left. Latour believes, as do many others, that politics should be seen as relational rather than divisive. This means that everyone who is part of the civic society has a role to play in shaping environmental politics. However, one of the weaknesses of Latour's work concerns his failure to show how his ideas will benefit those who are affected by the changes he proposed, starting with non-humans. The cooperative structure I emphasised in the previous section helps to fill this gap. If politics are to be conceived as a process of exchange, in constant mutation and becoming, it would be incoherent to propose a finite solution to the current deficit of Quebec's forest management system (Deleuze and Guattari 1987). Yet it is important to stress the relevance of the associations/alliances of multiple forest users in proposing political institutions which embrace the various imaginaries and politics of the forest.

It is where relational politics can be fused with a politics of association, allowing us to think about the responsibility of civic society in making and performing politics. In economic policy literature, the expression "politics of association" refers to associativism which has been developed by the political theorist Paul Hirst (1994: 2) as associative democracy which aims to reform and reorganise socio-economic governance

in Western societies by criticising representative democracy. Scholars working in economic policy circles also refer to “the third way” when they speak about associative democracy. This is because this alternative form of governance tries to break down the dualism between the market and State economies by building a type of governance in which civic society is empowered by “self governing associations [as] the primary governance structures in both economy and society” (Amin 1996: 309). Although the associative democracy model has many weaknesses (just like all models that attempt to grasp the unutterable contingency of social relations), it is important to highlight the points that might benefit environmental politics and the politics of the boreal forest in Québec. This is true in a context in which multiple users have rights and responsibilities regarding their relationships with their biophysical environment. Because the boreal forest of Québec is public, the State should still provide a legal framework and orientation (e.g. what kind of relationships with the forest should be developed and maintained through governmental institutions) for the rural and urban regions that are concerned with forest issues.

7.4.1 Forest policy and associative democracy

The problem with giving too much power to the State regarding the ways in which the forest should be imagined and experienced lies with the regulation and legitimisation of imagined and constructed forests. By emphasising capitalism and forestry sciences as the ways through which the population of Québec comes to know and experience the boreal forest, the government of Québec has contributed greatly to the current overexploitation (Chartrand and Rodrigue 2006). By providing a legal framework in which the politicisation of forest imaginaries is possible, the State could participate in a renewal of environmental politics. To use an analogy, the State (including the institutions and individuals that make them alive: members of parliament, civil servants, and so on) plays the role of the canvas on which cooperatives and other forest users and workers will draw their own imaginaries of the forest; it is the surface that makes possible their superposition and relations, but also the frame that will politicise these relations. This metaphor demonstrates a “platform” role played by the State, in which environmental politics are produced by the relations between different imaginaries and actions of multiple forest users.

By providing the frame that legalises and regulates the existence of various imaginaries of the forest, different forest users associate their forces (and interests) in an effort to construct other forms of governance based on imaginaries that differ greatly from more persistent forms (i.e. the industrial and scientific) (Harvey 2000, Gibson-Graham 2006). For instance, a variety of forest imaginaries has been demonstrated through alternative forestry practices; this includes things like using horses instead of forwarders to remove trees from harvesting sites; using trees for many different functions; and collecting wild fruits. By promoting such kinds of uses and practices, the State would not be instigating a "going back to the past". On the contrary, by providing a framework that allows forestry practices to minimise the unnecessary loss of non-humans (small trees, plants and mosses, as well as animals present on and around harvest sites), the State would enable the protection of various experiences with and knowledges of the forest that could help to produce alternative politics. Minimising the loss of biophysical elements provides a way to protect the varieties and possibilities of interactions between humans and non-humans, and that could open onto other forms of political thought.

By establishing a legal framework that would recognise forest cooperatives as the main institutions involved in forest management, the State could ensure the coexistence of different imaginaries in forest policies and legalise them in a democratic way without according more power to one form or another. In turn, the protection of imaginaries of the forest and the places they produce could open up other relationships with non-humans and other political possibilities for managing the forest. This alternative form of governance is not completely impossible, mainly because it would be inspired by the political and economic structures of today's forest management. It is an alternative that acknowledges the difficulties in implementing a completely different way of conceiving the biophysical and social world. It is more an invitation to go beyond the current networks of power that regulate relationships between humans and non-humans and that produce today's environmental politics, than it is a concrete new world.

If associative democracy theory proposes to decentralise the role of the State in order to encourage associations between different members of civic society, this means that there is almost no reason to disagree with the ideas defended by this type of democracy (Hirst 1994). However, decentralising the role of the State should not be generalised to all domains, since it is the State and the legal framework it provides that could introduce and maintain a horizontal distribution of power between forest users, as well as make

possible the coexistence of various imaginaries of the forest. This is particularly important if the management of forests were to be given to associations of citizens and forest users in the form of cooperatives, in which many imaginaries of the forest can circulate without being interrupted. The current forest attribution system (using Forest Management Units) would have to be refashioned in order to displace forest industries, replace them with forest cooperatives and thus create a more inclusive form of territoriality. This means that the boreal forest would be re-territorialized by other forms of horizontal power relations (such as cooperatives) through which members could build alliances according to the imaginaries of the forest they would like to embody and perform. These alliances would resist any attempt to produce a vertical hierarchy in decision-making and they would contribute to the production and distribution of power as something much more complex than a basic dichotomy between those *against* and those *for* regional economic development (see Desjardins and Monderie 1999, Dubois 2002). This change implies destabilising "undemocratic and unaccountable networks serving highly particularistic interests", such as those of industrial forestry (Amin 1996: 311).

By favouring coalitions and alliances between different forest cooperatives, the State would allow the diversification of the forest through different sets of knowledge and practices than those valued by the forest industry. In this context, cooperative members would create forest politics that would include, and consider jointly, industrial imaginaries as well as imaginaries describing alternative forest places, like the forest as a place for hunting, fishing, cross-country skiing, trekking, bird-watching and so forth. This context would also allow cooperative members to propose the forest as a space in which all of these places work together to produce the boreal forest as everything except a space in which extraction would dominate the relationships users have with the forest. If all these imaginaries and places could coexist and become co-constituted in the production of the same forest space and in the creation of a new politics of the forest, it would also be possible to rethink the economic system and propose something more inclusive than the present system.

7.4.2 Making it concrete

If the development of different relationships with non-humans involves acknowledging the coexistence of a multiplicity of imaginaries, knowledges and skills that contribute to

the production of various forest places, the economic system that prefers one type of imaginary of the forest should also be broken down and transformed into something more inclusive. This is because a renewal of environmental politics — one which would recognise the coexistence of various imaginaries and ways of knowing the forest — cannot be implemented if one of its primary objectives is to keep the regional economy as competitive as possible in the globalised market (Harvey 1996, 2000). In this context, a community economy developed through associations of cooperatives would enhance the possibility to allow different kinds of forest users, with their imaginaries and utopias of forest management, to redesign environmental politics (Gibson-Graham 2006).

By challenging space-time compression (Harvey 1996, Massey 2005) and showing how it is possible for a regional economy to survive with the inclusion of various imaginaries of the forest, it is important to indicate that an economy closer to self-sufficiency would be more appropriate for forest users interested to participate in redefining the relationships between users and the forest. This is particularly true for the forest-dependent communities whose lifestyle is now threatened by the difficult state of commercial forestry in the Abitibi region, as well as for the non-humans composing the boreal forest. The adoption of such structures is also about the responsibility that each forest user has towards the future of the forest, saving it for future generations of users, who will experience the forest for multiple reasons and needs that are impossible to predict at the moment. Products fabricated on a smaller scale could also be better integrated in a market that would prioritise the respect of multiple forest imaginaries, since a smaller extent of forest would be harvested annually, rejecting the illusion that economic activities can only survive while integrated within the globalised market (MacLeod and Goodwin 1999).[80]

This re-territorialization of the boreal forest and the decentralisation of power would allow forestry science (which is at the centre of the current management system) to be equal to other ways of knowing and experiencing the forest — thereby offering an alternative to the current forestry system. In turn, these alternative ways of knowing and experiencing the forest should be recognised and introduced within forestry faculty programs at university in order to make future foresters aware of the existence of these

[80] However, this involves reflecting about the role of scale, and because I want to provide paths that could show how a politics of multiple imaginaries of the forest can be produced, I will not enter into a discussion of economical scale.

imaginaries and their importance in questions of forestry politics. These alternative imaginaries and politics should not be seen as marginal or as obstacles to foresters, but rather as complementary to their knowledges. These proposed resolutions to the current forestry system and imagination of the boreal forest could enhance greatly the cohesion of boreal forest users and make them participate within the political processes that make possible the production of alternative forest politics.

The implementation of politics of association would also need some modification in terms of general forest users representation of the forest in the provincial parliament as well as structural changes within ministries. This would involve explaining how institutional power can be practiced horizontally through ministries and how such organisation could generate participative democracy. Political theorists have shown that there are possibilities to adopt political assemblies that institutionalise and increase deliberation amongst representatives such as by integrating "a well-resourced environmental audit committee […] with the ability to scrutinise policy proposals and call witnesses" which in turn, moralise the debates about environmental policies (Smith 2003a: 117).[81] However, it is important to create the audit committee of citizens from various backgrounds to avoid the monopolisation of decision making by experts. In cases where this committee is composed only scientific experts, it is quite likely that other ways to know and experience the forest outside scientific discourse will be undermined. By composing the political assembly with citizens (who have alternative expertise of the forest as well as those with forestry science expertise) who are randomly selected by the government to attend to debates about policy proposals, it is more likely that a greater number of ideas and imaginaries about the biophysical environment can participate in debates.

Changing the role of cooperatives and coalitions of forest users and workers is one step in that direction. However, it would be imprudent to present a finite model of how relational political activities, and the human interactions that make them, could be framed. This is because relational politics and the politics of association between different users require flexibility and negotiation, as well as acknowledging the

[81] Although an environmental audit already exists in Québec under the name of the *Bureau d'Audience Publique en Environnement* (BAPE), its only role consists of consulting citizens to understand and describe their opinions about specific development projects that could have , its power is limited to write reports in which BAPE members (mainly scientists named by the government) highlight which decision the government should follow. However, the government is free to accept and apply the BAPE's recommendations.

unpredictability of forest users, and these are all things that models and their parameters cannot achieve. The paths I opened in this chapter are intended to demonstrate that a new politics of the boreal forest is made possible by thinking of the social and the non-human worlds as interrelated in the production of spatial imaginaries and politics. These paths also show that it is possible to reform current forest politics and to materialise utopias of a world that is always becoming, without exclusions: utopias in which forest users can shift from being simple economic actors to active political agents, conscious about their role in constructing the world which they wish to inhabit. However, it is important to acknowledge that not all people would be interested in participating to such renewal of forest management. This is because implementing these ideas requires a complex rethinking of the current power relationships situated at the heart of forest politics and it is more likely that many forest users would rather give this responsibility to other parties. Many users do not want to be involved in such negotiations and political efforts for practical reasons but also because they would simply disagree with the idea express until now for reforming forest policies. Since the basis of this project involves making the forest a democratic space in which every voice would be accepted, differences should remain present in order to maintain the movement of ideas, imaginaries and political possibilities. However, these differences could be negotiated into another form of democracy and forest management that is similar to the ideas expressed in this chapter.

7.5 Conclusion

This chapter has demonstrated how a relational politics of the forest, one that rejects conventional dichotomies and categorisation schemes, can be articulated through a political structure that would reorganise the power relations in the current forest management system of Québec. I also emphasised how political utopias can be transformed into tangible politics by imagining what a new politics of the boreal forest would look like if multiple imaginaries would be acknowledged into politics and practices. In order to advance these ideas, I have been inspired by forest cooperatives and by everyday life experiences such as fruit picking and the selective harvesting of trees for the production of non-construction timber, such as that for canoes and music instruments and local products.

I also highlighted the potential role of forest cooperatives as entities in which deliberative democracy (Elster 1998) can take place and thus, in which all imaginaries of the forest can be articulated together and simultaneously produced without boundaries. By allowing the free circulation of imaginaries and the co-constitution of politics, forest cooperatives could become the entities through which members decide to apply the type of forest practices that correspond to the relationships they want to cultivate with the forest (e.g., a space for learning, hunting, trekking, harvesting, reforesting, etc.). This in turn would allow the production of a new environmental politics.

This simultaneous concretisation of various imaginaries enacts a relational politics of forest imaginaries and the places they embody contribute to proposing other forms of forest politics and policies. As emphasised above, it is important to acknowledge that cooperative members might disagree on the ways the forest should be managed and on the types of forest imaginaries they would implement into practices, but this is why the State would be there to establish the amount of forest that can be allocated to a cooperative that chooses only to apply commercial forestry practices. It is also the responsibility of cooperative members to ensure that their communities and the next generations will be able to stay within the Abitibi region.

By drawing on associative democracy (Hirst 1994), I showed how different forest cooperatives can associate with each other to materialise various imaginaries of the forest. By decentralising the role of the State to achieve associatiation of different cooperatives, I proposed that forest users (local and external) could be at the centre of the decision-making about how forest should be imagined and experienced. This, moreover, enhances the responsibilities of cooperative members and forest users in producing forest politics in which they participate.

As demonstrated by this chapter, political renewal does not necessarily need to come from completely abstract social theories. Echoing the words of Arturo Escobar (1995), I want to remind researchers to keep attentive to who they work for and who will benefit from their research. By highlighting the significance of a politics that would acknowledge the openness of space, and thus that would make it possible to think about the forest without imposed boundaries, an inclusive politics of the forest could be

produced — a politics that acknowledge equal rights to various imaginaries and various forest users.

Chapter 8

Conclusion: Towards new forest management possibilities

8.0 Introduction

This chapter focuses on the multiplicity of boreal forest imaginaries, and on the spaces and politics they create, in order to reconsider current forest management policies. The chapter highlights the main points that have been advanced in the thesis so far, and emphases their relevance to rethinking how the multiple imaginaries of the boreal forest (that derive from everyday life practices and experiences) can contribute to a revision of environmental politics and establish other forms of democracy and other relationships between humans and non-humans.

To achieve these goals, this chapter is divided into three main sections and a conclusion. The first section reviews the main points of each chapter, paying particular attention to how forestry science and ecology have fabricated industrial imaginaries of the forest which have become dominant in the current discourses, practices and politics of Québec's forest system. This is followed by a discussion about the significance of exploring how multiple spatial imaginaries of the forest allow forest users to embody other politics of the forest, and are found in the everyday practices of forest users. Section 2 returns to the relational politics described in Chapter 7, in order to stress their importance in reorganising the power relations involved in environmental politics by extending the role of the current forest cooperative system. Section 3 provides a discussion of how further research on boreal forest imaginaries could supplement existing knowledges about the politics of imaginaries and the potential for articulating other relationships between humans and non-humans. Finally, I conclude by highlighting the contribution of this thesis to a renewal of environmental politics.

8.1 Thesis synopsis

Throughout this thesis, I have deepened the understanding of imaginary as a concept that can be used beyond textual descriptions, as something that exists through everyday practices and that allows forest users to elaborate particular politics of the forest. I have

also demonstrated how different imaginaries of the boreal forest (the effects or products which result from imaginations) contribute to the production of different places that become the centre of political disagreements between forest users. I have also shown that these different imaginaries, and the places and the politics they embody, materialise different ways of knowing and experiencing the boreal forest of Abitibi. After establishing the context of the Abitibi region and the relevance of investigating how different forest users produce spatial imaginaries and politics of imaginations (which are the positions embodied by imaginaries in the contestation and negotiation of the forest's meaning), Chapter 2 introduced the literature that has been written in political ecology, nature and society, and on the concepts of imagination and imaginaries. This literature review made it possible to locate this thesis in relation to the field, with a particular emphasis on exploring the role of spatial imaginaries in the production of boreal forest politics. What I showed was that while many have worked on forest politics in Canada (e.g. Marchak 1989, Reed 2000, Braun 2002, 2003, Rossiter 2004 and so on), few have tried to understand how imaginaries of the forest are materialised in practice and how they become political vehicles. Therefore one of my major points was to highlight how imaginaries of the forest can be traced within the forest.

In order to show how spatial imaginaries of the forest come alive through practices of everyday life, I used Chapter 3 to explain my methodology. This chapter explored the techniques I used to approach forest users, and what I did to understand how imaginaries and their politics take form through discourses and practices within the forest, in the quotidian experiences forest users have with the forest's non-humans. I also described the reasons for choosing semi-structured interviews and ethnographic techniques (the core of my methodology) to move beyond written documents in exploring how imaginaries are created and involved in the production of politics. As I have continually emphasised, not all imaginaries of the boreal forest are currently recognised in Québec's forest management policies, and this is often the source of conflicts between different forest users regarding the ways in which the forest should be managed. This is partly due to the dominance of forestry science and the ecology discourses and practices which constitute the foundation of the current forest system. In their articulation and repetition, these discourses and practices delimit the ways in which forest users come to know, experience and imagine the boreal forest.

In Chapter 4, I emphasised that the dominance of forestry science and ecology discourses and practices have transformed the public boreal forest of Québec — and more precisely the boreal forest of Abitibi — into a site of expertise that is controlled by foresters and other experts.[82] I also noted how scientific forestry works in theory and in practice to frame the ways in which the boreal forest is imagined and known: by producing boundaries that attempt to fix the meaning of the forest as a space of extraction.

One of the most powerful effects of forestry science and ecology has been the production of the boreal forest as a geographic entity that can be located on vegetation maps, using sets of boundaries and biophysical limits (see Chapter 4). It is through this geography that forestry science and ecology construct the forest as an object that can be regulated by calculations and simulation models such as *SYLVA II,* with which foresters can determine the amount of forest that could be harvested over a period of 150 years. Through this simulation model, the geography of the forest becomes a cybernetic entity: an immutable mobile/inscription (see Latour 1993, 1999a) that circulates between different computer screens without altering its form or the type of relationship with the forest that this geography embodies. As demonstrated in Chapter 4, this cybernetic entity is made from selected parameters and classification schemes that enable foresters to portray the forest through a curve model. This model is then used to create GIS maps that will subsequently and simultaneously appear on the computer screens of forest engineers and on the navigation systems of feller-limber-bucker machine operators. In turn, this cybernetic entity becomes foresters' ontology; it is their reference when they talk about the forest. As I stressed, the cybernetic forest has contributed to the creation of industrial imaginaries of the forest that are maintained through a variety of practices such as harvesting, reforesting, thinning, and drag-scarifying). These dominant practices allow the cybernetic boreal forest to become the place where forest users are, even as they experience the forest through a multitude of non-forestry activities (Haraway 1992a) .

By showing how forestry science is determinant in orienting the ways of imagining and experiencing the forest (especially in the production and maintenance of a cybernetic boreal forest), I emphasised that forest industries have used the legitimacy of forestry

[82] This has been explained well for other forests, such as in the United States, with the work of Demeritt (2001c), and on the Canadian West Coast, with the work of Braun (2002).

science discourses and practices (such as maps and models) to support their capitalist aims. In the process, forestry science, ecology and industrial forestry have monopolised forest policies and management debates. This is highly significant when one pays attention to the ways in which the debate about boreal forest management has been oriented in recent years. For instance, recent reflections on the future of forest management of Québec, as advanced by the Coulombe Inquiry in 2004, emphasised the need for more science in forest management (see CEFPQ 2004). The conclusion of this inquiry was also embraced by the groups which have contributed mainly to the homogenisation of the debate about the forest's future (e.g. environmentalists, the forest industries and the Ministry of the Natural Resources and Parks, as well as the Ministry of Sustainable Development and Environment). By showing the role of scientific forestry in forest policies, I demonstrated that simulation models and highly technical practices have made the boreal forest the territory of foresters, biologists and ecologists in ways that are very difficult to challenge. Forestry science discourses and practices are the ways in which the territoriality of the cybernetic boreal forest imaginary is maintained — a territoriality that allows forest industries to reify the boreal forest as a space of extraction.

The power of forestry science and ecology means that the territoriality of the industrial imaginary of the boreal forest has left little room for other imaginaries or for their involvement in forest management policies. This is where my thesis challenges the situation, showing how other ways of imagining and knowing the forest are produced, embodied, maintained and performed through diverse relationships between humans and the non-humans that compose the forest (as developed in Chapters 5 and 6). The multiplicity of boreal forest imaginaries encountered through a variety of discourses and practices destabilises the boundaries made by scientific forestry and ecology when it is activated through politics. This means that the cybernetic forest and the industrial imaginaries that come with it can be challenged, and as I have demonstrated in Chapters 5 and 6, these contestations can be exposed by identifying the various places and politics that are constructed by other imaginaries of the forest. In Chapter 5 for instance, I showed how alternative imaginaries of the boreal forest are performed and embodied in a variety of arts and crafts objects within a cultural event that celebrates industrial relationships with the forest, such as the *Festival Forestier de Senneterre*. This case study allowed me to emphasise the potential role played by these objects and their materiality in challenging the stability of the industrial forest imaginaries and their

underlying relationships. The presence of these objects, and the imaginaries they embody, transform and displace the forest from a bounded place to an open one, in which all imaginaries are simultaneously produced and coexistent.

Recognising the coexistence of imaginaries can have a major impact on how environmental politics and forest management policies are produced and articulated. This view was put forward in Chapter 6, by demonstrating that it is useful to see other imaginaries embodied through objects within a festival (as in Chapter 5), but it is also crucial to recognise how these imaginaries and the places they signify are manifested within the forest itself. These other imaginaries concretise multiple ways of knowing and experiencing the forest and this can influence how forest politics and policies are conceptualised and articulated in forest management. For instance, imagining the forest as a learning place, in which forest users can go to discover the plants, trees and animals that constitute the forest in non-scientific terms, is not recognised by the current forestry system in Québec.

The same is true when the forest is presented as a place to learn not only about the different non-humans and their interactions within the forest, but also about how these non-humans can help users understand their social life in general. This was revealed in Chapter 6 when I presented testimonies from forest users who practice outfitting, canoeing and hunting activities. In these practices, they realise both the complexity of the non-human world that surrounds them and the role played by non-human interactions in an understanding of their own social world. For instance, hunters do not only go in the forest to kill animals, but also to learn about animals and the other biophysical elements that made the forest and through these experiences they make parallels with their own lives. In a metaphoric way, the forest is a big book that lies wide open for anybody interested in learning more about life in general. As emphasised in Chapter 6, imagining the boreal forest as a learning place in which multiple epistemologies can be produced and materialised by forest users and becomes a way of potentially challenging the current monopoly of scientific forestry and forest industries over how the boreal forest is known and experienced. This also means that a multitude of ways of imagining and knowing the forest exist, and thus can influence how the boreal forest is conceptualised and politicised — making it a space in which a variety of imaginaries and practices can coexist, not in opposition, but interrelation.

Imaginaries of the biophysical world that do not emanate from industrial relationships are often portrayed and described by forest users as irreconcilable with the dominant forestry imaginary. However, as I demonstrated in Chapter 6, it is possible to see that although the multiple imaginaries of the forest are interrelated and mutually constituted. By experiencing the boreal forest through industrial discourses and practices, forest users allow other kinds of imaginaries and politics to emerge. Although these other imaginary forms frequently borrow terms from the industrial forestry lexicon, they create places and politics dissimilar to industrial forestry that can be traced through practices (e.g. using the concept of "sustainable development" to create biodiversity reserves and harvesting sites which can be both defined as sustainable development).

By using the same or similar terminologies in their constitution, it is possible to see these imaginaries as interrelated, as relational to the industrial imaginary of the forest. These interrelations contest the dominant understanding of forest politics as a sort of binary division between an industrial forest imaginary and a conservationist imaginary. Instead, they present forestry politics as an amalgam of imaginaries, standing for a forest composed of different power relations by which other imaginaries and politics can be realised. For instance, forest users will utilise forest roads that have been designed and constructed by the forest industry to go quad biking and fishing. Even though they use routes that have been constructed according to an industrial imaginary of the forest, users can access multiple experiences that will all be involved in the production of various imaginaries and places of the boreal forest.

This interrelation is not restricted to discourses; it is also materialised through the use of tools such as chainsaws, axes or GPS technology in a variety of ways and in multiple contexts. By using GPS receivers, diverse forest users are able to locate their imaginaries of the forest on the same coordinate grid that is central to the production of a cybernetic boreal forest, and to the concretisation of the industrial forest imaginary. Thus, through the use of the same technologies, a range of specific sites and biophysical features involved in the production of diverse boreal forest experiences and imaginaries are interconnected. The possibility of locating multiple forest imaginaries (and their politics) by using the same technology makes it possible to imagine and construct the forest as an open place that is in perpetual movement and reproduction.

The interrelation of imaginaries is also well exemplified by the use of chainsaws to harvest trees and make objects that embody different relationships with and imaginaries of the forest. For instance, the chainsaw is used to carve animals, make canoes and produce construction timber. The same instrument can materialise different imaginaries, and by its circulation in and fabrication of different contexts, the chainsaw is also a good example of how a multiplicity of imaginaries are nevertheless interrelated. The forest becomes a space in which imaginaries are coexistent and continually territorialized by various social relations, thereby opening up the potential for new political relationships.

Seeing the forest as an amalgam of different imaginary places produce by multiple users who in turn embody different sorts of politics which do not necessarily propose a predetermined ending to the forest, is a very difficult endeavour. In Chapter 7, I emphasised the importance of renewing environmental politics by avoiding using notions like sustainable development, protection of biodiversity or ecosytem management. The renewal of environmental politics is particularly salient in a political context, in which the ontology and epistemology of the biophysical world are taken for granted. Rethinking the ways in which other imaginary places and the politics that they make possible could be integrated into current boreal forest policies means thinking beyond what is believed to be reality. This intellectual effort is in part inspired by ideas of utopia and the belief that the world as it is presented through dominant discourses and practices can be changed as human relationships with it change.

As argued in Chapter 7, rethinking how environmental politics could incorporate the idea that imaginaries of the boreal forest are interrelated is often limited to the academic world, which rarely identifies ways that a "new" environmental politics could come into being. This is why I emphasise the relevance of Arturo Escobar's (1995) work in thinking about who will benefit from the political changes proposed by concretising a different relationship with the environment. This thesis is similarly concerned with elaborating possible strategies that would not only inspire new forms of environmental politics and forest management but would actually profit the Abitibi region. By trying to move beyond the dichotomy of the political right and left, I argue for a governance that is inspired by associative democracy (Hirst 1994), in which decisional power is redistributed amongst various forest users. This would regroup users into cooperatives in which a deliberative democracy is exercised (see Elster 1998), and which would

allow a multiplicity of imaginaries to circulate and be expressed amongst members. Through forest cooperatives, forest users would be interrelated in decision-making, forming coalitions within their cooperatives and with other forest cooperatives about the imaginaries they want to see performed in the forest and involved in policy-making. This structure has the advantage of enabling forest users to acquire considerable responsibility in the relationships they choose to establish with the forest. As explained in Chapter 7, these cooperatives of workers and forest users are animated by forestry practices and the activities inspired by various imaginaries shared amongst members.

Although this type of governance would allow the decentralisation of industrial power relations in how the boreal forest is imagined, experienced and known, it is not certain that single forest cooperatives or coalitions of cooperatives would necessarily implement alternative ways of knowing and experiencing the boreal forest. In a context in which every citizen of Québec can access the forest, the State has also a responsibility to provide a legal framework in which the boreal forest would be a space where multiple imaginaries coexist simultaneously. By establishing a horizontal structure in which forest users have equal rights regarding forest management decisions, including how much of it will be available for exploitation and how much other purposes, the State can encourage users to politicise themselves about forest management issues. A horizontal distribution of power in which forest users and workers have to work with each other to decide what kind of relationships they want to develop with the forest has more to offer to both humans and non-humans than the current status quo, which rests almost exclusively on the accumulation of financial profits.

This horizontal structure would have the effect of disrupting the territoriality of industrial forestry and acknowledging the existence of multiple places and spaces that embody various imaginaries of the forest. By decentralising the decisional power and redistributing responsibility amongst various boreal forest users (who are also political actors), coalitions and associations, it is more likely that a multitude of forest imaginaries and users will become politically recognised. It is through this interrelation of different forest users, participating together to produce forest politics, that it becomes possible to construct the forest as a heterogeneous, organic whole that needs all its components (humans and non-humans alike) to exist. Although the approach described here is only a sketch of one possible way in which multiple imaginaries could be

recognised, the forest cooperative model provides a valuable structure for rethinking the organisation of environmental politics. This suggests that multiple boreal forest users have to work in coalition and associations, and thus they have to interact together in the pursuit of an inclusive politics of the forest, in which multiplicities and interrelations between forest users and the forest will be acknowledged.

Acknowledging these interrelations of users and imaginaries is also important for anyone interested in new possibilities for thinking about the human interactions with non-humans that reside outside the current power relationships of environmental politics. This acknowledgement requires making a collective effort to reassemble the social. By "reassembling the social", I am not alluding to social movements (Peet and Watts 1996, 2004), since social movements often homogenise the ways in which the world is imagined (Forsyth 2003, 2004). Rather, reassembling the social means inviting every forest user to participate in a common project in which the boundaries that marginalise, exclude, fragment and limit the interrelations among humans and between humans and non-humans are destroyed.[83] It is through dialogue (this explains the necessity of deliberative democracy found in forest cooperatives), and by bringing together different users and their imaginaries of the forest, that it becomes possible for forest users to politicise the boreal forest in a different way than through industrial forestry.

This is why a politics that acknowledges these interrelations is necessary to open alternative paths, which could gradually make forest users aware of their role in rethinking the biophysical world and their relationships with it. In a context in which the biophysical world reveals its limitations to the industrial imaginaries and relationships humans have developed with it (e.g. climate change, extinction of non-human life due to over-consumption and over-production, pollution of fresh water and so on), these relationships and the spatial imaginaries that come with them will need to be seriously reconsidered. This is particularly true if the ultimate aim is to allow other generations of humans to engage with the biophysical world and imagine it anew.

[83] Here I am also not referring to Bruno Latour's (2005) book *Reassembling the social: An introduction to Actor-Network-Theory*, which focuses on disarticulating the term "social" into various connections between social actors in order to demonstrate its non-static meaning. I use "reassembling the social" in order to bring people and interests back together in the concretisation of a social project that unites rather than divides.

By producing knowledge through which the biophysical world and its components become regulated objects with a future that can be predicted through models and graphs, the relationships that humans have developed with the biophysical world has become dominated by market values. This in turn ignores completely the possibilities offered by the multiplicities of interactions found in the biophysical world, which can also be beneficial for re-thinking the social. For instance, the numerous interrelations between different non-humans make it possible for humans to recognise that the social world is as diversified as the biophysical, and it is this diversity that should be recognised in management policies in order to create a forest in which every user and their imaginaries of the forest will be able to co-exist.

In the following section, I review the type of work that can be conducted to extend knowledge about the formation and manifestation of imaginaries and their roles in the production of politics. I will identify three areas of research that can deepen the understanding of imaginaries and expand on their political roles and possible contributions to the production of new types of forest management. These innovative areas of research are the exploration of the masculinity of the boreal forest imaginaries; the significance of Québec nationalism in the creation of imaginaries as well as the potential of research that could be done on the role of cooperatives as potential way to reframe the regional economic development.

8.2 Extending knowledge: the junction for other possible challenge

Although the aim of this thesis was to identify different imaginaries of the boreal forest and to demonstrate their influences in the construction of places and politics, I did not succeed in addressing the masculinities of imaginaries and politics involved in the production of the boreal forest. While a significant corpus of work has been done on the role of women in forestry (e.g. Agarwal 1992, Reed 2000, 2003, Nightingale 2006) very little has been published about the masculinity of imaginaries in forest debate and this is especially true for the boreal forest of Québec. Although many of my interviewees were women, I think that the imaginaries described in this work are essentially male-dominated. This is because men control forestry discourses and practices at almost every level of forestry work and that women (when present) are completely

marginalised. This masculine dominance can be seen when one pays attention to the production and dissemination of forestry knowledge in Québec's universities, which has a significant impact on the ways in which the forest is imagined, experienced and constructed. An exploration of the power relations underlying masculine imaginaries of the forest would show the significance of gender in the kind of governance and relationships that have been developed with the forest. This would add another dimension to the work I have presented here, and would help to round out the research on imaginaries of the biophysical world that are involved in the production of the boreal forest and its politics.

The roles of imaginaries in politics also need to be extended, especially in regards to how environmental politics are produced and performed in forest users' everyday life practices. How imaginaries can play a role in the reconfiguration of environmental politics in general must be extended to areas other than forestry (for instance, fisheries and mining activities), leading humans to expand the renewal of our relationships with the other non-human forms of life. There is a need for research that goes beyond emphasising the possible roles played by imaginaries in rethinking politics and instead focuses on how imaginaries are constituted and performed through social interactions and politics (Peet and Watts 2004). This is because the politics of everyday life are often overlooked; yet as demonstrated in Chapters 5 and 6, their acknowledgment can lead to a better understanding of the interconnectedness of multiple actors often portrayed as irreconcilable. By paying attention to how imaginaries allows forest users to produce politics (the stands and positions embodied by users) that are performed in everyday practices; it is possible to see how these politics interact and are constituted in the production of the boreal forest.

By emphasising the significance of imaginaries and their interrelations with each other, it becomes possible to rethink political conflicts as something different than the product of antagonistic oppositions. Instead, by seeing imaginaries of the boreal forest as mutually constituted and interrelated, it is possible to observe that political conflicts, especially those involving humans and non-humans, are not necessarily produced by an opposition of interests between those for or against the current management system but rather by a negotiation of power over how imaginaries should be politically recognised. Acknowledging the boreal forest as a site in which different forest users, their imaginaries and politics are negotiated rather than opposed means that the politics of

forest management should be more flexible than it is at present. It should also be possible to respect the great variety of forest users and their imaginaries.

If forest users accept the coexistence of various imaginaries and places, it is possible to move beyond unproductive debates that simply categorise, classify and frame forest users as either environmentalists or forest industry supporters. By accepting the coexistence and co-constitution of boreal forest imaginaries, it could be possible to move towards a unity of different users rather than their division.

8.3 Conclusion

As this thesis has shown, imaginaries cannot be dismissed as myths or fictions. As embodied by forest users, they are political entities that can propose new sets of power relations, having the potential to move societies closer to making their utopias realisable projects. Imaginaries are the products and effects of imaginations, which could provide a way for humans to rethink the kind of relationships they want to develop with the non-human world, as well as the kind of world they want to produce and live in. It is also in trying to imagine the world differently than through homogenous discourses and practices that the first steps toward change become possible — and this is where the contribution of this thesis is located.

As I have demonstrated, it is possible to propose and produce an alternative politics of the forest and relationships with non-humans that can eventually lead to something different and new. For instance, by paying attention to the everyday life practices and discourses taking place in the forest, we can grasp the substances that may help us develop other relationships with the forest and with the biophysical world in general. This is because forest users perform multiple imaginaries and politics of the forest, by which the relationships between them and the forest can be reorganised. Through performing imaginaries that differ from the dominant discourses and practices of industrial forestry, forest users reappropriate the forest space and its uses in their own fashion — and it is these performed imaginaries that could be used to inspire other politics of the forest (de Certeau 1984). This, in turn, provides another way of looking at forest management strategies and at the internal politics of forestry science in a socio-economic context in which an alternative to the current forest policies is essential

to the survival of forest-dependent communities, to the regional economic development and to the non-humans composing the boreal forest.

Finally, the aim of this thesis was to expose the complexity of the multiple imaginaries that inhabit and constitute the boreal forest and to investigate how they could participate in a political renewal of the forest. Ideally, the ideas expressed in this work will allow forest users and readers to become aware of the infinite possibilities offered by imaginaries. By revealing the political dimensions of imaginaries, I have opened up a new way in which other political potential can be concretised and used to develop new possible forms of interactions between humans and non-humans that can eventually lead to reappropriate the boreal forest space and reinvent it as a an inclusive space in which multiple imaginaries merge in the formation of new utopias and environmental politics.

Appendix 1 : Project Letter

Dear Mr. Bonneville,

My name is Sébastien Nobert and I am writing to inform you that I will be in the region of Abitibi during the months of July and August 2004 in order to undertake a doctoral research on the social values attached to the forest of the Abitibi region. I would like to interview different forest users and I was wondering if it would be possible to meet you briefly during my stay in your region? Although it is early to fix a meeting date I take this opportunity to advise you that I will contact you during the month of June in order to fix a date for a possible meeting.

Do not hesitate to contact me if you would like to know more about my research. I would be happy to answer your questions.

Yours sincerly,

_____

Sébastien Nobert
Ph.D. Candidate
Institute of Geography
The University of Edinburgh
Drummond Street
EDINBURGH, Scotland, U.K.
EH8 9XP, tel:(0)131 650 2532
S.Nobert@sms.ed.ac.uk

Appendix 2 : Interview Questions 2004-2005

1: How would you describe your role in this particular organisation? What made you want to take on this kind of job? What was the appeal? (This might lead to questions that explore the kinds of things/qualities that are associated with the boreal forest).

Comment décrivez-vous votre rôle au sein de votre organisation, compagnie? Qu'est-ce qui a fait en sorte que vous avez choisi le milieu forestier comme milieu de travail?

2 : What does your organisation think is most important in the management of the boreal forest (in the case of individuals like foresters, the question can be what do you consider as important in the management of the boreal forest).

Qu'est-ce qui est le plus important pour vous dans la gestion de la forêt boréale? Est-ce partagé par l'entreprise pour laquelle vous travaillez?

3 : How do you understand the term 'sustainable development'? Do you think that the current legislative and economic framework of Quebec's forest management allows the aims of this concept to be achieved?

Qu'est-ce que représente le concept de développement durable pour vous? Comment comprenez-vous ce concept? Croyez vous que les cadres législatif et économique actuels régissant l'exploitation forestière permette son application?

4 : What does the boreal forest means to you in term of its physical, social and economical features? (if the question is asked to an organisation representative, I will also ask if this vision is shared by most members).

Qu'est-ce que la forêt boréale repésente pour vous en terme de milieu biophysique, social et économique? Est-ce partagé partagé par la compagnie pour laquelle vous travaillez?

5 : When the term "boreal forest" is mentioned, what is the first thing that comes into your mind?

Lorsque que je vous dis le terme forêt boréale, qu'elle est la première chose qui vous viens en tête?

6 : Do you think that you have a special relationship (or link) with the boreal forest of Abitibi, if yes, how would you describe this; if not, why not?

Croyez-vous avoir une relation particulière avec la forêt boréale de l'Abitibi? Si oui, comment décrivez-vous cela, si non, pourquoi n'avez-vous pas un quelconque liens avec cette forêt?

7 : Today, it is easy to hear about global warming or what is called the 'environmental crisis'. Do you think that you can contribute to finding solutions to these large scale problems? How and Why?

8 : How would you define common forest? What specific qualities make it public? Which forests in Quebec are considered as common or public?

Comment définissez-vous une forêt publique? Qu'est-ce qui permet de dire qu'une forêt est publique, qu'elles sont les caractéristiques particulières attachées à ce type de forêt?

9 : Do you think that regional economic development can achieve a sustainable economy while still respecting the integrity of the natural environment?

Pensez-vous que le développement économique régional peut permettre l'émergence d'une économie durable tout en respectant l'intégrité de l'environnement naturel.

10 : Are you satisfied with the present forest management in Québec? Why or why not?

Êtes-vous satisfait du présent régime forestier et de la gestion forestière qui en découle? Pourquoi oui ou Pourquoi non?

11 : Do you think that public awareness of the boreal forest has increased over the last 5 years? What makes you think this? What factor/people have been most important in increasing publicity?

Croyez-vous qu'il y a eu une augmentation de sensibilité du public envers la gestion de la forêt boréale depuis les dernières cinq ans? Qu'est-ce qui vous fait pensez cela? Quelles sont les facteurs furent le plus important dans la publicité de cette dernière?

12 : Why is the boreal forest important to you (and to the organisation that you represent)?

Pourquoi la forêt boréale de l'Abitibi est-elle importante pour vous?

13: To what extent do you think that the boreal forest constitutes a human (or cultural) environment?

Dans quelle mesure pensez-vous que la forêt boréale constitut un environment humain?

14 : Could you please describe your own experiences of the boreal forest?

Pouvez-vous me décrire votre propre experience de la forêt boréale de l'Abitibi?

15 : Have you seen any changes in the boreal forest management over the 10 last years in Abitibi. If so what are these changes?

Quels sont les types de changements que vous avez vu depuis les 10 dernières années dans la gestion de la forêt boréale en Abitibi?

16 : Based on your own knowledge of Abitibi's boreal forest, who do you consider most interested in its management in Québec? Why do you think these people or groups are important?

Selon vos connaissances personnelles de la forêt boréale de l'Abitibi, quels sont les groupes semblant les plus intéressés par sa gestion? Pourquoi croyez-vous que ces groupes sont important?

17: What, do you think, makes an area "natural"? Do you think the boreal forest of Abitibi is a "natural" area?

Selon votre propre opinion, qu'est-ce qui permet de qualifié un endroit comme étant naturel? Croyez-vous que la forêt boréale de l'Abitibi en est un ?

18 : What makes the boreal forest different from the other types of forests in Quebec?

Selon vous, qu'est-ce qui différencie la forêt boréale des autres types de forêts?

19: How do you feel when you are in the boreal forest? What do you like and dislike about being in this environment?

Comment vous sentez-vous lorsque vous êtes dans la forêt boréale? Qu'est-ce que vous aimez et n'aimez pas lorsque vous êtes dans cet environnement?

20: Do you think humans have a place in forest? If so, how would you describe this place? If not, why do you think that human beings do not belong to the boreal forest?

Pensez-vous que les humains ont leur place dans la forêt boréale? Si oui, comment décrivez-vous cette place? Si non, pourquoi croyez-vous que les humains n'appartiennent pas à ce milieu?

Interview question 2005: Questions for forest communities, workers, foresters, people

1. **Do you think you have a particular role to play in the management of the boreal forest in Abitibi? If yes Why, if not Why?**

Pensez-vous avoir un rôle particulier à jouer dans la gestion de la forêt boréale en Abitibi? Si oui, pourquoi, si non, pourquoi?

2. **Who do you think should be in control of forest management in Québec and why?**

Qui pensez-vous devrais avoir le control de la gestion forestière au Québec, mais plus particulièrement en Abitibi?

3. **What are the main qualities or things that make the boreal forest a comfortable environment for you? Why do you like to be there (in case the interviewee doesn't like to be in forest the positive wording will be modified accordingly).**

Quels sont les principales caractéristiques ou éléments qui font de la forêt boréale un environnement dans lequel vous vous sentez bien? Qu'est-ce qui fait que vous aimez vous retrouver dans cet environnement?

4. **Do you think there is a conflict regarding the management of the boreal forest in Quebec and especially in your region? Could you explain in a bit more details why you think this?**

Croyez-vous qu'il y a un conflit concernant la gestion de la forêt boréale au Québec, plus particulièrement dans votre région?

5. **Do you have a secret or favourite spot (place) where you like to go in the boreal forest of Abitibi, in the area? If yes, what makes this place so unique and different for you than other areas located within Abitibi's boreal forest?**

Avez-vous un endroit secret ou favori où vous aimez vous retrouver dans la forêt boréale? Si oui, qu'est-ce qui fait que cet endroit est tellement unique et différent des autres endroits que vous connaissez dans la forêt boréale abitibienne?

6. **What do you think the boreal forest represents to the population of Abitibi?**

Qu'est-ce que vous pensez que la forêt boréale représente pour la population de l'Abitibi?

7. **Do you think that future generations that want to established themselves in Abitibi will be able to enjoy the same type of environment as today? Could you explain in a bit more detail why hold this opinion?**

Pensez-vous que les prochaines générations qui viendront s'établir dans la région de l'Abitibi pourront jouir du même type d'environnement qu'aujourd'hui? Pouvez-vous m'expliquer pourquoi vous pensez ainsi?

8. **Do you think that there is still a future for the forest industry in the region? For how long?**

Pensez-vous qu'il y a toujours un avenir pour l'industrie forestière dans la région et pour combien de temps encore?

9. **During the last 5 years and perhaps even longer the expression "consultation publique" are often used to promote a sort of understanding between stakeholders in forest management. Do you think that these consultations are useful and encompass the majority of groups interested in the boreal forest management in your region? Please explain why?**

Au cours des dernières années, l'expression consultation publique est souvent utilisée afin de promouvoir une forme de cohésion entre les différents utilisateurs de la forêt. Croyez-vous que ces consultations sont utiles et qu'elles permettent d'entendre tous les groupes intéressés par la gestion forestière de votre région.

10. **Do you feel your opinion is incorporated into the current policies and practices for managing the boreal forest of Abitibi?**

Est-ce que vous sentez que votre opinion est écoutée et incorporée dans les pratiques et politiques forestières qui régissent l'exploitation forestière en Abitibi?

11. **How would you describe the reality of being a person living in the region of Abitibi and its contact with the boreal forest?**

Comment décrivez-vous la réalité d'être une personne vivant dans la région de l'Abitibi et son contact avec la forêt boréale?

12. **What changes in forest management do you think might enhance regional socio-economic emancipation?**

Quels sont les changements dans la gestion de la forêt boréale qui pourrait permettre une émancipation socio-économique régionale?

13. **Do you think that the current management of the boreal forest is a good reflection of the needs of the inhabitants of the region?**

Pensez-vous que la gestion actuelle de la forêt boréale reflète bien les besoin de la population locale?

14. **What makes you feel more attached to the boreal forest (of Abitibi) more than another type of forest?**

15. **Do you think that la *commission d'enquête sur la gestion de la forêt publique québécoise* (commission Coulombe) gave good recommendations to the**

current government? (i.e. reducing the immediate forest harvest of 20%) Why?

Pensez-vous que la Commission Coulombe a donnée de bonne recommandation au gouvernement tel que la réduction immédiate de 20% de la possibilité forestière ainsi que la création de la création d'un poste de chef forestier?

16. **According to your experience of the boreal forest, what is the role of the provincial government in forest management? What should be taken into account when decisions are made regarding the management of the boreal forest in Abitibi that you don't see in the current context?**

Selon votre expérience de la forêt boréale, quel est le rôle du gouvernement dans la gestion de la forêt? Qu'est-ce qui devrais être pris en compte dans la gestion de la forêt boréale que vous ne voyez pas actuellement dans les politiques forestières?

17. **What do you want to see protected and preserved (a specific features or a "sense of nature") in the boreal forest of your region for the next generations?**

18. **Do you think that the management of forest should be given to local authorities (municipalities or MRC) instead of being governed from Québec city? Could you explain why?**

Pensez-vous que la gestion de la forêt devrait être donnée aux autorités locales (comme les municipalités et les MRC) plutôt que d'être gouverné de Québec? Pouvez vous m'expliquer pourquoi vous pensez cela?

19. **What is the most important thing for you about being in the boreal forest of Abitibi?**

20. **Can you explain to me what you mean by "approche écosystémique"?**

Pouvez-vous m'expliquer ce que vous voulez dire par approche écosystémique?

21. **Can you tell me which image reflects your own idea of the boreal forest? (I will show four different image of the boreal forest, a different stage of harvest for instance).**

Laquelle des images suivantes se rapproche de ce que vous considérer être la forêt boréale de l'Abitibi. Qu'est-ce qui fait que les autres images correspondent moins à la forêt boréale abitibienne?

22. **Can you tell me why the other images do not correspond to your criteria of a boreal forest?**

Appendix 3 : List of interviewees

Interviewee/Year	Relationship to the forest	Gender
DD/2004	Saw mill employee, hunter, fishing	Male
FM/2004	Environmental NGO	Female
SG/2004	Environmental NGO	Male
DO/2004	Scientists	Male
LI/2004	Forest Industry	Female
WG/2004	Trapper, fisherman, canoe maker	Male
CA/2004	Hunter, trapper, agriculturalist	Male
GBB/2004	Fishing, quad biker	Male
FC/2004	Forest engineer, environmental NGO, scientist	Male
WS/2004	Forest engineer, scientist, forest industry	Male
DFD/2004	Hunter, saw mill employee	Male
TS/2004	Park Quebec	Female
GJ/2004	Forest engineer, forest industry	Female
GJe/2004	Reforestation, forest industry	Male
JH/2004	Environmental NGO	Male
LC/2004	Forest industry	Male
LCh/2004	Civil servant, canoeing	Male
CJ/2004	Outfitting, hunting	Male
BJ/2004	Trapping, fishing, canoeing	Male
AR/2005 AC/2005	Forest Industry, fishing, hunting	Male, Male
PD/2005	Trapper, fishing, fruit collecting	Male
FD/2005	Reforestation, forest industry, fishing, snowmobiling	Male
CB/2005	Trapping, fishing, hunting	Male
DR/2005	Civil servant, fishing, hunting	Male
JM/2005 MA/2005 PJM/2005	Trapping, hunting, fishing, canoeing, reforestation	Female Male Male
MS/2005	Forest industry	Male
PM/2005 TB/2005	Fishing, hunting	Female Male

BF/2005	Forest industry	Male
LPE/2005	Hunting, fishing	Male
BJL/2005	Outfitter, fishing, hunting	Male
GB/2005	Environmental NGO	Female
CG/2005 CJo/2005	Forest industry	Male Female
GP/2005	Forest Industry	Male
PM/2005	Hunting, trapping	Male
SC/2005	Canoeing, fishing, skiing	Female

Appendix 4 : Declaration statement

Interviewee Identification

_____ _____
First name Surname

☐ Male

☐ Famale Date of Birth (D/M/Y) : ____/____/19____

Where could I reach you during the year?

_____
Civic Number Street Apartment (if any)

_____
City/town Postal Code/Postal Box

_____ _____
Main telephone number Other number where I can reach you

_____
E-mail

I consent to participate to the research of the University of Edinburgh directed by Mr. *Sébastien Nobert* on the social values of the forest of the Abitibi region.

I accept that the researcher *Nobert* use the content of the interview in which I took part the _____2004 for the research aims that he has clearly explained to me. The interview is recorded on an audio support and will be transcribed in a way that would not allow anyone to be recognised. Only parts of the interview that do not identify me would be allowed to be published.

I accept to be contacted to participate to other interviews and meetings. I will be free to participate or not to these meetings.

In anytime I could redraw myself from the research.

_____ _____
Signature Date

_____ _____
Researcher Date

Appendix 5: Transcription sample

Q Une question plus personnelle, mais qu'est-ce qui est le plus important pour vous dans la gestion de la forêt boréale actuellement en Abitibi?

BLJ Premièrement y faire attention. Il faudrait que la forêt… premièrement quand on fait des exploitations, que le bois serve, qu'on cesse le gaspillage. Le gaspillage c'est effrayant le gaspillage de bois qu'il y a en Abitibi. C'est impensable. Si t'avais une couple de jours, je pourrais te faire faire un tour d'avion. Je l'ai offert au député, je l'ai offert à monsieur Jules Arsenault de la Commission Coulombe. Moi j'ai des amis qui ont avions et je suis pilote moi-même. Je leur ai dit « je vais vous amener, on va prendre une journée ou deux jours d'avion, ça ne coûtera pas une cenne à personne, à la société. On va payer, nous autres les pourvoyeurs, pour vous montrer ce qu'il reste dans le bois ». Ça n'a pas de bon sens. **(*Presque plus de bois*, Forest desappearing)-105**

Q Vous trouvez que ça a été surexploité ou c'est ce qui reste au sol…

BLJ Ah c'est surexploité puis on s'en fout assez de la forêt qu'on laisse du bois partout. Du bois là c'est impensable… je vais te dire ce que je pense de la gestion des ressources naturelles. Que c'est du pétage de bretelles. La direction des Ressources naturelles, je pourrais aller te montrer. (Capitachouane), c'est une pourvoirie à droit exclusif. 5000 cordes de bouleaux. **(*Surexploitation*, Overexploitation)–105**

Q 5000 cordes?

BLJ 20 000 cordes sur le bord du réservoir Gouin, tout pilé, gaspillé. C'est fini ça là. Il y en a 30 km de long.

Q Pourquoi? Parce que c'est du bouleau ou quoi?

BLJ Oui, mais il y a du monde qui aurait pu s'en servir. Puis moi ma pourvoirie j'ai été ramasser du bouleau à terre, puis la ministère des Ressources naturelles m'ont poursuivi. Ils sont venus saisir le bois. J'avais été faire une demande de permis.

Q Est-ce que ça fait longtemps de ça?

BLJ Non, ça fait 4 ans. Ils m'ont chargé 7750$

Q Ben voyons, je pensais que c'était juste dans le temps des concessions ça.

BLJ Non. Une pourvoirie moi ils m'ont poursuivi. Ils m'ont chargé.

Q Le ministère vous a poursuivi?

BLJ Oui. 3750$ d'amende à moi, puis 3750 à un de mes amis qui m,a sorti le bois parce que sa bûcheuse… Je travaillais pour lui avec (l'esquiveuse?). Le gars il voulait me rendre service. Ça s'est réglé hors Cour, j'ai payé 1250$ d'amende, ça m'a coûté 200$ d'avocat. C'est de même que ça marche aujourd'hui puis dans le même temps, puis ça se fait encore aujourd'hui, le gars reste pilé sur le bord du chemin. J'ai été montrer à des gens l'hiver passé en motoneige. Ça c'est sans parler de l'épinette. Le tremble, peuplier… **(Gaspillage, Spoiling timber)-106**

Bibliography

Agarwal, B. 1992. The gender and environment debate: lessons from India. *Feminist Studies* 18:119 – 158.

Allaby, M. 1998. *A Dictionary of Ecology*. Oxford: Oxford University Press.

Amin, A. 1996. Beyond assocaitive democracy. *New political Economy* 1:309-334.

—. 2002. Ethnicity and multicultural city:living with diversity. *Environment and Planning A* 34:959-980.

Anderson, B. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.

Asselin, M., and B.-B. Gourd. 1995. "La naisance de l'Abitibi rural: 1910-1930," in *Histoire de l'Abitibi-Témiscamingue*, Institut Québécois de la Recherche sur la Culture edition, vol. 7, *Les régions du Québec*. Edited by O. Vincent, pp. 197-281. Québec City: Les Presses de l'Université Laval.

Bachelard, G. 1929. *La Valeur inductive de la Relativité*. Paris: Librairie Philosophique J. Vrin.

—. 1942. *L'eau et les rêves: Essai sur l'imagination de la matière*. Paris: Librairie José Corti.

—. 1943. *L'air et les songes: Essai sur l'imagination du mouvement*. Paris: Librairie José Corti.

—. 1957. *La poétique de l'espace*. Vandôme: Presse Universitaire de France.

Baldwin, A. 2003. The Nature of the Boreal Forest: Governmentality and Forest-Nature. *Space and Culture* 6:415-428.

—. 2004. An Ethics of Connection: Social-nature in Canada's Boreal Forest. *Ethics, Place and Environment* 7:185-194.

Batterbury, S., T. Forsyth, and K. Thomson. 1997. Environmnetal transformation in developing countries: hybrid reserach and democratic policy. *The Geographical Journal* 163:126-132.

Baxter, J., and J. Eyles. 1997. Evaluating qualitative research in social geography: establishing 'rigour' in interview analysis. *Transaction of the Institute of British Geographers* 22:505-525.

Beetham, D. 1992. Leberal Democracy and the Limits of Democratisation. *Prospects for Democracy: Political Studies Special Issue* 40:40-53.

Bergeron, Y., and M. D. Flannigan. 1995. Predicting the effects of climate change on fire frequency in the southeastern Canadian boreal forest. *Water, Air, & Soil Pollution* 82:437-444.

Bergeron, Y., S. Gauthier, V. Kafka, P. Lefort, and D. Lesieur. 2001. Natural fire frequency for the eastern Canadian boreal forest: consequences for sustainable forestry. *Canadian Journal of Forest Research-Revue Canadienne de Recherche Forestière* 31:384-391.

Bergson, H. 1941. *Matière et mémoire*. Paris: PUF.

Berstein, S., and B. Cashore. 2001. "The International-Domestics Nexus: The effect of International Trade and Environmental Politics of the Canadian Forest Sector," in *Canadian Forest Policy: Adapting to Change*. Edited by M. Howlett, pp. 65-93. Toronto: University of Toronto Press.

Blaikie, B., and H. Brookfield. 1987. *Land Degradation and Society*. London: Methuen.

Blanchette, L. 2003. *Avis sur le bois d'oeuvre en Abitibi-Témiscamingue*. Centre de Ressources humaines du Canada (CRHC).

Bloor, D. 1991. *Knowledge and Social Imagery*, 2nd edition. Chicago: University of Chicago Press.

Bouthiller, L. 2001. "Quebec: Consolidation and the Movement towards sustainability," in *Canadian Forest Policy: Adapting to Change.* Edited by M. Howlett, pp. 237-278. Toronto: University of Toronto Press.

Braun, B. 2000. Producing vertical territory: Geology and governmentality in late Victorian Canada. *Euceme* 7:7-46.

—. 2002. *The Intemperate Rainforest: Nature, Culture, and Power on Canada's West Coast*. Minneapolis: University of Minnesota Press.

Braun, B., and N. Castree. 1998. *Remaking Reality: Nature at the millenium*. London: Routledge.

Braun, B., and L. Disch. 2002. Radical democracy's 'modern constitution'. *Environment and Planning D: Society and Space* 20:505-511.

Braun, B., and J. Wainwright. 2001. "Nature, Postructuralism and Politics," in *Social Nature: Theory, practices and politics*. Edited by N. Castree and B. Braun, pp. 41-61. Oxford: Blackwell.

Brisson, G. 2003. "La forêt, lieu vécu et espaces de gestion," in *Pays et paysages dans la seconde moitié du 20e siècle*. Edited by P. Dieudonné and L. K. Morisset, pp. 243-254. Brest: PUB.

Brown, W. 2002. At the Edge. *Political Theory* 30:556-576.

Bryant, R. 1998. Power Knowledge and Political Ecology in the Third World. *Progress in Physical Geography* 22:79-94.

Butler, K. F., and T. M. Koontz. 2005. Theory into Practice: Implementing Ecosystem Management Objectives in the USDA Forest Service. *Environmental management* 35:138-150.

Camill, P. 2005. Permafrost thaw accelerates in boreal peatlands during late-20th century climate warming. *Climatic Change* 68:135-152.

Caron, I. 1912. *Le Témiscamingue, l'Abitibi. Centre de la colonisation du Nord-Ouest de la province de Québec*. Québec City: Ministère de la Colonisation, des Mines et des Pêcheries.

—. 1919. *L'Abitibi: Une des plus belles régions agricoles de la province de Québec: Le témoignage d'un curé*. Québec City: Ministère de la Colonisation, des Mines et des Pêcheries.

—. 1923. *La région de l'Abitibi. Guide du Colon,*. Québec City: Ministère de la Colonisation des Mines et des Pêcheries.

Carr, D. S., S. W. Selin, and M. A. Schuett. 1998. Managing Public Forests: Understanding the Role of Collaborative Planning. *Environmental Management* 22:767-776.

Castree, N. 1995. The nature of produced nature: Materiality and knowledge construction in Marxism. *Antipode* 27:12-48.

—. 2003. A Post-environmental Ethics? *Ethics, Place and Environment* 6:3-12.

Castree, N., and B. Braun. 1998. " The construction of nature and the nature of construction. Analytical and political tools for building survivable futures.," in *Remaking Reality: Nature at the millenium*. Edited by N. Castree and B. Braun, pp. 3-42. London: Routledge.

Castree, N., and T. Macmillan. 2001. "Dissolving dualism: Actor-network and the reimagination of Nature," in *Social Nature: Theory, Practice and Politics*. Edited by N. C. a. B. Braun, pp. 208-224. Oxford: Blackwell.

CEGFPQ. Commission d'Enquête sur la Gestion de la Forêt Publique du Québec. 2004. *Rapport Final*. Bibliothèque Nationale du Québec.

Chamberland, R., J. Leroux, S. Audet, S. Bouillé, and M. Lopez. 2004. *Terra Incognita des Kotakouemis: L' Algonquinie orientale au XVIIe siècle.* Ste-Foy: Les Presses de l'Université Laval.

Chartrand, Y., and P. Rodrigue. 2006. "Dottori blâme Québec," in *Journal de Montréal*.

Che, D. 2006. Developing ecotourism in First World, resource-dependent areas. *Geoforum* 37:212-226.

CIFQ. Conseil de l'Industrie Forestière du Québec. 2006. "Canada-US Lumber Dispute", http://www.cifq.qc.ca/html/english/sciage/enjeux_contentieux.php.

Coates, P. 1998. *Nature: Western attitudes since ancient times*. Oxford: Polity Press.

Cohen, S. 1993. *Politics of Planting: Israeli-Palestinian Competition for Control of Land in the Jerusalem Periphery*. *Geography papers S.* Chicago: University of Chicago.

—. 1999. Promoting Eden: tree planting as the environmental panacea. *Cultural Geographies* 6:424-446.

—. 2004. *Planting Nature:Trees and the Manipulation of Environmental Stewardship in America*. Berkeley: University of California Press.

Colinvaux, P. 1993. *Ecology 2*, 2 edition. Toronto: John Willey and Sons, Inc.

Cosgrove, D. 1998. *Social formation and symbolic landscape*. Madisson: University of Wisconsin Press.

Côté, M.-A., and L. Bouthillier. 2002. Assesing the effect of public involvement processes in forest management in Quebec. *Forest Policy and Economics*:213-225.

Côté, M. 2003. *Dictionaire de la foresterie, Dictionary of Forestery, Diccionario de foresterìa*. Québec City: Ordre des ingénieurs forestiers du Québec.

Crang, M. 2002. Qualitative Methods: the new orthodoxy? *Progress in Human Geography* 26.

—. 2003. Qualitative Methods: touchy, feely, look-see? *Progress in Human Geography* 27:494-504.

Cronon, W. 1996a. "Introduction: In Search of Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*. Edited by W. Cronon, pp. 23-68. New York: W.W. Norton and Company, Inc.

—. 1996b. "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*. Edited by W. Cronon, pp. 69-90. New York: W.W.Norton and Company, Inc.

Daniels, D. 1993. *Fields of Vision: Landscape Imagery and National Identity in England and United-States*. Cambridge: Polity Press.

de Certeau, M. 1984. *The Practices of the Everyday Life*. Berkeley: University of California Press.

Deleuze, G., and F. Guattari. 1973. *Capitalisme et Schizophrénie 1: L'Anti-Oedipe*. Vol. 1. *Collection "Critique"*. Paris,: Les Éditions de Minuit.

—. 1987. *A Thousand Plateaus*. London: Continuum.

—. 1991. *Qu'est-ce que la philosophie? Collectioon «Critique»*. Paris: Les éditions de minuit.

Demeritt, D. 1998. "Science, Social Constructivism and Nature," in *Remaking Reality: Nature at the millenium*. Edited by N. Castree and B. Braun, pp. 173-193. London: Routledge.

—. 2001a. "Being Constructive about Nature," in *Social Nature: Theory, Practice and Politics*. Edited by N. Castree and B. Braun, pp. 22-40. Oxford: Blackwell.

—. 2001b. The Construction of Global Warming and the Politics of Science. *Annals of the Association of American Geographers* 91:307-337.

—. 2001c. Scientific forest conservation and the statistical picturing of nature's limits in the progressive-era United States. *Environment and Planning D: Society and Space* 19:431-459.

—. 2002. What is the 'social construction of nature'? A typology and sympathetic critique. *Progress in Human Geography* 26:767-790.

Desbiens, C. 2004. Producing North and South: a political geography of hydro development in Québec. *The Canadian Geographer/Le Géographe Canadien* 48:101-118.

Descola, P. 1996. "Constructing natures: symbolic ecology and social practice," in *Nature and Society: An anthropological perspective*. Edited by P. a. P. Descola, G., pp. 82-102. London: Routledge.

Desjardins, R. 2004a. "Autochtones et Blancs, nous sommes tous les serviteurs des compagnies: Le regard lucide d'un nouveau docteur," in *Le Devoir*. Montréal.

—. 2004b. "Squatters dans notre propre pays: Pourquoi les forestières ont-elles tant de pouvoir?," in *Le Devoir*. Montréal.

Desjardins, R., and R. Monderie. 1999. "L'Erreur Boréale." Canada: National Film Board of Canada.

Dickinson, J., and B. Young. 2003. *A Short History of Quebec*, Third edition. Montreal: McGill-Queen's University Press.

Dikeç, M. 2005. Space, politics and the political. *Environment and Planning D: Society and Space* 23:171-188.

du Tremblay, A. 1910. "Report of a portion of the township of Figuéry, county of Temiscaming," in *Report of the minister of lands and forests of the province of Quebec for the twelve months ending 30th June 1912*, vol. 26, pp. 66-67. Québec City: L.V. Filteau.

Dubois, P. 2002. *Les vrais maîtres de la forêt québécoise*. Montréal: Écosociété.

Dumont, M., C. Mérette, J. Arseneault, D. Rioux, and J. Martel. 1994. *Guide pour le dégagement de la régénération direstière à l'aide d'outils mécaniques*. Ministère des Ressources Naturelles du Québec RN95-3015.

Dunn, K. 2000. "Interviewing," in *Qualitative reserach Methods in Human Geography*. Edited by I. Hay, pp. 50-82. Oxford: Oxford University Press.

Durand, G. 1964/2003. *L'imagination symbolique*. Paris: Presse Universitaire de France.

Dussault, C., J.-P. Ouellet, R. Courtois, J. Huot, L. Breton, and H. Jolicoeur. 2005. Linking moose habitant selection to limiting factors. *Ecography* 28:619-628.

Elden, S. 2007. Governmentality, calculation, territory. *Environment and Planning D: Society and Space* 25:562-580.

Elster, J. 1998. *Deliberative Democracy*. *Cambridge studies in the theory of democracy*. Cambridge: Cambridge University Press.

Elwood, S. A., and D. G. Martin. 2000. 'Placing' interviews: location and scales of power in qualitative reserach. *Professional Geographer* 52:649-57.

Emerson, R. M., R. I. Fretz, and L. L. Shaw. 1995. *Wrting Ethnographic Fieldnotes*. Chicago: University of Chicago Press.

England, K. V. L. 1994. Getting Personal: Reflexivity, Personality and Feminist reserach. *Professional Geographer* 46:80-89.

Escobar, A. 1995. *Encountering Development: The Making and Unmaking of the Third World.* Princeton: Princeton University press.

—. 1996. "Constructing Nature: Elements for a postructural political ecology.," in *Liberation ecologies: Environment, development, social movement*, vol. 1. Edited by R. P. a. M. Watts, pp. 46-68. London: Routledge.

—. 1998. Whose Knowledge, whose nature? Biodiversity, Conservation, and the political ecology of social movements. *Political Ecology* 5:53-82.

Fafard, J.-F. 1916. "Rapport concernant les limites Nord, Est et Sud du canton Hébécourt, compté de Témiscaming," in *Rapport du Ministre des terres et forêts de la province de Québec, pour les douze mois expirés le 30 juin 1917*, vol. 30, pp. 85-86. Québec City: Publication le Soleil.

FAITC. Foreign Affairs and International Trade of Canada. 2006. *Softwood Lumber Agreement between the Government of Canada and the Government of the United-Sates of America*. Foreign Affairs and International Trade Canada. http://www.international.gc.ca/eicb/softwood/pdfs/SLA-en.pdf.

Feléz, J.-L. A. 2005. Las paradojas de la modernizacion - La transformacion de una fiesta religiosa en Atacama (Chile). *Anthropos* 100:507-519.

Fetterman, D. M. 1998. *Etnography: Step by Step*. Thousand Oaks, CA: SAGE Publications.

Forsyth, T. 2003. *Critical political ecology: The politics of environmental science*. London: Routledge.

—. 2004. "Industrial pollution and social movements in Thailand," in *Liberation Ecologies: Environment, Development, Social Movements*, vol. 2. Edited by R. Peet and M. Watts, pp. 422-438. London: Routledge.

Foucault, M. 1961. *Histoire de la folie à l'Âge Classique*. Paris: Gallimard.

—. 1966. *Les mots et les choses: Une archéologie des sciences humaines*. Paris: Gallimar.

—. 1969. *L'Archéologie du Savoir*. Paris: Gallimard.

—. 1975. *Surveiller et Punir*. Paris: Gallimard.

—. 1976/2001. "Le discours ne doit pas être pris comme..." in *Foucault, Dits et écrits II, 1976-1988*. Edited by D. Defret, F. Ewald, and F. Lagrange, pp. 123-124. Paris: Quatro Gallimard.

—. 1977/2001. "Pouvoir et Savoir," in *Foucault: Dits et écrits II, 1976-1988*. Edited by D. Defret, F. Ewald, and F. Lagrange, pp. 399-418. Paris: Quatro Gallimard.

—. 1979. *The History of Sexuality, Volume I: An Introduction.* London: Allen lane.

—. 1991. "Governmentality," in *The Foucault Effect: Studies in Governmentality*. Edited by G. Burchell, Colin G., and Miller, P., pp. 87-104. Hemel Hempstead: Harvester Wheatsheaf.

—. 2001/1978. "Sexualité et pouvoir," in *Foucault: Dits et écrits II, 1976-1978*. Edited by D. Defret, F. Ewald, and J. Lagrange, pp. 552-570. Paris: Gallimard.

Gamache, I., and S. Payette. 2004. Height growth response of tree line black spruce to recent climate warming across the forest tundra of eastern Canada. *Journal of Ecology* 92.

—. 2005. Latitudinal response of subartic tree lines to recent climate change in eastern Canada. *Journal of Biogeography* 32:849-862.

Gauvin, J. 2004. "Réplique à Richard Desjardins--Le jongleur d'hyperboles et le camion qui sort de la forêt," in *Le Devoir*. Montréal.

Gibson-Graham, J. K. 2006. *A Postcapitalist Politics*. Minneapolis: University of Minnesota Press.

Gingras, P., and M. Carrier. 2006. Entre intégration économique et cohésion sociale: les coopératives forestières et le développement régional au Québec. *The Canadian Geographer/Le Géographe Canadien* 50:358-375.

Gourd, B.-B. 1973. La colonisation de Clay Belts du Nord-Ouest québécois et du Nord-Est ontarien. *Revue d'histoire de l'Amérique Française* 27:235-256.

—. 1975. "La colonisation et le peuplement du Témiscamingue et de l'Abitibi 1880-1950. Aperçu historique.," in *L'Abbittibbi et le Témiskaming: Hier et Aujourd'hui*, vol. 2. Edited by M. Asselin and B.-B. Gourd, pp. 1-51. Rouyn: Collège du Nord -Ouest.

Green, G. L. 2002. Marketing the Nation: Carnival and tourism in Trinidad and Tobago. *Critique of Anthropology* 22:283-304.

Gregory, D. 1994. *Geographical Imaginations*. Oxford: Blackwell.

—. 2001. "(Post)Colonialism and the production of Nature," in *Social Nature: Theory, practices and politics*. Edited by N. Castree and B. Braun, pp. 84-111. Oxford: Blackwell.

—. 2004. *The Colonial Present*. Oxford: Blackwell.

Guattari, F., and S. Rolnik. 2007. *Micropolitiques*. Paris: Les Empêcheurs de penser en rond.

Haack, R. A., and J. W. Byler. 1993. Insects and Pathogens: Regulators of Forest Ecosystems. *Journal of forestry* 91:33-37.

Halliday, W. E. D. 1939. Forest regions of Canada: their distribution and character. *Canadian Geographical Journal* 14:229-243.

Haraway, D. J. 1991. *Simians, Cyborg and Women: The Reinvention of Nature*. New-York: Routledge.

—. 1992a. Otherwordly conversations; terrain topics; local terms. *Science as Culture* 3:64-98.

—. 1992b. "The Promise of Monsters: A Regenerative Polics for Innapropriate/d Others.," in *Cultural Studies*. Edited by L. Grossberg, Nelson, C. and Treichler, P.A., pp. 295-337. New York: Routledge.

—. 1997. *Modest Witness@Second Millenium.Female Man© Meets OncoMouse™.* New York: Routledge.

Harris, C. 2002. *Making Native Space: Colonialism, Resistance and Reserves in British Columbia*. Vancouver: UBC Press.

Harvey, D. 1990. *The conditions of postmodernity*. Oxford: Blackwell.

—. 1996. *Justice nature and the geography of difference*. Oxford: Blackwell.

—. 2000. *Spaces of Hope*. Edinburgh: Edinburgh University Press.

Hayter, R., and J. Holmes. 2001. "The Canadian Forest Industry: The Impacts of Globalization and Technological Change," in *Canadian Forest Policy: Adapting to Change* Edited by M. Howlett, pp. 127-156. Toronto: University of Toronto Press.

Hirst, P. 1994. *Associative Democracy*. Cambridge: Polity.

Houde, N., and L. A. Sandberg. 2003. To Have Your Cake and Eat It Too?' Utility, Ecology, Equity and Québec's New Forest Act, 2001. *Cahiers de géographie du Québec* 47.

Ingold, T. 2000. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. London: Routledge.

Jackson, P. 1988. Street life: the politics of Carnival. *Environment and Planning D: Society and Space* 6:213-227.

—. 1992. The politics of the streets. A geography of Caribana. *Political Geography* 11:130-151.

Jacobs, J. 1996. *Edge of Empire: Postcolonialism in the City*. London: Routledge.

Jaroz, L. 1996. "Defining deforestation in Madagascar," in *Liberation Ecologies: environment, development, social movements*, 1st edition. Edited by R. Peet and M. Watts, pp. 148-164. London: Routledge.

Jessop, B. 2002. Globalisation, regionalisation, market and the state: interview with Bob Jessop. *Currículo sem Fronteiras* 2:i-xvi.

Jobindon, R., P. Bernier, M. Bernier-Cardou, G. Blais, C. Gagné, Gauthier G., J. Moisan, F. Pelletier, D. Pothier, G. Prégent, F. Raulier, C.-H. Ung, and S. Végiard. 2004. *Rapport du commité scientifique chargé d'examiner le calcul de possibilité forestière*. Ministère des Ressources Naturelles, de la Faune et des Parcs, Direction de la recherche forestière INSB-2-550-43206-1.

Katz, C. 1994. Playing the Field: Questions of Fieldwork in Geography. *Professional Geographer* 46:67-72.

Katz, J. 2001. From how to why: On luminuous description and acusal inference in enthography (Part 1). *Ethnography* 2:443-473.

Kearney, R. 1991. *Poetics of imagining: Modern to Post-Modern*, Second edition. Edinburgh: Edinburgh University Press.

Knorr Cetina, K. 2003. "How are global markets global? The architecture of a flow world." *Economies at Large conference, New-York, 14-15 November, 2003*.

Lanthier, S., and M. Pelletier-Gilbert. 2004. "Deux mille fois par jour," in *environment*, pp. 85min, 21 sec. Canada: ONF, NFB.

Larouche, C. 2006. "Raréfaction du Thuya," in *Les enjeux de biodiversité relatifs à la composition forestière*. Edited by P. Grondin and A. Cimon, pp. Chapter 5, 36p. Québec City: Ministère des Ressources Naturelles, de la Faune et des Parcs.

Lars, C. R. 2005. The boundary of animality. *Envirinment and Planning D: Society and Space* 23:787-793.

Larsen, J. A. 1980. *The Boreal Ecosystem*. New-York: Academic Press.

Latour, B. 1987. *Science in Action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.

—. 1992. *Aramis, ou l'amour des techniques*. Paris: La Découverte.

—. 1993. *We never been modern*. Hemel Hempstead: Harvester Wheatsheaf.

—. 1999a. *Pendora's hope: Essays on the reality of Science Studies*. Cambridge, MA: Harvard University Press.

—. 1999b. *Politiques de la nature: Comment faire entrer les sciences en démocratie*. Paris: La Découverte.

—. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

Latour, B., and S. Woolgar. 1986. *Laboratory life: The construction of Scientific facts*. Chichester: Princeton University Press.

Laurier, E. 2004. "Participant Observation," in *Key Methods in Geography*. Edited by N. J. Clifford and G. Valentine, pp. 133-148. London: Sage.

Laurier, E., and C. Philo. 2003. The region in the boot: mobilising lone subjects and multiple objects. *Environment and Planning D: Society and Space* 21:85-106.

Lavoie, C., and S. Payette. 1996. The long-term stability of the boreal forest limit in subartic Quebec. *Ecology* 77:1226-1233.

Lecomte, N., C. Martineau-Delisle, and S. Nadeau. 2005. Participatory requirements in forest management planning in Eastern Canada: A temporal and interprovincial perspective. *The Forestry Chronicle* 81:398-402.

Lefebvre, H. 1975. *Hegel, Marx, Nietzche ou le Royaume de l'ombre*. Paris: Casterman.

—. 2000. *La Production de l'Espace*, 4^{e} edition. *Ethnosociologie*. Paris: Anthropos.

Lefort, C. 1988. *Democracy and Political Theory*. Oxford: Polity.

Lejeune, P. 1632. *Brève relation du voyage de la Nouvelle-France, fait au mois d'avril 1632*. Paris: Cramoisy.

Lepage, A. 1912a. "Extract from the report of the township of La Motte, county of Temiscaming," in *Report of the minister of land and forests of the province of Quebec for the twelve months ending 30th June 1912*, pp. 80-83. Québec City: L.V. Filteau.

—. 1912b. "Extract from the report on a survey of the township of La Corne, county of Temiscaming," in *Report of the minister of land and forests of the province of Quebec for the twelve months ending 30th June 1912*, vol. 28, pp. 70-71. Québec City: L.V. Filteau.

—. 1913. "Rapport concernant la division du canton de Senneterre, compté de Temiscaming et Pontiac," in *Rapport du minitre des terres et forêts de la province de Quebec, pour les douze mois expirés le 30 juin 1914*, vol. 34, pp. 69-72. Québec City: E.-E Cinq-Mars.

Leroux, J. 1995. Les métamorphose du pacte dans une communauté Algonquine. *Recherches Amérindiennes au Québec* 25:51-69.

—. 2003. Cosmologie, mythologie et récit historique dans la tradition orale des Algonquiens de Kitcisakik. Thesis, not paper, Université de Montréal.

Lévinas, E. 1985. *Ethics and infinity: conversations with Philippe Nemo*. Pittsburgh: Duquesne University Press.

Little, J. I. 1989. *Nationalism, Capitalism, and the Colonization in Nineteenth-Century Quebec*. Montreal: McGill-Queen's University Press.

Lorimer, H. 2006. Herding memories of humans and animals. *Environment and Planning D: Society and Space* 24:497-518.

Lower, A. R. M., and H. A. Innis. 1936a. "The colonization policy of Quebec," in *Settlement and the mining frontier*, vol. IX, *Settlement and forest frontier in eastern Canada*. Edited by W. a. a. J. Mackintosh, W.L.G., pp. 76-93. Toronto: The Macmillan company of Canada limited, at St. Martin's House.

—. 1936b. "The pulp and paper industry," in *Settlement and the forest and mining frontier in eastern Canada*, vol. IX, *Canadian Frontiers of Settlement*. Edited by W. a. a. J. Mackintosh, W.L.G., pp. 113-129. Toronto: The Macmillan company of Canada Limited, at St. Martin's House.

Macbeth, D. 1999. "Glances, trances and their relevance for visual sociaology," in *Media studies: Ethnomethodological Approaches*. Edited by P. L. Jalbert. Lanham, MD: University Press of America.

MacDonald, F. 2007. Anti-Astropolitik: outer space and the orbit of geography. *Forthcoming in Progress in Human Geography*.

MacDonald, G., J. M. Szeicz, J. Claricoates, and K. A. Dale. 1998. Response of the central Canadian treeline to recent climate changes. *Annals of the Association of American Geographers* 88:183-208.

MacLeod, G., and M. Goodwin. 1999. Reconstructing an urban and regional political economy: on the state, politics, scale, and explanation. *Political Geography* 18:697-730.

MAMR. Ministère des Affaires Municipales et des Régions. 2003. *Potrait socio-économique 2001, Abitibi-Témiscamingue*. Ministère des Affaires Municipales et Régions http://www.mamr.gouv.qc.ca/publications/regions/ruralite/Abitibi_2001.pdf.

— 2006. "Région 08: Abitibi-Témiscamingue: Les MRC et Municipalités locales exerçant certaines compétences de MRC." Edited by e. d. P. Ministère des

Ressources Naturelles Faune. Québec City: http://www.mamr.gouv.qc.ca/publications/cartotheque/region_08.pdf.

Marchak, P. 1989. "What happens when the common property becomes uncommon?," in *Consumming Canada: Readings in environmental history*. Edited by C. G. a. P. Gaffield, pp. 239-255. Toronto: copp Ltd.

—. 1995. "What happens when common property becomes uncommon?," in *Consuming Canada: Readings in Environmental History*. Edited by C. Gaffield and P. Gaffield. Toronto: Copp Clark Ltd.

Marin, L. 1984. *Utopics : Spatial Play*. London: Macmillan.

Massey, D. 1994. *Space, Place and Gender*, Polity Press edition. Oxford: Blackwell.

—. 2004. Geographies of Responsability. *Geografiska Annaler* 86:5-18.

—. 2005. *For space*. London: Sage.

Mathews, R. 1999. *Jobs of Our Own: Building a Stake-holder Society*. Sydney: Pluto Press Australia.

Mathewson, K. 2000. Cultural landscape and ecology III: foraging/farming, fodd festivities. *Progress in Human Geography* 24:457-474.

McCarthy, J. 2002. First-World political ecology: lessons from the Wise Use movement. *Envirinment and Planning A* 34:1281-1302.

—. 2005. Devolution in the woods: community forestry as hybrid neoliberalism. *Envirinment and Planning A* 37:995-1014.

McDermott, G. L. 1961. Frontier of Settlement in the Great Clay Belt, Ontario and Quebec. *Annals of the Association of American Geographers* 51:261-273.

McManus, P. 2003. "Resource," in *The Dictionary of Human Geography*, 4th edition. Edited by R. J. Johnston, D. Gregory, G. Pratt, and M. Watts, pp. 706-707. Oxford: Blackwell.

Mendoza, G. A., and R. Prabhu. 2000. Development of a Methodology for Selecting Criteria and Indicators of Sustainable Forest Management: A Case Study on Participatory Assessment. *Environmental Management* 26:659-673.

Mercier, C., and J.-P. Marquis. 1995. "Vie politique, mouvement sociaux et conscience régionale," in *Histoire de l'Abitibi Témiscamingue*, vol. 7. Edited by O. Vincent, pp. 607-653. Ste-Foy: Les Presses de l'Université Laval.

Miner, H. 1939. *St-Denis a French-Candian Parish*. Chicago: University of Chicago Press.

Moen, R., J. Pastor, Y. Cohen, and C. C. Schwartz. 1996. Effects of moose movement and habitat use on GPS collar performance. *Journal of Wildlife Management* 60:659-668.

Mol, A., and J. Law. 2005. Boundary variations: an introduction. *Envirinment and Planning D: Society and Space* 23:637-642.

Morrison, R. 1991. *We Build Road as We Travel*. Philadelphia: New Society Publishers.

Mouffe, C. 1995. Post-Marxism: democracy and identity. *Environment and Planning D: Society and Space* 13:259-265.

MRN. 2002. *Rapport sur l'état des forêts québécoises, 1995-1999*. Ministère des Ressources Naturelles du Québec. Diffusion Code: 2002-3073.

—. 2003. *Zones de végétation et domaines bioclimatiques du Québec*. Ministère des Ressouces Naturelles du Québec. Diffusion Code: 2003-3043.

MRNF. 2006. *Portrait Territorial de l'Abitibi-Témiscamingue*. Ministère des Ressources Naturelles et de la Faune. Diffusion code: 2006-2002.

MRNFP. 2002. Combien y a-t-il d'arbres dans nos forêts? Diffusion-code 2002-3038.

—. 2003a. *Manuel d'Aménagement Forestier*, 4e edition. Québec City: Ministère des Ressources Naturelles, de la Faune et des Parcs.

—. 2003b. *Objectifs de protection et de mise en valeur des ressources du milieu forestier proposés pour les plans généraux d'aménagement forestier de 2005-2010*. Ministère des Ressources Naturelles de la Faune et des Parcs.

—. 2006a. Vergers à graines de première génération. *Ministère des Ressources Naturelles, de la Faune et Parcs* http://www.mrnf.gouv.qc.ca/forets/entreprises/entreprises-semences-systeme-source-premiere.jsp.

—. 2006b. Vergers à graines de seconde génération. *Ministère des Ressources Naturelles, de la Faune et des Parcs* http://www.mrnf.gouv.qc.ca/forets/entreprises/entreprises-semences-systeme-source-seconde.jsp.

Nagle, J. 2005. "Everybody is Irish on St Paddy's": Ambivalance and Alterity at London's St Patrick's Day 2002. *Identities: Global Studies in Culture and Power* 12:563-583.

Nancy, J.-L. 1991. *The inoperative community*. Minneapolis: University of MinnesotaPress.

Nash, R. F. 2001. *Wilderness and the american mind*, 4th edition. New Heaven: Yale University Press.

Nightingale, A. 2006. The nature of gender: work, gender, and environment. *Environment and Planning D: Society and Space* 24:165 – 185.

O'Sullivan, H. 1909. "Rapport d'une étude topographique des rivières, lacs et portages d'une partie des bassins de l'Abitibi et de la Harricana, dans le compté de Pontiac, faite en vertu d'instructions du département des Terres et Forêts, datées à Québec du 10 août 1906 et du 22 juillet 1907," in *Rapport du Ministre des*

Terres et Forêts de la province de Québec pour les douze mois expirés le 30 juin 1909, pp. 145-177. Québec City: Louis-V. Filteau.

—. 1910. "Extrait d'un rapport d'inspection de l'arpentage de différents cantons dans la région de l'Abitibi," in *Document de la Session 5, Ministre des terres et des forêts de la province de Québec pour les douze mois expirés le 30 juin 1910*, pp. 228-229. Québec City: Louis-V. Filteau.

Ossowski, S. 1999. *Co-ordination in Artificial Agent Societies: Social Structures and its Implementations for Autonomous Problem Solving Agents*. Berlin: Springer.

Paasi, A. 1996. *Territories, boundaries and consciousness: The changing geographies of the Finnish-Russian border. Belhaven studies in political geography*. Chichester: John Wiley & Sons Ltd.

Pâquet, J. 2003. *Outil d'aide à la décision pour classifier les secteurs d'intérêt majeurs et définir les stratégies d'aménagement pour l'intégration visuelle des coupes dans les paysages.* Ministère des Ressources Naturelle de la Faune et des Parcs.

Parks, L. 2001. Plotting the personal: Global Positioning Satellites and interactive media. *Ecumene* 8:209-222.

Patton, M. 1990. *Qualitative evaluation and research methods*. Newbury Park, CA: Sage.

Payette, S. 1983. "The forest-tundra and present tree-lines of the northern Québec-Labrador penninsula." *Tree-line Ecology, Proceedings of the Northern Québec tree-Line Conference,, Québec city, 1983*, pp. 3-23 47.

—. 1992. "Fire as a controlling process in the North American boreal forest," in *A Systems Analysis of the Global Boreal Forest*. Edited by H. H. Shugart, Leemans R., and G. B. Bonan, pp. 144-169. Cambridge: Cambridge University Press.

Peet, R., and M. Watts. 1996. *Liberation Ecologies: environment, development and social movement*. London: Routledge.

—. 2004. *Liberation Ecologies: environment, development and social movements*, 2nd edition. London: Routledge.

Penrose, J. 2003. When all the cowboys are Indians: The nature of race in All-Indian rodeo. *Annals of the Association of American Geographers* 93:687-705.

Pinder, D. 2005. *Visions of the City: Utopianism, Power and Politics in Twentieth-Century Urbanism*. Edinburgh: Edinburgh University Press.

Popke, J.E. 2003. Postructuralist ethics: subjectivity, responsibility and the space of community. *Progress in Human Geography* 27:298-316.

Proctor, J. D. 1996. "Whose Nature? The contested Moral Terrain of Ancient Forest.," in *Uncommon Ground. Rethinking the Human Place in Nature*. Edited by W. Cronon, pp. 269-297. New-York: W.W. Norton & Company.

—. 1998. The Social Construction of Nature: Relativist Accusations, Pragmatist and Critical Realist Responses. *Annals of the Association of American Geographers* 88:352-376.

Prudham, S. 2003. Taming Trees: Capital, Science, and Nature in Pacific Slope Tree Improvement. *Annals of the Association of American Geographers* 93:636-656.

—. 2005. *Knock on Wood: Nature as Commodity in Douglas-Fir Country*. New-York: Routledge.

Purdon, M. 2003. The Nature of Ecosystem management: postmodernism and plurality in the sustainable management of the boreal forest. *Environemental Science and Policy* 6:377-388.

Purnomo, H., G. A. Mendoza, R. Prabhu, and Y. Yasmi. 2005. Developing multi-stakeholder forest management scenarios: a multi-agent system simulation approach applied to Indonesia. *Forest Policy and Economics* 7:475-491.

Rainville, A., M. Desponts, P. Beaudoin, P. Périnet, M.-J. Mottet, and M. Perron. 2003. *Tree improvement in Québec: A tool for industrial and environmental productivity.* Government of Québec 2003-3121.

Rancière, J. 2001. Ten theses on politics. *Theory and Event* 5:http:/muse.jhu.edu/journals/theory_and_event/toc/archive.html#5.3.

Rayner, J., and M. Howlett. 2007. The National Forest Strategy in comparative perspective. *The Forestry Chronicle* 83:651-657.

Reed, M. G. 2000. Taking Stands: a feminists perspective on 'other' women's activism in forestry communities of northern Vancouver Island. *Gender Place and Culture* 7:363-387.

—. 2003. *Taking stands: Gender and the sustainability of rural communities.* Vancouver: UBC Press.

Ricoeur, P. 1969. *Le conflit des interprétations: essais d'herméneutique*. Paris: Éditions du Seuil.

Rieman, B. E., D. C. Lee, R. F. Thurow , P. F. Hessburg, and J. R. Sedell. 2000. Toward an Integrated Classification of Ecosystems: Defining Opportunities for Managing Fish and Forest Health. *Environmental management* 25:425-444.

Robbins, P., and A. Fraser. 2003. A Forest of Contradictions: Producing the Landscapes of the Scottish Highlands. *Antipode* 35:95-118.

Robinson, J. 2004. "The Urban Basis of Emancipation: Spatial Theory and the City in South African Politics," in *The Emancipatory City?: Paradoxes and Possibilities*. Edited by L. Lees, pp. 161-177. London: SAGE.

Rose, G. 1996. Teaching visualised geographies: towards a methodology for the interpretation of visual materials. *Journal of Geography in Higher Education* 20:281-294.

—. 2001. *Visual Methodologies: An Introduction to the Interpretation of Visual Materials*. London: Sage.

Rose, P. 1999. *Powers of Freedom*. Cambridge: Cambridge University Press.

Rossiter, D. 2004. The nature of protest: constructing the spaces of British Columbia's rainforests. *Cultural Geographies* 11:139-164.

Roth, W.-M. 2005. Making Classification (at) work: Ordering Practices in Science. *Social Studies of Sciences* 35:581-621.

Sack, R. D. 1986. *Human territoriality, its theory and history*. Cambridge: Cambridge University Press.

Sahlins, M. 1974. *Stone Age Economics*. London: Routledge.

Said, E. 1995. *Orientalism: Western conceptions of the orient*, 4th edition. London: Pinguin Books.

—. 1999. *Out of place: A memoir*. London: Granta Books.

Sample, V. A. 1993. A framework for public participation in natural resource decision making. *Journal of Forestry* 91:22-27.

Satterfield, T. 2002. *Anatomy of a conflict: Identity, knowledge and emotions of old-growth forests*. Vacouver: UBC Press.

Schroeder, R. A. 2005. Debating the place of Political Ecology in the First World. *Environment and Planning A* 37:1045-1048.

Schroeder, R. A., St-Martin, Kevin, Albert K.E. 2006. Political Ecology in North America: Discovering the Third World within? *Geoforum* 37:163-168.

Selin, S., and D. Chavez. 1995. Developing a cooperative model for environmental planning and management. *Environmental management* 19:189-195.

Shugart, H. H., Leemans R., and G. B. Bonan. 1992. *A System Analysis of the Global Boreal Forest*. Cambridge: Cambridge University press.

Sin, C. H. 2003. Interviewing in place: the socio-spatial constrction of interview data. *Area* 35:305-312.

Sinn, E., and W.-L. Wong. 2005. Place, identity and immigrant communities: The organisation of the Yulan Festival in post-war Hong Kong. *Asia Pacific Viewpoint* 46:295-306.

Sirois, L. 1992. "The transition between the boreal forest and tundra," in *A systems analysis of the global boreal forest*. Edited by H. H. Shugart, Leemans R., and G. B. Bonan, pp. 196-215. Cambridge: Cambridge University Press.

Smith, G. 2003a. *Deliberative Democracy and the Environment*. *Environmental Politics*. London: Routledge.

Smith, G. E. 2003b. "Democracy," in *The Dictionary of Human Geography*, 4th edition. Edited by R. J. Johnston, D. Gregory, G. Pratt, and M. Watts, pp. 158-160. Oxford: Blackwell.

Smith, N. 1990. *The production of nature: Uneven development: Nature, capital and the ptoduction of Space*. Oxford: Blackwell.

—. 1996. "The Poduction of Nature," in *Future Natural*. Edited by G. Robertson, Mash, M., Tickner, L., Bird, J., Curtis, J. and Putnam. T.,, pp. 56-70. London: Routledge.

—. 2007. Another revolution is possible: Foucault, ethics and politics. *Envirinment and Planning D: Society and Space* 25:191-193.

Smith, S. J. 1993. Bounding the Borders: Claiming Space and Making Place in Rural Scotland. *Transactions of the Institute of British Geographers* 18:291-308.

Speck, F. G. 1915. The family hunting band as the basis of Algonkian social organization. *American Anthropologist* 17:289-305.

Spielmann, R. 1993. "Makwa nibawaabaa" Analyse d'un récit algonquin concernant les rêves sur les ours. *Recherches Amérindiennes au Québec* 23:109-117.

St. Martin, K. 2001. Making Space for Community Resource Management in Fisheries. *Annals of the Association of Americain Geographers* 91:122-142.

—. 2005. Disrupting enclosures in New England fisheries. *Capitalism, Nature, Socialism* 16:63-80.

—. 2006. The impact of “community” on fisheries management in the US Northeast. *Geoforum* 37:169-184.

Straussfogel, D. 2006. Exploring the Theoretical Interface of Climate Change and Resource Dependency: Application to the Vulnerability of Boreal Forest Regions. *Mitigation and Adaptation Strategies for Global Change* 11:911-931.

Swift, J. 1983. *Cut and Run: The Assault on Canada's Forests*. Toronto: Between the Lines.

Tembec. 2003. "Taking our responsabilities beyond the boardroom," Tembec inc.

Thomson, D. W. 1969. *Men and Meridians: The history of Surveying and Mapping Canada (1917-1947)*. Vol. 3. Ottawa: Department of Energy, Mines and Resources.

Thrift, N. 2004. Movement-space: the changing domain of thinking resulting from the development of new kinds of spatial awareness. *Economy and Society* 33:582-604.

—. 2005. From born to made: technology, biology and space. *Transactions of the Institute of British Geographers* 30:463-476.

Thwaites, R. G. 1838-1901. *Jesuit Relations and Allied Documents, 1647-48*. Vol. 32. Cleveland, OH: The Burrows Brothers Company.

Tousignant, D., P. Périnet, and M. Rioux. 1996. *Le bouturage de l'épinette noire à la pépinière de Saint-Modeste*. Ministère des Ressources Naturelles RN96-3004.

Turnbull, D. 2005. Locating, negotiating, and crossing boundaries: a Western Desert land claim, the Tordesillas line, and the West Australian border. *Environment and Planning D: Society and Space* 23:757-770.

Unwin, T. 2000. A waste of space? Towards a critique of the social production of space... *Transaction of the Institute of British Geographers* 25:11-29.

Urquhart, I. 2001. "New Players, Same Game? Managing the Boreal Forest on Canada's Prairie," in *Canadian Forest Policy: Adapting to Change*. Edited by M. Howlett, pp. 316-347. Toronto: University of Toronto Press.

Valentine, G. 1997. ""Tell me about" ...: using interviews as a research methodology," in *Methods in Human Geography: A Guide for Students doing reserach Project*. Edited by R. Flowerdew and D. Martin, pp. 110-126. Edinburgh Gate: Addison Wesley Longman.

VGQ. Vérificateur Général du Québec. 2002. *Rapport à l'Assemblée nationale pour l'année 2001-2002 Tome II*. Bibliothèque Nationale du Québec.

Wainwright, J. 2005. The geographies of political ecology: after Edward Said. *Environment and Planning A* 37:1033-1043.

Wait, G. R. 2006. Boundaries of Desire: Becoming Sexual Through the Spaces of Sydney's 2002 Grey Games. *Annals od the Association of Americain Geographers* 96:773-787.

Walker, P. A. 2003. Reconsidering 'regional' political ecologies: toward a political ecology of the rural American West. *Progress in Human Geography* 27:7-24.

Warnock, M. 1976. *Imagination*. London: Faber and Faber.

Watts, M. 2003. "Political Ecology," in *A companion to economic geography*. Edited by E. Sheppard and T. J. Barnes, pp. 257-274. Oxford: Blackwell.

Whatmore, S. 2002. *Hybrid geographies: nature culture spaces*. London: Sage.

Willems-Braun, B. 1997. Buried Epistemologies: The politics of Nature in (Post) Colonial British Columbia. *Annals od the Association of Americain Geographers* 87:3-31.

Wolch, J., R,, and J. Emel. 1998. *Animal Geographies: Place, Politics and Identity in the Nature-culture Borderlands*. London: Verso.

Wunenburger, J. J. 2006. *L'imaginaire*. Vol. 649. *Que sai-je*. Paris: PUF.

Yung, L., W. A. Freimund, and J. K. Belsky. 2003. The politics of Place: Understanding meaning, common ground, and political difference on the Rocky Mountain front. *Forest Science* 49:855-866.

Ziegler, J. 2005. *L'Empire de la Honte*. Paris,: Fayard.