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Bras d'Or Lake Watershed

INTEGRATED RESOURCE MANAGEMENT PLAN STUDY

**Study Area
Boundary**

***TAKING CHARGE OF THE BRAS D'OR:
ECOLOGICAL POLITICS IN THE 'LAND OF FOG'***

by

WILLIAM T. HIPWELL, M.A.

**A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of**

Doctor of Philosophy

Department of Geography and Environmental Studies

**Carleton University
Ottawa, Ontario
July 12, 2001**

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**TAKING CHARGE OF THE BRAS D'OR: ECOLOGICAL POLITICS IN
THE 'LAND OF FOG'**

submitted by **William T. Hipwell, M.A.**

in partial fulfilment of the requirements for
the degree of Doctor of Philosophy (Geography)

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Abstract

The central Bras d'Or Lakes watershed on the island of Cape Breton/Unama'kik, Canada is experiencing severe ecological degradation, including siltation, septic contamination, and declining biodiversity. These problems are the result of a number of things. At the most general level, Cape Breton/Unama'kik has historically been treated as a resource extraction zone for "Industria", the global system of political and economic power, knowledge and technology which is feeding parasitically on "Gaia", the wild, living Earth. In addition, hegemonic Industrian ontology and epistemology have ensured that managers have failed to recognise the Bras d'Or watershed as an ecological "whole" which is itself part of larger "wholes" up to the planetary level. Government managers operate isolated from one another, attempting to deal separately with different aspects of human interactions with the rest of the natural community in the region. The result has been jurisdictional overlap, inefficiency, and continuing ecological decline.

Local communities, including the Mi'kmaq nation and non-Mi'kmaq "Cape Bretoners" have responded to these problems with a number of proposals and initiatives. The Cape Bretoner proposals have focussed on lobbying the government to implement some form of integrated management. For their part, the Mi'kmaq have begun to unilaterally implement such an integrated management approach, utilising the jurisprudence of their underlying title to the land as a political lever.

This dissertation adopts a "Gaiagraphic" approach, wedding Gaia, Fourth World and bioregional theories through a philosophical appeal to the work of post-structuralist Gilles Deleuze, to evaluate these local initiatives for socio-ecological sustainability. It concludes that a revamped bioregional approach, which takes into account the ecological

expertise and territorial rights of the Mi'kmaq nation and focuses on the creation of cross-cultural alliances, holds the greatest promise for the project of developing sustainability in the region. It argues that a new approach to development and sustainability is needed which rejects some of the universalist presumptions of modernist thought which pervade Industria, in order to build a post-Industrian, "Terran" civilisation.

Keywords: Cape Breton; Unama'kik; Bras d'Or Lakes; Mi'kmaq; bioregionalism; Industria; Gaiagraphy; resource-use management; Gaia; Deleuze; Fourth World; regional geography; wilderness; social construction of nature

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Bill Hipwell
July 6, 2001
Chelsea, Gatineau River Bioregion

Dedication

This dissertation is dedicated to

Kimberly-Anne Ford

and

Tao Lynn Patricia Mogan Hipwell

with undying love and appreciation,

to the people of the Bras d'Or,

and to the memory of my father

Thomas Leon Hipwell

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Note on the Illustrations

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Adapted from Microsoft (2001). F.N. = First Nation (Mi'kmaq Reserve)

Map of Cape Breton/Unama'kik, Showing Principal Bras d'Or Watershed Settlements and Other Places Referred to in the Study

Chapter 1 Ecological Politics in the “Land of Fog”

The anthroposphere needs to be understood as a drama more complex than simply as battleground of ecological versus economic rationality, but rather as **oecumene**, potential home for mankind, a species which urgently needs to rediscover the art of dwelling (Buttimer 1990: 28).

The “Land of Fog”

The Mi'kmaq¹ people, aboriginal occupants of Atlantic Canada, call Cape Breton Island *Unama'kik*, which in English means “the Land of Fog”.² Though almost certainly a reference to the thick banks of Atlantic fog that regularly roll across this large island off the north-eastern tip of Nova Scotia, the name has metaphorical relevance for a discussion of the problems facing the island in general, and the watershed of its central Bras d'Or Lakes³ in particular (see Frontispiece). Indeed, the behaviour of the almost two dozen government agencies with overlapping and at times conflicting mandates for management of the Bras d'Or Lakes watershed at many times resembles that of people blundering about in a thick mist, only dimly aware of where they should be going, and constantly getting in each other's way. In a sense, then, the present work can be regarded

as a kind of fog light, rather than a map or a set of directions, something designed to illuminate in a helpful way some of the issues that threaten to undermine the potential ecological and cultural sustainability of the Bras d'Or watershed and indeed, Cape Breton/Unama'kik as a whole.

"The Bras d'Or Lakes constitute an inland sea, and as such can serve as a microcosm of Canada." So wrote Dr. Donald Arseneau (1975: 6), then Director of the College of Cape Breton's Bras d'Or Institute, on December 15, 1975. The Bras d'Or Lakes lie at the centre of Cape Breton/Unama'kik, appearing on small-scale maps like the hole in the middle of a donut. The Lakes, chosen by the National Geographic's *Traveler* magazine as one of the world's fifty greatest places to visit, are renowned for their beauty and ecological diversity (Bruce 1999). Unfortunately, like many of Canada's most significant ecosystems, the Bras d'Or Lakes and their drainage basin or watershed face numerous threats -- primarily from resource-extraction activities and poorly managed development. Arseneau was reacting to growing ecological problems which he and others felt posed a significant threat to the region's future. From the human perspective, it was apparent that ecological deterioration was rapidly undermining both the sustainability of a local resource-based economy and the potential of tourism. From the perspective of the rest of the biotic community the situation was equally alarming. Since the Bras d'Or Lakes are -- according to the Local/Traditional Ecological Knowledge (Lo/TEK) of the Mi'kmaq nation and other local residents -- an important hatchery and nursery for the North Atlantic, ecological problems in the watershed are implicated in the collapse of major North Atlantic fish stocks. This has in turn contributed to the overall degradation of the ecology of the Atlantic Ocean, which in turn undoubtedly has some

impacts on the overall functioning of the global ecosystem. Twenty-five years later, the issues which first aroused Arseneau's concern have, by all accounts, worsened.

Actually an inland sea, the semi-saline Bras d'Or Lakes and their watershed provide habitat for diverse species, including eastern North America's largest concentration of breeding Bald Eagles, and are an important spawning area for many of the most commercially valuable fish species including cod, flounder, and Atlantic Salmon. For thousands of years, Cape Breton/Unama'kik has also been the political centre of *Mi'kma'ki*, the sprawling territory of the Mi'kmaq nation which historically covered parts of present-day Newfoundland, New Brunswick and the Gaspé peninsula, and all of Nova Scotia, Prince Edward Island, St. Pierre and Miquelon, and the Magdalen Islands (RCAP 1996: v.2, c.3, s.1). The Mi'kmaq have always utilised the abundant resources of the Bras d'Or for physical, cultural, and spiritual sustenance.

Politically, the ecological threats to the Bras d'Or can be traced directly to three roots. The first is the capture of Cape Breton/Unama'kik by European colonial states and the island's subsequent status as a resource protectorate of the global political-technological-economic system, which for simplicity's sake is dubbed here "Industria" (see Hipwell 1997a; Hipwell 2001; and Chapter Three in the present volume). The second is the political marginalisation of the Mi'kmaq nation, whose historic treaties with the British Crown have been flouted by the Canadian state. The third root is the more general failure of Canadian federalism to provide rural communities with *effective* political representation.

At the most immediate level, ecological problems in the Bras d'Or have arisen from resource-use management failures, including unsustainable forestry practices, over-

fishing (and poor fishing⁴), inadequate sewage treatment and other water quality issues, sedimentation from road-building and aggregate quarrying, and excessive and poorly-regulated shoreline development. These failures to sustainably manage human interactions with the rest of the natural world stem in part from fundamental errors in the atomistic world-view of scientists and administrators, and are exacerbated by overlapping administrative units at the municipal, provincial and federal levels which ensure that no one agency or administrative body is responsible for the overall well-being of the watershed and its inhabitants.⁵ Moreover, this situation has resulted in “turf wars” which hinder inter-agency co-ordination in socio-economic and ecological management. All of this is occurring in the context of a global political economy which has seen most of the benefits of resource extraction and development leaving the island, while residents are left to contend with the problems this resource-use has caused.

This study takes as its overarching question whether what has been called a “bioregional” approach might address the above problems and help to achieve socio-economic and ecological sustainability in the Bras d’Or watershed. In answering this question it will be necessary to draw upon diverse theoretical perspectives, and look at the larger context of events in the Bras d’Or. In addition to hypothesising the existence of “Industria” and assessing its relationship with the Bras d’Or, it will also be necessary to examine the history of local efforts to reform environmental management in the watershed and their degrees of success, as well as the aboriginal rights and management activities of the Unama’ki⁶ Mi’kmaq (who at the time of writing comprised more than one-third of the watershed’s population of approximately 18,000 people -- BOWWG 1995). In the latter regard, it will be argued that for a number of distinct reasons, the

Mi'kmaq represent the watershed's best -- and perhaps only -- chance for a sustainable future. The reasons for this assertion are outlined in more detail below.

Arseneau's assertion that the Bras d'Or Lakes are a "microcosm of Canada" is well-founded. Indeed, consideration of the issues facing the Bras d'Or and its populace holds important lessons for those concerned with Canada's political future. One might go a step further, and suggest that solutions to the problems of the Bras d'Or watershed may even have relevance for larger questions of global environmental geopolitics. In the former regard, what might be most aptly termed a "crisis in Canadian federalism" has repeatedly manifested itself in a number of ways in recent years:

1. Multi-faceted conflict between aboriginal peoples and various levels of Canadian government, including armed conflict in places such as Kahnasetake (Oka, Québec) T'sepeten (Gustafsen Lake, British Columbia), Ipperwash (Stoney Point, Ontario), and most recently in Esgenoôpetitj (Burnt Church, New Brunswick).
2. Seemingly intractable constitutional conflicts fuelling talk of separatism in Québec, the western provinces, northern Ontario, and Cape Breton/Unama'kik. In the case of Québec especially, such talk in turn raises alarm among sub- or trans-provincial cultural groups.
3. Community protest over resource-use management from afar. Resource-use management regimes have tended to promote large-scale and increasingly automated industrial resource extraction. This has caused extensive ecological damage and rendered human labour increasingly redundant, consequently undermining the economic basis of rural communities.

All three of these aspects of the crisis in federalism are at play in the ecological politics of the Bras d'Or and Cape Breton/Unama'kik as a whole. To start with, the Mi'kmaq have, over the past decade, increasingly asserted their aboriginal rights, especially with regard to resource-use management. The Mi'kmaq have protested their exclusion from decision-making processes in a variety of situations, including the spraying of highland forests with pesticides and herbicides in the late 1970s and early 1980s, a proposed granite "super-quarry" on Kluscap (Kelly's) Mountain in the early 1990s, and the dredging of the Middle Shoal in 1996. All of these situations are discussed in greater detail in later chapters.

With regard to constitutional conflicts and separatist movements, Cape Breton/Unama'kik has a long history of resistance to its inclusion in the province of Nova Scotia, ever since the province annexed the hitherto separate colony in 1820 (Hornsby 1992; Muise 1994; Royle 1993). Many Cape Bretoners⁷, including some of those interviewed for this study, argue that the island is culturally and economically distinct from the rest of Nova Scotia, and should become a separate province. Of course, this form of separatism is of a somewhat different order than that found in Québec, where separatists advocate a withdrawal from the Canadian federation. However, in both cases, the current constitutional structure of Canada is being questioned, and in the case of Québec, sub-provincial cultural groups -- like many people in Cape Breton/Unama'kik -- contest the right of the province to make decisions without their specific consent. In many important regards, local efforts to achieve a devolution of power from the provincial and federal governments to the Bras d'Or watershed level must be understood

as an extension of arguments for Cape Breton/Unama'kik independence from Nova Scotia and a more empowered relationship with the Canadian federal state.

The third facet of the federal crisis is manifested in community resentment of -- and resistance to -- resource-use management from afar. Here Cape Bretoners and Mi'kmaq alike have repeatedly echoed the protests of other Atlantic Canadian communities over the federal management of the commercial fisheries, which many view as ecologically unsustainable and inherently inequitable. A particular concern is the allocation of fish quotas to large corporations whose equipment causes ecological damage, at the expense of harvest shares for small-scale fishers using more ecologically benign technologies. Similarly, Cape Breton/Unama'kik communities watch helplessly as their "public" forest resources are almost entirely controlled by Stora Enso Ltd., whose "iron-clad"⁸ Crown Forest license and management agreement with the provincial government grants the company rights to virtually all Crown-owned forest on the island outside protected areas. Allocation of mineral resources such as gypsum follows a similar pattern. It is almost trite to add to this discussion mention of the coal industry, which is by far the best-known example of Cape Breton/Unama'kik resources being exploited by off-island companies while local residents remain impoverished. In this latter case, Canada's most hazardous waste site, the Sydney Tar Ponds, has been left behind to poison local residents who were never consulted about how industrial wastes should be managed.⁹

One thing that will be apparent to readers is that in the above discussion the Bras d'Or watershed and Cape Breton/Unama'kik have been elided. This is not accidental, and in many ways reflects the overall conclusions reached in this study. The Bras d'Or

watershed lies at the very centre of Cape Breton/Unama'kik, constitutes 35% of the island's total area, and encompasses large portions of all four Cape Breton/Unama'kik municipalities. A geographical perspective affirms the assertions of numerous people interviewed that the Bras d'Or watershed cannot be disaggregated from the island of which it is in very many ways the heart. It will also be apparent that the Mi'kmaq are considered here to be central to the discussion of the future of the Bras d'Or and Cape Breton/Unama'kik as a whole.

Geography and the Search for Sustainability

...how can we manage [the Earth] if we do not know what it is? First we must ask, what is the Earth? [...] Even scientists differ about what the Earth is. There are a few, *mostly geographers*, who see the Earth as a whole (Lovelock 1991a: 177-8, emphasis added).

The geographic project is inherently ecological, and unavoidably political. As policy-makers at local, state, and global levels grapple with the problem of ecological sustainability, the special expertise of geographers is urgently needed. As Stoddart forcefully puts it,

Quite frankly I have little patience with so-called geographers who ignore these challenges [posed by ecological degradation]. [...] Nor do I have a great deal more time for what I can only call the chauvinist self-indulgence of our contemporary obsession with the minutiae of our own affluent and urbanized society—housing finance, voting patterns ... We cannot afford the luxury of putting so much energy into peripheral things (Stoddart 1987: 334).

In Stoddart's view, two things must underlie all work in geography in the coming decades. First is the base assumption that we face an anthropogenic ecological crisis of global proportions which threatens the very survival of humankind and many of our non-human relatives. Such a view is chillingly substantiated in Turner et al. (1990) and

countless other geographic treatises.¹⁰ Stoddart's second point is that heading off this crisis will require fundamental changes not just in what humans *do*, but also in the way the majority of humans have begun to *think*. The geographic discipline has both the capability and the responsibility to bring its collective familiarity with "biogeoclimatologic" mechanisms, human land-use patterns, and environmental thought to bear on the gravest crisis ever to have faced our species -- to find an alternative to prevalent modes of existence.

In this light, geography is a discipline whose time has come. A tight focus by students and educators of the bio-physical context and spatial organisation of human activities is needed now more than ever before as humans in communities and as a species grapple with the problematic of "developing sustainability" (M'Gonigle 1989). In an era of increasing ecological uncertainty (Ives and Messerli 1989; Mitchell 1995a; Thompson 1988) the geographic discipline can play a central rôle in this task.¹¹

Immanuel Kant believed that geography provided a vehicle for unifying human understanding of the world, a "synoptic" discipline which could synthesise the findings of other sciences (Livingstone 1992: 114). Another way of saying this is that if there is one thing geographers do, it is explore across disciplinary boundaries and bring back perspectives needed to *contextualise* events in specific places. Early geographers did much more than draw maps. They engaged in research spanning numerous contemporary applied and social science disciplines. As theoretical work in science began to achieve primacy over empirical research, geography was progressively marginalised. Now, in the latter half of the twentieth century, Lovelock (1979: 137) points out that there is only limited contact between "model-builders" [scientists] and explorers [geographers]"

adding that “if we are to live properly within Gaia, this imbalance needs early correction”.

Sally Macgill (1986: 372) notes that there is scope for much more work by geographers on ecological issues, and “[g]eography is well-placed to rise more completely to the contemporary challenges of environmental questions.” The development of research methods appropriate to these challenges is inseparable from a consideration of “higher level” philosophical questions. Harrison and Livingstone’s (1980) “Presuppositional Hierarchy” shows how our cosmological beliefs (concerning the origin of reality) strongly influence our ontological ideas (presuppositions concerning the nature of reality) (see Figure 1.1). Ontology in turn determines epistemology, that is to say, our beliefs about the nature of reality determine our beliefs about constraints on knowledge and the specification of legitimate questions. Meanwhile, disciplinary divisions reflect decisions about which aspects of reality should be investigated, while in turn influencing epistemology. The methodology adopted for research is itself determined by epistemological decisions.

Linked to all the levels of the Presuppositional Hierarchy is the field of ethics. Ultimately, researchers come face to face with Plato’s famous question: what is the Good?, which will fundamentally influence why, on what, and how research is conducted. So I will make clear from the outset my own answer: *the greatest Good is Life itself*, which is the essence of Leopold’s (1947) “Land Ethic”. This is an ecocentric standpoint, and one which accords better with contemporary scientific theories about the nature of Nature than the anthropocentrism that has dominated the worldview of Europeans for several centuries, and which now characterises the global hegemonic

Source: Harrison and Livingstone (1980: 27, Fig. 1)

Figure 1.1 - Harrison and Livingstone's "Presuppositional Hierarchy"

culture ("Industria"). In the words of James Lovelock (1988: 14), the scientist who first proposed the Gaia Hypothesis, "In Gaia we are just another species, neither the owners nor the stewards of this planet".

A "Gaiagraphic" Approach

...conservation requires us to challenge the hegemonic structures of the modern world (Rogers 1995: 13).

What is clear from a geographic standpoint is that averting the global ecological catastrophe which many believe is already underway requires a radical philosophical shift, both in the way reality is viewed, and in what are considered legitimate routes to gaining knowledge about that reality. In general, the approach taken here might be best described as "Gaiagraphic". While this neologism may strike some readers as unusual, it accomplishes a couple of things. First of all, it provides a convenient shorthand for the three intersecting bodies of theory which it amalgamates, and which are described below. Second, the word emphasises that the focus of interest is the *living* Earth, and not the inanimate and wholly stochastic processes and static forms implied by the prefix "geo" in the word "geography" (etymologically linked to "geology", "geophysics", "geometry" etc.). Gaiagraphy's implicit argument is that it is just as defensible to start with the presupposition that life on Earth is unitary and self-organising (and therefore, as a collective project of all life-forms, *purposeful and meaningful*), as it is to presuppose that life is individualistic, governed by stochastic processes and abstract "laws of physics" and that *meaning* must be sought in some transcendental realm (God, Heaven, etc.). Indeed, to start with the second presupposition is to condemn one's inquiry to a path

wholly incompatible with the worldviews of aboriginal peoples; it is to adopt the internal logic of colonisation.

Gaiagraphy employs the philosophy of Gilles Deleuze to wed three bodies of theory: Gaia theory (the notion that all life on Earth is collectively self-organised into a single global “super-organism”, called “Gaia” by atmospheric scientist James Lovelock, or “Mother Earth” by many aboriginal people and environmental activists); Fourth World theory (the aboriginal critique of the capture of their territories by the state system); and bioregionalism (a theory regarding the importance of geographical regions, and the need to define them according to a combination of eco-geographical and cultural factors with their rôles in the global ecosystem kept in mind) (see Figure 1.2). The use of Deleuze is important, because it provides a bridge between European and aboriginal thought, showing that it is possible using the philosophical method to construct a cogent and coherent argument which is compatible with aboriginal worldviews, while simultaneously revealing the basis of commonalties between aboriginal worldviews and those of contemporary ecological theorists.

Deleuze and Geography

The philosophical work of Gilles Deleuze, alone, and in his later collaborations with Félix Guattari, provides several tools for understanding the ecological and political situation in the Bras d’Or. Deleuze shows that a belief in what he calls “ontological identity” constitutes the most serious flaw in the worldview that has spread around the globe from its origins in Europe. An ontology of identity is intimately linked to an epistemological prioritisation of the intellect, leading to reductionism and representation.

This Venn diagram shows Gaiagraphy's main theoretical tenets and their primary points of convergence. Gaia theory, Fourth World theory, and bioregional theory are all compatible with and best described by an ontology of difference, all imply an ecocentric ethics, and all necessitate a critique of "Industria".

Figure 1.2 - The Three Beams of the "Gaiagraphic" Fog-Light

The critique of ontological identity helps expose the errors underlying conventional resource-use management strategies and the structure of the Canadian political system. Moreover, Deleuze shows how these mistakes are compounded by a reactive and anthropocentric ethical stance which contributes to the environmental crisis and the disempowerment of communities. Deleuze contrasts these errors with his “philosophy of difference”, and outlines how a differential worldview opens the space for intuitive epistemologies. This argument provides support for wider calls for the inclusion of local knowledge in politics and resource-use management.

Deleuze’s work on active/reactive ethics provides a sound defence for a deep ecological or ecocentric stance, highlights why “democracy”¹² as it is practised in Canada leads to conflict and concentration of power, and sheds light on why efforts to implement local management of the Bras d’Or watershed have consistently failed. His discussion of the opposition between the sedentary state apparatus (described as “Industria” in Chapter Three) and the “war-machine” demonstrates the importance of the Fourth World challenge to Industria in general, and the involvement of aboriginal peoples in resource-use management in particular, and helps to illustrate why the Mi’kmaq can and must play a central role in solving the problems of the Bras d’Or.

Gaiagraphic Ethics

The case has been made by geographers and others that the crisis which exists in human-environment relations requires some fundamental changes in the way people view the world, and a recalibration of ethics to reflect contemporary understandings of the world and the place of humans in the biotic community (Gould 1991; Kates 1987; Leopold 1947; Leopold 1991; Nesmith and Radcliffe 1993; Peet and Watts 1996; Price

1955; Proctor 1998a).¹³ As *educators* (Gould 1991; Kropotkin 1979), geographers cannot be content to merely report for example that the majority of residents in a given community would willingly sacrifice biodiversity and other environmental values in order to secure economic development; it is the geographer's responsibility to work with such communities to develop alternative economic practices which will displace the archaic, destructive dichotomy of "jobs versus the environment", as well as to help people understand what precisely is being sacrificed when environmental degradation is accepted as a necessary cost of "development". A wellspring of the geographer is "the ability to feel and stand in awe at the very mystery of being" (Gould 1991: 331), and it is from this wellspring that a geography relevant to the environmental challenges of the twenty-first century must draw. The history of normative inquiry in geography is a long one -- as Gould (1991: 329) puts it, "[g]eography is a subject saturated with moral and ethical dimensions." It has been argued repeatedly that geographers have as important a rôle to play in determining what the human relationship with the environment *ought* to be as they do in describing what that relationship *is* (Bordessa 1993; Buttimer 1990; Chapman 1966; Cosgrove 1992; Cutter 1995; Kobayashi and Mackenzie 1989; Kropotkin 1979; Peet 1977; Sayer 1993; Sluyter 1997; Stoddart 1987; Wisner 1978; Wolch and Emel 1995).

Morris Berman (1981) notes that until the Scientific Revolution, European cultures had an "enchanted" view of nature and the rôle of humans within it. While Berman suggests that the disenchantment of the world began as early as 2000 BCE, Charles Taylor (1991) suggests that it has only been since the dawn of the modern age that nature has been viewed as separate from humans, and governed by mechanism rather

than a divine mind. Whereas prior to the Enlightenment, Europeans (Taylor makes the mistake of generalising his discussion to “humans”) had seen themselves as part of “a great chain of being”, by the 19th century science had displaced religion as the source of social validation in European culture. In effect, scientists became the new priesthood, and Nature replaced God (Sauer 1963a, orig. 1925).¹⁴ Most significant in this displacement of teleological thinking was Darwin’s theory of evolution (Lehan 1992: 307). In the process nature was de-sanctified, and this “disenchantment of the world” allowed the erosion of respect for the non-human world. The hegemonic culture has persisted in viewing the ecosphere as separate from humanity, or something that humans can somehow manage or control. Colonialism and neo-colonialism have had the effect of globalising this way of thinking, though an “enchanted” worldview persists in many areas -- especially among aboriginal cultures of the Fourth World.

The answers to the question posed by Lovelock in the epigraph -- “What is the Earth?”-- are varied and perhaps limitless. According to the “scientific” view, the Earth is merely a ball of rock and water upon whose surface life has stochastically evolved. Each life form acts in its own interests, reacts to environmental change, and evolves through selection of randomly generated genetic mutations best adapted to the environmental status quo. The fact that the planet has remained capable of supporting these competitive life forms is a matter of pure, unadulterated good luck. It would probably not be an exaggeration to say that this conventional scientific view has dominated physical geography for most of the twentieth century. Note that there can be no *meaning* found in this geographic formulation; such an issue is left to the

philosophers, theologians and sociologists among whose writings geographers must search to situate their own work.

At the dawn of the twenty-first century we are witnessing what Berman would term a "re-enchantment of the world" in the popular arena -- where awareness of human participation in a "great chain of being" is being re-kindled. This is manifested in a surge of interest in holistic medicines, Eastern philosophies, and ecological issues. As well as being driven by an awareness of the emptiness of modern mechanistic formulations, it has been suggested that Gaia theory has played an important rôle in this cultural renaissance. As Joseph (1990: 10) notes, "[m]uch as at the dawn of history, the idea of a living earth today exercises a profound intellectual enchantment." Friedrich Nietzsche would have called this idea "Dionysian":

Under the charm of the Dionysian not only is the union between man and man reaffirmed, but nature which has become alienated, hostile, or subjugated, celebrates once more her reconciliation with her [prodigal]¹⁵ son, man (Nietzsche 1967a, orig. 1886: 37, trans. modified).

A re-enchantment of the Earth is long overdue in the geographic discipline, but achieving it will be no simple matter. It will require the careful consideration of some difficult ontological and epistemological questions. It will influence what many geographers choose to research, and indeed change the way they *do* research. It will necessitate pausing at every investigative turn and ask: "What does this mean in the context of the living Earth of which we are a part?"

There is a strong tradition of *activist* and *ethical* geographies, including those advocating Marxist (e.g. Harvey 1974), feminist (e.g. Mackenzie 1989), or Christian (e.g. Wallace 1998) approaches to social justice. Yet as Wolch and Emel (1995: 1) point out in their introduction to a special issue of *Environment and Planning D: Society and*

Space on non-human subjectivities, social theory “remains resolutely anthropocentric.”

Gaiagraphy is an attempt to break free of that ethical limitation, and establish a “deep ecological” (Manes 1990; Naess 1993a; Naess 1993b) stream in the geographic discipline.

Gaia Theory: The Case for “Mother Earth”

...it is not theory but life that matters” (Foucault 1980: 81).

[The Gaia Hypothesis] postulates that the physical and chemical condition of the Earth, of the atmosphere, and of the oceans has been and is actively made fit and comfortable by the presence of life itself. This is in contrast to the conventional wisdom which held that life adapted to the planetary conditions as it and they evolved their separate ways (Lovelock 1979: 152).

Anne Buttner (1990: 27, Fig. 7) has described Gaia theory as a “global challenge for the practice of geography”. Lovelock’s Gaia hypothesis is predicated upon a few simple observations about the Earth’s atmosphere. He noted that oxygen, carbon dioxide and methane levels have been maintained at roughly the same proportions for 2.5 billion years despite the fact that these gases are highly reactive when exposed to solar radiation, and that as our sun has grown hotter with age, solar radiation has increased by 30 percent in the same time period (Lovelock 1979; Lovelock 1988; Lovelock 1991a; Lovelock 1991b). This led Lovelock and other researchers to investigate how these levels are maintained. It became quickly apparent that the various gases in the atmosphere that allow the Earth to support complex life forms are not the product of random geo-physical processes to which life has adapted, but rather are produced in massive quantities by living organisms themselves. The evolution of living organisms and their environment is

intimately inter-linked -- organisms do not merely evolve in response to environmental conditions, they help to *create* those conditions.

When first proposed, the Gaia hypothesis took a “strong” form, stating that biota collectively control the Earth’s environment, and implying that somehow they collectively know what they are doing, or put another way, that Gaia is conscious (Lovelock 1979). Vociferous debate has led to grudging acceptance of many of Lovelock’s views by mainstream scientists after a few revisions (Joseph 1990). His revised account of Gaia (1988) has been called “moderate” Gaia theory; it states that biota modify the ecosphere, making it substantially less extreme, but that geo-physical events also play a rôle. Lovelock seems to have backed away from any association with teleological approaches (Lovelock 1991a), though as Dalby (1998) points out, his work is still read this way by many. Lovelock (1988: xvii) has written that even if Gaia theory is not absolutely true it is a useful and productive metaphor, forcing “a planetary perspective”.

One major criticism of strong Gaia is the absence of an evident mechanism for interspecies or inter-ecosystem communication that would allow this co-operation to take place. The question revolves around the issue of what constitutes life. If Gaia is alive, the argument goes, there must be something akin to a nervous system or other “inter-cellular” communication. Yet as Lovelock (1988) is fond of pointing out, scientists do not actually know what life *is*. He suggests one possible definition: life is any “self-organizing system characterized by an actively sustained low entropy” (27), adding that recognizing something is alive requires observing it from beyond its boundaries.¹⁶ Williams (1996) has suggested that molecular controls on the activities of universal

enzymes such as chlorophyll act to fine tune “biogeochemical” cycles, a viewpoint supported by other scientists (Westbroek 1998). Geographer J. Douglas Porteous’ (1990) innovative work on “soundscapes” raises the additional possibility that the sounds of nature represent part of an ecosystemic language, and that one of the damaging features of noise pollution -- such as that experienced by the Innu of Labrador due to low-level NATO flights -- is that people and other beings are cut off from this source of information.

Those species that can not play a co-operative role in an ecosystem ultimately live in a more hostile environment than those species in ecosystems which act co-operatively. As microbiologist Lynn Margulis puts it, “co-operation becomes habit-forming” (quoted in Joseph 1990: 38). This idea of co-operation is not new. At the turn of the twentieth century, Petr Kropotkin wrote in *Memoirs of a Revolutionist*:

...I found in a lecture by...Professor Kessler, a true expression of the law of struggle for life. ‘Mutual aid...is as much a law of nature as mutual struggle; but for the progressive evolution of the species the former is far more important than the latter.’ (Kropotkin 1967: 299).

Lovelock has compared Gaia to Russian Matryoshka nesting dolls; Gaia is an organism containing organisms (ecosystems) containing organisms (plants and animals) containing organisms (cells and microbes) and on down to the subatomic level. Since, like all other terrestrial beings, humans are a part of Gaia, then like the cells of a body, human behaviour may be evaluated from the perspective of the larger organism as “healthy” or “unhealthy”. The following definition of Gaian health is proposed: Gaia is healthy to the degree that biodiversity, complexity, and resilience in the face of stochastic events -- at both the local and global levels -- is constant or increases. This is an improvement on Leopold’s (1947) sentiment that: “A thing is right when it tends to

preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise". There are a couple of difficulties with Leopold's formulation. Though "integrity" may be appropriate if it is read as "resilience", the idea of "stability" has been challenged by recent ecological research (Dalby 1998), and "beauty" is so subjective as to be conceptually useless in evaluating human actions, since there is the possibility that someone might argue that a landscape devoid of all life but humans, crows and cockroaches is more "beautiful" than an old-growth forest.

The implications of Gaia theory for geography are threefold:

1. Humans are not separate from Nature, but rather are constituent parts of a planetary biosystem - or better, intensities in a continuum of life. This in turn means that humans have a rôle to play in the over-all functioning of the larger organism, and Gaiagraphers must discern what this rôle is both in particular places and at the global level.
2. Since humans are part of the global biosystem, they are also part of localised ecosystems. This point leads to the consideration that human social, economic, and political activities need to be re-organised to reflect ecosystemic realities at a variety of inter-nested scales. This notion is central to work on bioregionalism.
3. Given that Gaia is characterised by co-operation, interdependence, inter-penetration and flow among species and ecosystems, and since each level of organisation from the cellular to the ecosystemic is part of a larger level of organisation, the conventional atomism, reductionism, and anthropocentrism of hegemonic thought is no longer adequate for dealing with human life in Gaia, and would be better augmented by insights from Deleuze's philosophy of difference.

The Fourth World: Capture and Resistance

In a world in which continued colonial occupation and exploitation of the Fourth World is a crucial element in the interlocking dimensions of various environmental, political and cultural crises, responsible academic discourse must have a coherent and transparent political edge. The precise configuration of the politics, of course, will always be subject to debate, consultation, critique and review, but continued obfuscation of the politics of academic discourse behind a shield of naive scientism and objectivity can be excused no longer (Howitt, et. al. 1996: 13).

Geographers were complicit in the colonial project which enabled the spread of the European culture around the globe (Brealey 1995; Livingstone 1992).¹⁷ The cartographic term *terra incognita* bears a close discursive and functional resemblance to the legal term *terra nullius*, and both were used equally to deterritorialise the peoples of the Fourth World (Clay 1994; Hall 1987; Nietschmann 1994). As discussed elsewhere (Hipwell 1997a), the term Fourth World refers to the nations whose territories were taken over by states, and often divided *between* states. Examples include the Basques of Spain/France, the Saami of Norway/Sweden, or the Mohawks of Canada/United States.

From a Gaian perspective, the capture of Fourth World territories during the colonial era was particularly damaging, for as Callicott (1989) Goldsmith (1998), Henderson (2000a), Suzuki and Knudtson (1992), and numerous others have shown, aboriginal cultures had developed sophisticated understandings of the Earth and humanity's rôle within it.¹⁸ The cultural dislocations which followed colonisation, often a deliberate product of the "state-building" enterprise (Scott 1998; Nietschmann 1994), disrupted generations-old environmental micro-management practices (these practices are described in Chapters Four and Seven) and in many cases resulted in the loss of sophisticated knowledge about the ecological characteristics of the land in colonised

territories and the most ecologically appropriate methods of sustaining human populations there.

Fundamental to the ability of aboriginal cultures to act as functional parts of the Gaian system is an ecocentric *philosophy*. There exists a broad consensus among ethnographers that the notion of a

...Great Spirit and of the Earth Mother and the family-like relatedness of all creatures seems...to have been very nearly a universal American Indian idea, and likewise the concept of a spiritual dimension or aspect to all natural things (Callicott 1989: 186-7).

Similarly, Morell (1989: 232) notes that in the Gitksan and Wet'suwet'en worldview, non-humans are seen to possess consciousness, intelligence, power and spirit. Moreover, every species is seen to have an important rôle to play in a complex partnership which functions for the benefit of all only if "all the partners perform their roles properly."

At the political level, as Paul Patton (2000a: 114) argues, "the capture of colonial territory by European states is a paradigm of lawful state violence." He suggests that the subsequent development of the jurisprudence of aboriginal title destabilises the territorial presumptions of the state system (see also Hipwell 1997a); that in effect aboriginal land claims and sovereignty movements can be seen as a "metamorphosis machines" forcing a "counter-actualisation" of the internal colonisation of Fourth World or aboriginal nations, by the Canadian, Australian, or New Zealand states.

Peters and Wolfe-Keddie (1995) have urged more work by geographers on aboriginal issues. A geographical focus on and respect for aboriginal cultures has an ethical as well as a practical foundation. Wallace and Knight observe that

[a]lthough afforded even less protection than biodiversity in contemporary regimes of global and national governance, the diversity of indigenous cultures is increasingly being acknowledged as an intrinsic good and its preservation a matter of justice (Wallace and Knight 1996: 76).

The present work is an attempt to coherently describe the global, industrial, technological society which is seen by many theorists as a *single* entity in conflict with the nations of the Fourth World (e.g. Nietschmann 1994; Weyler 1992). Rex Weyler argues that Fourth World nations have viewed

...the tired left-right political discussions as all one Neo-European debate over who reaped the spoils of industrialization while the rights of indigenous people everywhere were ignored. The Neo-Europeans continued to colonize native people around the world and destroy the environment in the name of progress (Weyler 1992: 214, quoted in Hipwell 1997b),

a perspective which explains the failure of Marxists to win much support among aboriginal peoples (Bedford 1994). For this reason, the "Industria Hypothesis" advances the perspective that regardless of its hegemonic economic ideology, it is the "Neo-European" product of 5000 years of sedentary civilisation which is the enemy of the Fourth World.

Industria: Interrogating the State

Industria is the global system of power/knowledge that Ellul (1964) describes in *The Technological Society*, and which Deleuze and Guattari refer to as "the State" or the "*Urstaat*". As the web of Industria's nodes has spread and consolidated, this global network system has come to consume almost half of the biosphere's primary production (Dalby 1998; Dalby forthcoming)¹⁹. This level of consumption -- combined with Industria's toxic by-products, centralised political and economic structures, and sheer spatial presence -- has resulted in enormous and worsening ecological problems. These

include the collapse of fisheries around the world, ozone depletion, climatological disruptions due to deforestation and atmospheric pollution, and a precipitous decline in biodiversity as a result of mass, anthropogenic extinctions and localised extirpations (Turner et. al. 1990). It is becoming increasingly clear that if the ecosphere does indeed function as an integral system²⁰, then Industria is very close to causing disruptions severe enough to bring about ecological collapse (Dalby forthcoming). Chapter Three outlines the "Industria Hypothesis", proposing that Gaia is effectively under attack by a parasitic super-organism, a system of power/knowledge comprised of the state system, large corporations and institutions, and a predominantly urban populace which has internalised a reactive ("slave") morality. The discussion shows the ways in which ontological identity infuses Industrian praxis and has resulted in an ecological crisis which threatens the survival of humanity and most other highly-evolved life-forms on the planet.

The problems facing the Bras d'Or and Cape Breton/Unama'kik as a whole can be best explicated by reference to Industria's parasitic relationship with its resource peripheries. More importantly, an awareness of this parasitic relationship makes it clear that for rural communities, cultural and ecological survival depend on successful resistance to Industrian exploitation. One of the most promising strategies for such resistance may be found in the emerging theory of bioregionalism.

Bioregionalism: The New Regional Geography

Geography is concerned with *place* relations; ecology may well be its organizing concept (Barrows 1923: 6, emph. orig.).

Since what we do in any region is greatly influenced by the character of the local environment and what it offers, it should be apparent that this geographic approach to man's problems may be able to offer a few different concepts. It is a planning principle that man must work with nature (Robinson 1956: 2).

The human-environment tradition in geography emphasises the need to take into account the biophysical context of human activities in order to best manage those activities. More than three decades ago, geographers Morgan and Moss (1965; see also Moss and Morgan 1967) argued that humans are both components of and factors in ecosystem "communities" comprised of plants, soils, and animals. Much earlier, Barrows (1923) had pointed out that since humans are part of ecosystems, then socio-economic behaviour is one articulation of their relationship with their biotic community.

As Thompson and Warburton (1988: 33) argue in their discussion of ecological degradation in the Himalayas, "What is needed is a rejection of homogenising generalizations and their replacement by a sensitivity for local contexts." Since human communities can be said to "invent" places (Anderson and Gale 1992), the question becomes: what form should those invented places take in order to reflect the realities of an ecologically interdependent planet? It is the relationship between human societies and the ecosystems which they inhabit which has recently led some theorists to advocate a bioregional approach. Referring back to Deleuze's "differential" philosophy, a robust bioregional politics would incorporate methods of resource-use management which characterised the practice of aboriginal communities prior to colonisation. Bioregionalism and its potential application to the Bras d'Or watershed are explored in Chapter Four.

Plan of the Work

The following three chapters will develop a theoretical framework which can be applied to the study of the Bras d'Or watershed. Chapter Two will engage with the philosophical work of Gilles Deleuze. Chapter Three will apply Deleuzean ideas in the development of the "Industria Hypothesis". Chapter Four will evaluate the potential of the bioregional approach for coming to geo-political terms with both Industria and developing a sustainable civilisation which recognises and affirms ontological difference.

From there, Chapter Five presents an historical overview of the Industrian capture of Cape Breton/Unama'kik. Central to this discussion is the impact of colonisation and occupation (settlement) on Cape Breton/Unama'kik's aboriginal inhabitants -- the Mi'kmaq nation. An ensuing discussion of twentieth century Cape Breton/Unama'kik politics and the specific ecological problems affecting the Bras d'Or Lakes watershed will show that the failure to develop sustainability in the region has resulted directly from its encounter with Industria.

Ecological and social decline in the Bras d'Or watershed has motivated local people to develop numerous initiatives for local management or governance over the past twenty-five years. Chapter Six details historical and current initiatives suggesting why they have thus far failed to effect any real change.

Today the Mi'kmaq play a central role in confronting ecological problems affecting the Bras d'Or Lakes watershed and the wider island of Cape Breton/Unama'kik. Understanding why this is and *should be* so requires a detailed understanding of the "active" nature of Mi'kmaq politics, the jurisprudence of aboriginal title in Canada and the specific rights reserved by the Mi'kmaq in their treaties with colonial powers.

Chapter Seven contributes to such an understanding, and deepens it by describing Mi'kmaq ecological management techniques, environmental ethics, major political interventions, and ecological management institutions.

Chapter Eight then summarises the findings of the case study, and discusses future prospects for the Bras d'Or Lakes watershed and Cape Breton/Unama'kik as a whole, making a few tentative recommendations regarding courses of action available to Cape Bretoners and Mi'kmaq should they wish to develop a bioregional politics on the island.

Finally, the concluding Chapter Nine recaps the major arguments presented, and shows the value of the "Gaiagraphic" approach for geography.

Notes on Methodology

Gaiagraphy takes as an ontology a fluid, infinitely interconnected "differential" reality. To apprehend this enduring, continuously evolving reality, a Gaiagrapher must engage in field work. Just as it is argued that the philosophy of difference embodied in "Gaiagraphic" research reveals the importance of Lo/TEK and "wisdom of the body" in resource-use management decision-making, so too must this experiential approach strongly inform the way geographic research is conducted. A Mi'kmaq hunter, fisher, and cultural traditionalist interviewed on the shore of the Bras d'Or Lakes in 1997 counsels that universities:

Send everybody here. This is the focus place... If they want to learn something, they learn it here. Not in the classroom, you can't read about this. You can't read about the wave crashing on the shore. You have to go and touch and hear and smell and taste that... without the contact you can't learn nothing. You gotta feel the sand, you gotta smell the grass, feel the wind, feel the sun, hear the waves. See the water, taste the water. This is how you learn, how we learned for thousands of years. By *doing* it... (Lafford 1997 - Int.).

This statement is reminiscent of what Stoddart says in his nostalgic discussion of early twentieth century geography, which he suggests reached its apogee with the publication of Thomas' (1956) *Man's Role in Changing the Face of the Earth*:

It was a book about the physical earth and man's relationship with it... Reading it you could feel the dust in your eyes, the sand between your toes, the salt spray on your face. It is a palpable, tangible real world, peopled by the real men and women who have transformed it (Stoddart 1987: 330-1).

For Gaiagraphers, it is never enough to rely on statistical or discursive representations of distant places. Instead, in order to begin to understand a place, it is necessary to spend time there, hearing, feeling, smelling, touching and tasting the environment, and interacting with its inhabitants. To this end, field research for this study involved four consecutive summers spent in Cape Breton/Unama'kik, during which this Gaiagrapher lived with Mi'kmaq and Cape Bretoner families in Eskasoni and Sydney. Most interviews were conducted in 1997 and 2000, with the intervening summers devoted to archival research and site visits. To the greatest extent possible research included participation in cultural activities including sweat lodge ceremonies, festivals, hunting and fishing trips, and resulted in deep friendships with numerous Cape Bretoners and Mi'kmaq people. Field research data were recorded in detailed field notes and the transcripts of interviews with a select group of people identified in the literature or by members of their community as either playing a key rôle in the ecological politics of the

region or possessing profound knowledge of local ecology and history.²¹ These approximately three dozen interviews were but the tip of the iceberg as far as qualitative data is concerned; they were augmented by hundreds of brief or extended unrecorded conversations and encounters with people, and countless experiences of *place*.

These impressions and accounts are contextualised by extensive archival research undertaken at the Eskasoni Fish and Wildlife Commission (EFWC)²², the Union of Nova Scotia Indians (UNSI), the University College of Cape Breton (UCCB)'s Beaton Institute, the Carleton University MacOdrum Library, and via the internet. No claim is made here for the exhaustiveness of this documentary research: others have compiled extensive bibliographies of the hundreds of reports written about the Bras d'Or Lakes alone (see for example Paqtakek-Prism Project 2000). However, every effort has been made to triangulate qualitative data from interviews and personal experiences with more formal academic or institutional accounts to provide as detailed and complete a picture of the island and its eco-political processes as possible. Greater detail on the methodologies employed are provided in Appendix C.

The chapters which follow will show that a Gaiagraphic approach makes a *difference* in how we understand the future of the Bras d'Or watershed, the problem of Canada, and indeed in the possibility of human existence on an interdependent planet. As we teeter on the brink of biospheric collapse, human societies need to put forth an unprecedented effort to develop new ways of living sustainably on the Earth. In the academic world, who could better contribute to this vital and urgent project than geographers? Forward!

Notes to Chapter One

¹ The original Mi'kmaq name for themselves is *Lnu'k*, which means "The People". They greeted early European explorers as "*ni'kmaq*" ("*my kin friends*") and this word was eventually altered to its present form *Mi'kmaq* and used to refer to the *Lnu'k*. In contemporary discourse, the *Lnu'k* have adopted "*Mi'kmaq*" (Whitehead uses the archaic spelling "Micmac" in her work) as the name for their people (Whitehead 1988: 1). Henderson's (1997: 31) explanation of the etymology differs in that he argues that *Ni'kmaq* was in use as early as 5000 B.C., and that "*Mi'kmaq*" is merely its un-possessed form.

² Throughout this work, rather than *either* "Unama'kik" or "Cape Breton" to refer to the island, readers will find the island consistently referred to as "Cape Breton/Unama'kik".

³ Nomenclature is confusing, since among residents, in academic literature and in tourist publications the terms "Bras d'Or Lakes" and "Bras d'Or Lake" are used interchangeably. Both terms refer to a group of large, interconnected bodies of semi-saline water which would be most properly called a "sea". In the present work "the Bras d'Or Lakes" is used to refer to the water body, and the more general terms "the Bras d'Or watershed" or the simpler form "the Bras d'Or" are used to denote the water and its drainage basin or watershed.

⁴ By this is meant fishing practices which employ ecologically damaging technologies such as trawls which disrupt habitat, and result in significant by-catches of non-target species.

⁵ At least 25 separate agencies and institutions govern activities relevant to ecosystem health in the Bras d'Or watershed. For example, in Nova Scotia the Department of Natural Resources governs logging and mining, the Department of Environment and Labour is responsible for regulating sewage treatment and other sources of pollution, the Department of Fisheries and Aquaculture has obvious, but narrow responsibilities, and the Department of Transport and Public Works is supposed to ensure that roads and other infrastructure are built to both maximise quality of life (including economic well-being) while minimising ecological impacts. The list becomes even more complex when one factors in the often conflicting mandates of the federal Department of Fisheries and Oceans, Environment Canada, and the Department of Indian and Northern Affairs. Furthermore, zoning for residential development is mostly under the control of the four Cape Breton/Unama'kik municipalities, while five *Unama'ki* Mi'kmaq bands each have a certain degree of regulatory autonomy on Reserve lands, and the Union of Nova Scotia Indians through various agencies enacts pan-Mi'kmaq policies and programs.

⁶ This is the locative form of "Unama'kik".

⁷ Throughout this work "Cape Bretoner" will be used when it is necessary to distinguish Mi'kmaq people from other residents of the island. The term "non-Native" is not used, due to its ontological negation, nor is the word "white" despite its prevalence in Mi'kmaq discourse, since the Cape Bretoner population is racially and ethnically diverse, as is clear from the historical/fictional account provided by Ann-Marie MacDonald (1997) in *Fall on Your Knees*, or the work of academics such as Elizabeth Beaton (1995).

⁸ The agreement is covered by its own provincial Act of Parliament, the *Nova Scotia Pulp Act*. See Sandberg (1991), Sandberg and Clancy (1996), and May (1998) for detailed discussion of the ways in which Nova Scotia forest policies favour large corporations, and Chapter Five for a discussion of the impacts of (de)forestry in Cape Breton/Unama'kik.

⁹ After nearly a century of dumping of effluent by steel corporations and benzene manufacturer Domtar into Muggah Creek, the Tar Ponds, which are next to a residential area of Sydney, now hold an estimated 700,000 tonnes of toxin-laden waste, including 40,000 tonnes of PCBs, polychromatic hydrocarbons, raw sewage and heavy metals. This is more than 20 times the amount of toxic sludge found in New York state's infamous Love Canal.

¹⁰ The pace of change becomes apparent if one compares this work with Marsh (1965, orig. 1864) and Thomas (1956).

¹¹ A post-structuralist response to this paragraph might make reference to Michel Foucault's important work (e.g. 1972) on an "archaeology" of the social sciences, which shows how academic disciplines have functioned to advance State power. This is hardly a new observation. As early as the 1870s, Nietzsche (1983, orig. 1874) wrote: "[T]he state can have no interest in the university other than seeing it raise useful and devoted citizens of the state." Others might point out that the "the human project" is just an

Enlightenment myth, or follow Deleuze and suggest that academic disciplinarity merely entrenches the arboreal structures of State-thought. These are complex questions which deserve careful consideration, but which can not, for reasons of space, be dealt with fully here.

¹² This word is put in quotation marks to emphasise that "representative democracy" as practised in Canada and other "democratic" states bears little resemblance to "rule by the people" which is implied by the original Greek. For a more detailed discussion of the nature of true or "radical" democracy, see Esteva and Prakash (1998). The philosophical underpinnings of the critique of statist democracy are discussed in Chapters Two and Three in the present work.

¹³ Nesmith and Radcliffe (1993) also advance the important argument that in many regards the geographical debate over the nature of "nature" is deeply gendered, and that greater engagement with arguments advanced by environmental feminists is required.

¹⁴ This is of course what Nietzsche meant with his famous dictum "God is dead" (Kaufmann 1974).

¹⁵ Nietzsche's translator Kaufmann renders this "lost son", but notes that the German phrase "*der verlorene Sohn*" refers to the biblical story (Nietzsche 1967a: 37, Note 10).

¹⁶ This arguably occurred with the first photos of Earth from space.

¹⁷ However, as discussed in Chapter Three, it would be Eurocentric to continue calling the global hegemonic culture "European", which is one of the reasons that the term "Industria" has been coined.

¹⁸ While there are undoubtedly examples of contemporary or past aboriginal cultures whose activities have been ecologically dysfunctional, there is reason to believe that these are exceptions. Critics of this allegedly "romantic" view of aboriginal peoples suggest that the only reason these cultures did not do extensive damage to the ecosphere was because of low populations and inefficient technologies. Yet as American historian William H. McNeill (1976: 180) notes, "[I]earned opinion before World War II systematically underestimated Amerindian populations..." Contemporary estimates put the total pre-Columbian population of the Americas at between 40 and 80 million people (Denevan 1992). As far as technology is concerned, in the case of Pacific Coast cultures, there existed a clear capacity to completely extirpate salmon stocks using weirs and gill nets during spawning runs. Yet according to Swezey and Heizer (1993), complex social regulations were designed to prevent this from happening. See Chapter Four for a detailed discussion of ecological micro-management as practised by aboriginal cultures.

¹⁹ Biospheric primary production refers to matter processed into more complex forms by life processes, for example, vegetation.

²⁰ "System", with its mechanistic and atomistic overtones, while appropriate for describing the political and economic infrastructure of Industria, may be an inadequate word for discussions of the natural world or its human communities. Gaian ecological processes and human communities are more accurately described as "patterns", which philosopher Daniel Dennett (1991) has convincingly argued are ontologically real. Nonetheless, rather than confuse readers with yet more terminology, "system" is used throughout this paper even to describe ecological phenomena.

²¹ Interview references are indicated in the text by the respondent's last name or anonymous code, followed by the year of the interview and the abbreviation "Int." Full interview references are provided at the end of Appendix C, immediately before the bibliographic references.

²² A complete list of acronyms used in the dissertation is provided as Appendix A.

Chapter 2 Deleuze and Geography

"The question is not: is it true? But: does it work? What new thoughts does it make it possible to think? What new emotions does it make it possible to feel? What new perceptions and sensations does it open in the body?" (Massumi 1987 quoted in Doel 1996: 428).

...one really has to wait for the advent of a new species of philosophers, such as have somehow another and converse taste and propensity from those we have known so far -- philosophers of the dangerous "maybe" (Nietzsche 1966, orig. 1886: 10-11).

Gilles Deleuze: Philosopher of the Dangerous "Maybe"

In order to understand -- and find creative solutions for -- the problems affecting the Bras d'Or it is necessary to move below the surface of contemporary eco-politics and engage with the philosophical presuppositions that have led to the current state of affairs.

This is a *radical* position, since the underlying premise is that the existing political-economic system of which the Bras d'Or is a part can not be reformed by superficial tinkering.¹ Instead, the dominant society's most fundamental assumptions about reality and knowledge must be excavated, scrutinised, challenged, and as we will see below, ultimately rejected and replaced by a new way of understanding ecology, society and

politics. Such a task is obviously enormous, and the assistance of a great mind, a “philosopher of the dangerous ‘maybe’” is required.

In philosophy departments around the world, few 20th century thinkers have generated as much attention -- and controversy -- as the French thinker Gilles Deleuze, both alone and in his later collaborations with Félix Guattari. This work has only been discussed very recently in the geography literature (e.g. Doel 1996; Doel and Clarke 1999; Massumi 1996). Deleuze offers a number of things to scholars concerned with the project of building a sustainable future. In the pages to follow, we will examine Deleuze’s critique of ontological identity, his alternate ontology of difference, his naturalistic empiricism or “wisdom of the body”, his ethics of power or affirmation, and his development with Guattari of “nomadology” and “rhizomatic politics”.

Deleuze’s critique of ontological *identity* exposes the philosophical incoherence of intellect-based atomism and reductionism. This has important implications for anyone who must deal with complex ecological (or cultural) phenomena, and can be used to account for the widespread failures of resource-use management which have resulted collectively in the global environmental crisis. Moreover, it can be readily seen how ontological identity promotes anthropocentric ethics and individualism, and how it lies behind the structure of contemporary geopolitics as epitomised by the state-system.

His alternative to identity, which he terms an “ontology of difference” emphasises the fundamental continuity and unity of Being. Viewing apparently discrete phenomena as *intensities* in a continuum makes the utility of a holistic approach to research and politics evident. Ontological difference lends support to Lovelock’s “Gaia Theory”, while emphasising the multiplicitous nature of “Nature” and thereby avoiding a totalising

or teleological reading of Lovelock's work. This idea can also bring an important new perspective to current debates over the so-called "social construction of nature", rescuing the idea of "wilderness" from the conceptual scrap-heap by showing that wilderness and industrial civilisation are polarities in a continuum of intensities rather than discrete realms or identity-categories.

The epistemological implications of philosophical difference explain why resource-use management based on conventional reductionist science leads so frequently to ecological disaster, and provides defensible grounds for the inclusion of alternate epistemologies such as those which typify Local/Traditional Ecological Knowledge (Lo/TEK) (Hipwell 1998).² Deleuze's differential epistemology -- which he dubs "wisdom of the body" -- also demonstrates the importance of the local-level, community research which typified earlier approaches to geographic inquiry and which are once again being promoted by many social scientists.

There is, as noted earlier, a strong tradition of ethical geographies, and here too Deleuze's work has much to offer. Deleuzian difference is in essence an ontology of power, and his development of Nietzsche's "active/reactive" moral binary forces a reconsideration of the meaning of "justice", disaggregating this idea from its typical modernist pairing with "equality". In Deleuzian terms, justice involves ensuring that all beings have the opportunity to maximise their will-to-power, and that this in turn entails accepting and even celebrating the fact that innate power is differential -- not equally distributed. This unconventional take on justice can help political and cultural geographers account for the activities of social actors, shedding light on what form of politics is most likely to be fruitful in developing socio-ecological justice, and explain

important characteristics of the hegemonic global society. At the same time, Deleuze's encounter with Spinoza's "joyful affirmation" and his notion of "becoming", provide defensible grounds for a deep ecological ethic, something evidently needed in an era in which deep ecology has become a convenient and badly misrepresented whipping boy for all manner of academics.³

Finally, his political development of these ideas with Félix Guattari is of enormous heuristic value as we attempt to account for the complex processes commonly referred to as "globalisation" (see Chapter Three on "Industria" below), and suggests a prescription for political action which demonstrates the utility of a bioregional approach, and accounts for the eco-political success of the Mi'kmaq nation where other social formations have failed.

The Ontological Problem: the Nature of "Nature"

The Tao-Chaos is the dark, primordial, unfathomable, womb-like, maternal, creative Chaos (the chaosmos) which gives rise to the visible creation and sustains it through a yin-yang interactive balance. (Miles 1992: 7)

Ontology is that branch of philosophy concerned with the nature of reality.

Although at first glance an esoteric undertaking better suited for eccentric philosophers in the cafés of Europe than for North American geographers concerned with environmental degradation and ecopolitical sustainability, this field of study is absolutely necessary for a clear understanding of why the human relationship with the rest of the natural world is so strained. In short, it can be demonstrated that the way the majority of people in "Industria" (see Chapter Three below) commonly understand reality is erroneous and

that this error lies at the root of the interlocking crises of politics and the environment with which we are grappling at the dawn of the twenty-first century.

Nowhere can a more robust account of this error, nor a better ontological alternative, be found than in Deleuze's notion of "identity" versus "difference". Though Deleuze is frequently associated with French post-structuralism and postmodernism, and though these "movements" in philosophy and social theory have garnered accusations of idealism and relativism (Cosgrove 1994; Gandy 1996; Sayer 1993; Symanski 1994), it must be emphasised that Deleuze is a realist and an empiricist. Hardt (1993) points out that the Deleuzian critique is actually directed toward a long line of metaphysical idealism stretching from Plato through Hegel to Heidegger. For Deleuze (1994: 59), the task of modern philosophy is to overturn Platonic idealism because of what Gare (1995: 70) terms Platonism's "celebration of eternal forms and its denigration of the changing, sensible world". Deleuze sees Platonic idealism as lying at the root of representation and negation:

It is true that Plato already represents the subordination of difference to the powers of the One, the Analogous, the Similar, and even the Negative. It is like an animal in the process of being tamed, whose final resistant movements bear witness better than they would in a state of freedom to a nature soon to be lost (Deleuze 1994: 59).

To escape the taming, weakening force of Platonic idealism, it is necessary to come to see reality as ontologically chaotic, governed by chance. As Deleuze (1994: 199) puts it, "ontology is the dice throw, the chaosmos from which the cosmos emerges."

"Chaosmos" is -- as suggested in the epigraph to this section -- a strikingly Taoist concept. Consider the following passage from the *Tao Te Ching*:

There was something formed from Chaos.
 Born before Heaven and Earth.
 Ultimate and wonderful.
 Existing alone without change.
 Circulating cyclically without depletion.
 It acts like the mother of the world.
 Not knowing its name, I call it "Tao."
 If forced to name it,
 I would call it "Great."
 Great means Going.
 Going means Far Distant.
 Far Distant means Returning (Lao-Tzu 1992: Ch. 25).

The fifth and twelfth lines of this passage evokes the Nietzschean concept of the Eternal Return, which Deleuze draws upon extensively in his seminal work *Difference and Repetition*. Deleuze (1994: 57) notes that "Nietzsche had already said that chaos and the eternal return were not two distinct things, but a single and same affirmation." The idea that chaos can give rise to order -- creating a material reality -- is supported by the new sciences of chaos and complexity, which have collectively up-ended many of the assumptions of Newtonian physics:

Chaos Theory is the theory of postmodern society par excellence. In theory as in practice, there are no stable enduring clock-like systems; no eternal, fixed truths, no stable enduring theoretical relationships given by Nature or by God in the world we find when we look closely at it. In a chaos paradigm... all theory is, in the first instance, change theory" (T.R. Young quoted in Merry 1995: 11).⁴

Similarly, Chaos theorist Uri Merry describes the chaotic nature of "the world of life [where] even if something seemingly repeats itself, it is never exactly the same (Merry 1995: 35). Zimmerer (1994) emphasises that chaos and complexity theories form the core of the so-called "new ecology". From the "composed chaos" or "chaosmos" (Doel 1996: 431) of the eternal return emerges a material reality characterised ontologically by "difference".

A close reading of the Taoist characteristics of Deleuze's philosophy lends support to Hardt's (1993: 115) view that difference is, "a positive, materialist ontology... above all, an ontology of power."⁵ Taoist philosopher Thomas Miles argues that from the Tao (Chaosmos) emerges *Te* (power):

"Te"... is the power with which Tao manifests itself in our world... Te is Tao revealed, ennatured, embodied, and incarnated (Miles 1992: 8).

For Roger Ames (1991: 132), *Te* or "virtuality" "encompasses both efficient force and its effects" and bears strong similarities to Nietzsche's "will-to-power". As Deleuzian materialism and quantum physics suggest, *Te* includes all matter as well as physical and social power. In the next few pages, we will examine in detail Deleuze's critique of "identity" --the static ontology underlying Enlightenment thinking -- and why he feels it must be replaced by an ontology of power or what he terms "difference".

Identity

When you begin making decisions and cutting it up,
rules and names appear.
And once rules and names appear,
you should know when to stop (*Tao Te Ching*, quoted in Scott 1998: 262).

The problematic way in which contemporary humanity is interacting with the rest of the natural world results from what Deleuze (1994) describes as an ontology of identity, or what Doel (1999) has aptly dubbed "pointillism".⁶ Simply put, pointillism is the belief that reality can be broken down and reduced to discrete "atoms", "points" or "identities". For Deleuze, these static forms are dangerous illusions: the real world is by contrast always fluid and mobile; reality is characterised by underlying continuity and constant change.⁷ Even the simple act of naming, as implied by the *Tao Te Ching* passage quoted above, erects artificial ontological boundaries around portions of the

continuum of being. Of course, it is necessary for pragmatic reasons -- communication being the most obvious one -- that humans construct identities. The difficulty is that in Enlightenment thinking people did not “know when to stop”, and began to mistake the artificial identities they had constructed for the nature of reality itself. This error, which has been reinforced over the past three centuries, prevents a holistic vision, impairing our ability to see interconnections and interdependencies. Deleuze (1994) undertakes the most systematic and rigorous critique of this false ontology of identity in *Difference and Repetition*.

A pointillist ontology, having posited the existence of discrete identities, then attempts to construct a picture of the universe on the basis of calculating the interactions between these identities. According to this perspective, the sum of these interactions, akin to the behaviour of the balls on a billiard table, constitutes the universe. A perfect example of the difficulty with this is the recent move to digital recording of music after decades of analog recording. The original music, which like all of reality is a constant, unbroken flow, is “sampled” at minute intervals, digitised, and then “reconstructed” for playback. The recording, however, is fundamentally different from the original because the continuous flow has been replaced by many little pieces. In complex musical arrangements, such as certain pieces of classical music, the sound quality is negatively affected. By contrast, analog recording reproduces the original continuity of the music, which is why so many audiophiles dogmatically cling to their long-play (LP) records and reject compact disks (CDs) as acoustically inferior.

According to Deleuze, the Being described by an ontology of identity relies upon external negation as its foundation (the is/is not duality, Hegel’s “thesis/antithesis” etc.).

This reliance is unsatisfactory since “[t]he being that must seek an external support for its difference, the being that looks to negation as its foundation, is no being at all” (Hardt 1993: 114). Such structures of exclusion deny the positive movement of being, or “becoming”, and thus create a static, negative, and ultimately false picture of the world (Doel 1996: 430). This ontological negation plays a profound rôle not only in scientific enterprises, but also in the construction of social reality. Said’s (1978) *Orientalism* comes immediately to mind in this regard. Said illustrates how ontological negation formed the core of nineteenth and twentieth century (implicitly male) European identity, which “orientalised” or “Othered” women and non-European peoples, depicting them as “dark”, “irrational”, “inscrutable” etc., and ascribing to them all of the qualities opposite to those posited as worthy by Enlightenment thinkers (rationality, sobriety, masculinity, etc.). In the contemporary era, this ontological negation has globalized, and hegemonic society’s “Other” is now aboriginal peoples, rural ways of life, and the non-human animal realm.⁸ Esteva and Prakash tie this negation of difference to the homogenisation inherent to universalist pretensions of the Enlightenment:

In time, the elimination of such differences, of the radical heterogeneity of Being expressing the singularity and uniqueness of every man and woman, becomes an ideal, a social goal, to be accommodated to the homogeneity adopted as a premise and an assumption (Esteva and Prakash 1998: 171).

“Pointillism” also underlies anthropogenic environmental degradation because it renders more difficult the recognition of interconnections and interdependencies among ecosystem components. The uncritical acceptance of fixed identities (for example taxonomic divisions) has made it more difficult for scientists (including geographers) to grasp the holistic expression of life in Gaia. Pointillism also inevitably gives rise to anthropocentrism -- the belief in the central importance of humanity in the web of life --

since the human realm is considered ontologically discrete from the rest of the natural world, and rational self-interest would seem to therefore dictate that humans value themselves over external entities. In resource-use management, an exclusive focus on identity similarly encourages a way of thinking in which one part of nature can be discursively, cognitively, and physically ripped from its larger context and considered an independent “resource” which humans have the ability and the right to “manage”. In politics, the same ontological assumptions produce among other things the false dichotomy of inside/outside (Walker 1993), or what Taylor (1994) calls the myth of the “state as container”. The state system “produces a segmented space of authority and operates through processes of exclusion, extermination, domestication of the very figures which signify the possibility of escape -- woman, animal, child” (Jacobs 1996: 382).⁹ As a result, conflicts among global corporations, states, nations, sub-state communities, and civil society groups have become increasingly intractable. All of these problems stem from a failure to understand the fundamental continuity and dynamism of reality. Deleuze describes this reality as being characterised ontologically by “difference”.

Difference

Chaos is not a stable condition or fixed state. It is a process, it is dynamic. *It is more like the changing relationship between things than the things themselves* (Merry 1995: 11, *emph. added*).

The “laws of nature” that a great many of us have been taught are based on assumptions of unity, permanence, and simplicity. These assumptions no longer hold the way they once did (Kuehls 1996: 11-12)

For Deleuze (1988: 123), “the important thing is to understand life, each living individuality, not as a form, or a development of form, but as a complex relation between different velocities.” This closely parallels Lovelock’s suggestion that the new field of

geophysiology must be more concerned with the interactions among species and ecosystems than traditional ecology which focuses on ecosystems or species individually. Nature is continually reincarnated in new forms, but not static forms, rather it is infinitely transient, a mobile Becoming rather than a immobile Being governed by chance ("the dice throw"), and characterised by ever-increasing sophistication, complexity, diversity, and sentience.

Deleuze's opening salvo in his attempt to overturn pointillism involves defining the movement of being not in a negative, dialectical sense, but rather as a progression of internal differences where cause always inheres in its effect. As Hardt (1993: 113) puts it: "In this way, ontological movement is freed from any play of negations and is posed instead as absolutely positive, as an internal differentiation." Being is not defined on the basis of what it is *not*, but rather, on what it *is*, on its own will-to-power.

Whereas a pointillist ontology views "repetition" as the recurrence of the Same (this is the idea upon which generalisations are based), Deleuze (1994: 17) argues that this is a mistake, a "death instinct", that the Same never returns.¹⁰ The "eternal return" described by Nietzsche is always the return of difference:

The eternal return does not bring back 'the same' ... Returning is thus the only identity, but identity as a secondary power; the identity of difference, the identical which belongs to the different, or turns around the different. (Deleuze 1994: 41; see also Deleuze 1983).

Rather than discrete entities ("identities"), an ontology of difference sees objects, including living things, as intensities in a continuum. While we may, for practical purposes, speak of "a tree", "a fish", "the human species", etc., awareness of ontological difference reminds us that it is not legitimate to abstract things from their context, the continuum of which they are parts.

This lends direct support to Gaia Theory. For example, the notion of the ontological continuity of being, when applied to matters of ecology, emphasises that all life forms are to some degree interdependent and interconnected. These interconnections even include the horizontal, trans-species exchange of DNA:

Evolutionary schemas may be forced to abandon the old model of the tree and descent. Under certain conditions, a virus can connect to germ cells and transmit itself as the cellular gene of a complex species; moreover, it can take flight, move into the cells of an entirely different species, but not without bringing with it "genetic information" from the first host (Deleuze and Guattari 1987: 10).

Deleuze and Guattari cite as an example the discovery of a type C virus which has a double connection to baboon and domestic cat DNA. The discoveries of the "new ecology" (Zimmerer 1994) and the Human Genome Project reinforce this notion. In one example from Hammond's (1991) work on forest ecology, various tree species, flying squirrels, and soil microbes form an interdependent rhizome which in many ways renders discussion of individual organisms nonsensical. Consider Deleuze and Guattari's description of the multiplicitous nature of the world:

It is a problem not of the One and the Multiple but of a fusional multiplicity that effectively goes beyond any opposition between the one and the multiple. A formal multiplicity of substantial attributes that, as such, constitutes the ontological unity of substance. There is a continuum of all the attributes or genres of intensity under a single substance, and a continuum of the intensities of a certain genus under a certain type or attribute. A continuum of all substances in intensity and all intensities in substance. The uninterrupted continuum of the BwO [Body without Organs] (Deleuze and Guattari 1987: 154).

The living Earth is thus best understood as a multiplicitous singularity, an internally differentiated and continuously evolving whole. Lovelock (1979: 176) describes such an understanding as seeing the forest for the trees.

The Epistemological Implications: *How Do You Know?*

Epistemology is that branch of philosophy concerned with “[c]onstraints on the *understanding* of reality, delimiting the domain of inquiry and specifying legitimate questions” (Harrison and Livingstone 1980: 27, Fig. 1), or in other words, how it is possible to know things about the world. As noted in the previous chapter, Harrison and Livingstone (1980) argue in their discussion of the “presuppositional hierarchy” that our ontological assumptions about the nature of reality determine the epistemological approach we adopt (see Figure 1.2). This hierarchy has been followed in the organisation of this chapter.

However, Deleuze’s take on the relationship between ontology and epistemology is somewhat more complex, and some clarification is required. Deleuze would argue that our ontological assumptions are in fact the outcome of the epistemological apparatus we employ in perception. In brief, Deleuze follows Henri Bergson in linking intellect-based approaches to knowledge -- typified by logic and reason -- with an ontology of identity. The intellect is pointillist in structure; in order to understand the world logically it must first be supposed that the world is made up of discrete identities that can then be assembled and manipulated by reason. Thus the belief in an ontology of identity can be seen as the *product* of an intellectual epistemology. By contrast, prior to intellectualisation our instincts process and respond to sense data as a continuous and multiplicitous flow. Thus, the way humans perceive the world through intuition or “wisdom of the body” -- described elsewhere as a “libidinal epistemology” (Ford and Hipwell 2001) -- provides them with an understanding of a continuous, mobile, fluid and interconnected world: an ontology of difference.

Notwithstanding this clarification, Harrison and Livingstone do have a point: once an ontology of identity has been accepted (as it has in mainstream thinking), the epistemological question turns on itself, and intuitive approaches to knowledge are dismissed as illegitimate. Indeed, the so-called "Enlightenment" was very much the project of valorising the intellect and denigrating the intuition (Taylor 1991).

It is important to note here that Deleuze's viewpoint is pragmatic; he does not argue that intellect-based epistemologies are useless, but rather is concerned that they can only provide a *partial* understanding of reality, and therefore must be augmented by intuitive knowledge. His discussion of the details of the identity/intellect and difference/intuition binary pairs is examined next.

Identity/Intellect

The relationship between identity and intellect is much like a cat chasing its tail. An ontology of identity results from the way the intellect processes data (Kant's "categories"): time is conceived as a series of moments, days or years, and space is similarly conceived of as aggregations of units -- metres, kilometres and so forth. Once these series and aggregations are taken as an accurate depiction of reality, arguments are deployed to show that therefore only the rational intellect is a valid epistemological apparatus.

This Cartesian viewpoint was, by and large, accepted uncritically for much of the seventeenth to nineteenth centuries, until it was challenged, most notably by Friedrich Nietzsche and Henri Bergson. Deleuze's work on epistemology arises from the resulting twentieth-century interest in the problem of representation: the critique of correspondence

theories of truth and of reason's implicit "metaphysics of presence" which assume that representation can provide an accurate depiction of a stable external reality.

Livingstone (1992: 52) notes that cartography was "profoundly implicated in an epistemological move to representation". Deleuze shows that representation is the inevitable outcome of the privileging of intellect over intuition, and that the *differential* nature of reality -- which the intellect on its own can never grasp -- means that representation is doomed to perpetual error. The representational intellect -- working from an erroneous conception of time and limited by a grid-work of static identities -- can not truly understand continuity and flow. Representation lies at the very foundation of contemporary scientific practice, and if it is relied on exclusively, it creates a static, negative, and ultimately false picture of the world. The four aspects of representation -- identity, analogy, opposition and resemblance (Deleuze 1994: 29) -- are polite fictions which render the world more easily understandable at a large scale, but which do considerable violence to the reality of that world, especially at smaller scales. Representation requires that the knower accepts the legitimacy of generalisation, and that cases which diverge from an arbitrarily determined norm or average are purged from models and theories.

Pointillism has promoted (and simultaneously resulted from) a prioritisation of the intellect, with its capacity for logical thinking. This has also led to reductionism, and the positivist belief in the infallibility of the scientific method as a way of gaining access to knowledge of "external" reality. The problem with reductionism is captured quite neatly by the interaction between the two definitions provided for it by the Random House Webster dictionary:

Reductionism, n. 1. The theory that every complex phenomenon, esp. in biology or psychology, can be explained by analyzing the simplest, most basic physical mechanisms that are in operation during the phenomenon. 2. The practice of simplifying a complex idea, issue, condition, or the like, esp. to the point of minimising, obscuring or distorting it (Random House Webster 1998: 1618).

This is why, for example, biological approaches to fisheries management so frequently lead to ecological disaster. A Mi'kmaq hunter emphasises the inherent weakness of intellect-based approaches:

Where a white man would learn from a book, and go out here and scurry about doing things every day which they eventually fuck up or they lose their lives because they don't know how to respect Mother Nature (Lafford 1997 - Int.).

The ways in which pointillism infuses Industrian praxis will be elaborated upon in Chapter Three.

Difference/Wisdom of the Body

The further into the forest, the stranger the encounter, for it is the forest where reality becomes fluid. Within the Micmac [sic] universe, the forest is Chaos -- the unconscious, the unknown, the place where the map ends (Whitehead 1988: 6)

The great activity is unconscious... Consciousness is essentially reactive; this is why we do not know what a body can do... What happens is that science follows the paths of consciousness, relying on entirely *other* reactive forces; the organism is always seen from the petty side, from the side of its reactions... The real problem is the discovery of active forces without which the reactions themselves would not be forces" (Deleuze 1983: 41).

Deleuze feels that intuitive epistemologies attuned to difference must be re-legitimised so that the complexities of a continuous and interdependent reality may be more accurately grasped. He calls such epistemologies "wisdom of the body". To this

end, he recruits early twentieth-century philosopher Henri Bergson,¹¹ who contrasts the intellect with the instinct:

Intelligence remains the luminous nucleus around which instinct, even enlarged and purified into intuition, forms only a vague nebulousity. But, in default of knowledge properly so called, reserved to pure intelligence, intuition may... bring the intellect to recognize that life does not quite go into the category of the many nor yet into that of the one; that neither mechanical causality nor finality can find a sufficient interpretation of the vital process. Then, by the sympathetic communication which it establishes between us and the rest of the living, by the expansion of our consciousness which it brings about, it introduces us into life's own domain, which is reciprocal interpenetration, endlessly continued creation (Bergson 1907: 195).

The defence of intuitive routes to knowledge had been mounted earlier by Nietzsche (1966, orig. 1886: 11), who said that "... 'being conscious' is not in any decisive sense the opposite of what is instinctive: most of the conscious thinking of a philosopher is secretly guided into certain channels by his instinct." Livingstone (1992: 1-2) echoes this sentiment, noting that the myth of science as proceeding purely through "experimental analysis and logical rigour" has, in the cases of Galileo, Kepler, Newton, Darwin, Einstein, and others, been thoroughly dispelled. The intellect can not truly grasp continuity, flow, and reciprocal penetration, but rather sees the world as *aggregations* of units, *series* of moments. For example, though time as understood by physics is not "real", instinctively we all know it exists. We grasp it through a kind of *intuitive empiricism*.

Deleuze has also described this differential epistemology as a "transcendental empiricism". This should not, however, be confused with the naïve empiricism underlying "a sedentary State philosophy grounded in unequal exchange, whose *modus operandi* is constancy, rigidity and negation (I = I = Not you)..." (Doel 1996: 430). This

“State” or pointillist philosophy prioritises conscious activity and belief in identity, which “always entails mistaking variables for constants, and variations for wholes (Doel 1996: 421). As the Taoist master Lao-Tzu explains the problem,

Looked for but not seen--
it's called “Subtle.”
Listened for but not heard--
it's called “Rarefied.”
Reached for but not grasped--
it's called “Obscure.”
These three cannot be analyzed
because they're mixed together and they act as one (Lao-Tzu 1992: Ch. 14).

Burwick and Douglass note that the “spatializing language of the intellect” cannot “think true continuity, real mobility, reciprocal penetration -- in a word, that creative evolution which is life” (Burwick and Douglass 1992: 5, quotation is from Bergson 1907). This problem can be readily discerned in cartography, statistics, geopolitics, etc., where static “boundaries” are imposed on reality, though the real world is by contrast always fluid and mobile. Conventional science thus gives a representation of an inferior, static reality cut off from continuity and creation, and we “thus end up with two different ways of knowing -- one scientific, empirical, logical, abstract, and mechanical; the other subjective, intuitive and holistic” (Lehan 1992: 308). This is problematic, since “the ontology of a partitioned universe, evolved through the processes of specialisation, conflicts with the holism and interconnectedness that necessarily accompanies problem orientation” (Harrison and Livingstone 1980: 30).

For this reason, Deleuze urges that we shift our focus from the identities we have constructed toward the difference which more adequately characterises the nature of Being or “reality”. Because arboreal (tree-like, hierarchical) structures are so ingrained in our conscious thought, such a shift in focus will entail a greater reliance on the

unconscious, on instinct, on knowing through our hearts. It will require, in many senses, an *unfocusing*. As a staunch materialist, Deleuze does not mean that we should abandon empirical knowledge. Rather, what we do with the empirical knowledge we gain through our senses must change. We must learn “nomad thought”, “dwelling on change, becoming and inconsistency, rather than fixity, being and constancy” (Doel 1996: 430).

Epistemologies linked to the intuition, which typify the local/traditional ecological knowledge (Lo/TEK) commonly employed by aboriginal cultures and resource-users in rural communities (Hipwell 1998; Inglis 1993; Johnson 1992a), “women’s ways of knowing” (Reinharz 1992; Zalk and Gordon-Kelter 1992), and, it should be added, non-human intelligence, have been marginalised at both the theoretical and the applied levels. This epistemological discrimination has compounded the ontological errors mentioned above. It has impaired our understanding of ecological problems, led to significant resource-use management errors (which have had dramatic and potentially irreversible ecological impacts), and exacerbated group conflicts in human politics. Several scholars have recently suggested that this discrimination also presents significant hurdles to the implementation of alternate political frameworks geared toward social justice, and the development of ecological sustainability, such as those suggested by research into bioregionalism (see for example the contributors to McGinnis 1999a).

The question remains as to how we can integrate wisdom of the body with our arboreal intellectual processes. Deleuze and Guattari argue that what they call a “rhizomatic” approach is required. They describe rhizomes in this way:

In contrast to centred (even polycentric) systems with hierarchic modes of communication and pre-established paths, the rhizome is an acentred, non-hierarchical non-signifying system without a general and without an organizing memory or central automaton, defined solely by a circulation of states (Deleuze and Guattari 1987: 21).

To think rhizomatically is more than just thinking laterally, it means surrendering to “lines of flight” which will often lead the thinker in unexpected directions, establishing “contingent alliances” which could help free the Earth and its inhabitants from mental and physical subjugation. The inspiration for such lines of flight is something that is unlikely to be found in libraries or the outputs of statistical software. Rather, corporeal experience gained through field work is necessary.

Yet cloistered in the electrically-lit offices of concrete buildings on large urban campuses, scientists are increasingly cut off from the ecological reality they are relied upon to study. An increasing reliance on laboratory instead of field work, the professional need to publish, and a volume of literary information which requires almost full-time devotion to reading, conspire to deprive researchers of the “wisdom of the body” that can only be gained in the field. A Mi’kmaq hunter and fisher interviewed in 1997 urges greater physical engagement by researchers:

The universities, they don’t have the opportunity to come out here and pick up a clam or an oyster off the shore and eat it. Or go dive in there traditionally and go get an eel at thirty, forty feet of water. They can’t do that at school. [indicates Bras d’Or Lakes] This is a classroom to us. This is how we learn... That’s the sort of environment I like to teach my family in. Not in classrooms and closets, grey walls. No contact. Without the contact you can’t learn nothing. You gotta feel the sand, you gotta smell the grass, feel the wind, feel the sun, hear the waves. See the water, taste the water. This is how you learn, how we learned for thousands of years. By *doing* it. We don’t learn by just reading about it. Try to go out in the wilderness and try to do the things that you learn in a book. I guarantee you you’ll starve in ten days (Lafford 1997 - Int.).

A Cape Bretoner made a similar point with regard to the forest industry:

I mean, you could sit there and argue day in and day out about whether or not clear-cutting is good or bad or sustainable or unsustainable but all you have to do is go up there and see that the forest has been removed, and -- regardless of whether or not it's been done in a sustainable fashion or not, I mean, all of this bullshit -- it's gone (CB1 1997- Int.).

As researchers working to find elusive solutions to increasingly difficult and complex problems of ecology and politics, we must strive for an active re-engagement with the physical world. By thinking rhizomatically, with our hearts and bodies as well as our minds, we will be attuned to difference rather than identity. It is precisely such an attenuation wherein can be found the answers which we need to preserve the world and our place in it. As Deleuze (quoted in Doel 1996: 435) proclaims, "Representation no longer exists; there's only action".

Deleuzean Ethics

Discard holiness and abandon knowledge.
 People will benefit a hundredfold.
 Discard kindheartedness and abandon righteousness.
 People will return to familial love and natural affection.
 Discard cleverness and abandon acquisitiveness.
 Thieves and robbers will not exist (Lao-Tzu 1992: Ch. 19)

While the noble man lives in trust and openness with himself... the man of *ressentiment* is neither upright nor naïve nor honest nor straightforward with himself... [H]e knows how to keep silent, how not to forget, how to wait, how to be provisionally self-deprecating and humble. A race of such men of *ressentiment* is bound to become eventually *cleverer* than any noble race; it will also honour cleverness to a far greater degree... (Nietzsche 1989, orig. 1887: 38, emph. orig.).

Simon Dalby (1999a) has pointed out that ethics must take into account the inescapable ontological fact that the world is in constant motion, and that stable ethical categories are inadequate. He draws upon Susan Whatmore to argue that ethics must be relational. The complementary notion that "there is only action" is central to Deleuzean

ethics, which draws heavily upon Nietzsche (Deleuze 1983) and Spinoza (Deleuze 1988; Deleuze 1990). In essence, Deleuze calls for an “active” ethics characterised by “joyful affirmation”. There is a direct progression from Deleuze’s ontological arguments for “difference” versus “identity”, and his development of the Nietzschean contrast between “active” (life-affirming) and “reactive” (life-denying) ethics. This typology in turn, when applied to the field of environmental ethics, shows that ecocentrism (such as that embodied in “deep ecology”) is active whereas anthropocentrism (the central value of the global system described in the next chapter as “Industria”) is reactive. The following pages will outline the Deleuze/Nietzschean active/reactive typology. From there, some preliminary remarks will be made on the implications this has for an understanding of global eco-politics.

Active/Reactive and Joyful Affirmation

What Nietzsche calls *noble*, *high* and *master*, is sometimes active force, sometimes affirmative will. What he calls *base*, *vile* and *slave*, is sometimes reactive force and sometimes negative will (Deleuze 1983: 55).

It was suggested earlier that Deleuze’s ontology of difference can also be seen as an ontology of power. A Deleuzean typology of power would, following Nietzsche, divide it between “active” and “reactive” forces. Reactive forces attempt to separate active forces from what they can do by taking away some or all of their power (Deleuze 1983: 57).¹² Reactive forces deny difference, attempting to “level” or homogenise heterogeneity. By contrast, active forces go to their limit, are creative and affirming of difference (which allows other forces to simultaneously go to their limit and be active) (Deleuze 1983: 61). Referring back to the ontological discussion above, “identity” is a reactive concept which requires for its existence an external negation. “Difference”, by

contrast, is an active concept which relies on an interior affirmation. There is therefore a genetic link between reactive forces and the negative ontology of identity, just as there is between active forces and an affirmative ontology of difference. The contrast between active and reactive lies at the heart of Deleuzean ethics.

This is why it is not possible to adequately discuss Deleuzean ethics without making detailed reference to Nietzsche's critique of Christianity, one of the most central yet simultaneously most misunderstood aspects of his philosophical project. Nietzsche (especially 1989, orig. 1887) employs a genealogical method to determine the *origin* of Enlightenment values. He concludes that rather than deriving values logically, as philosophers such as Kant had claimed, that the Enlightenment had simply inherited its value system from Christianity, and that Kant in particular had attempted to insulate that value system from critique by situating it in a supra-sensible transcendental realm (Hardt 1993: 28-30).

For Nietzsche, the birth of Christianity constituted what he terms a "slave revolt in morality" (Nietzsche 1989, orig. 1887: 36). What he means by "slave revolt" is that an ethical inversion took place. The older Homeric "master" or "noble" values of pride, strength, honour, vengeance, beauty etc. -- all of which affirm life and difference -- became the "deadly sins", and were replaced by humility, meekness, faith, forgiveness and kindness. Since Nietzsche rejects the existence of a transcendental realm (God, etc.) as a source of values, he sees this inversion as rooted in power relations and nothing more.¹³ While this new moral code may have been quite useful for a people attempting to survive Roman oppression, it had the effect of universalising and enshrining the qualities of enslavement. This resulted in the creation of a passive "herd" of people (the

“masses”) who are easily controlled and manipulated by elites who pay only lip-service to the Christian morals they historically inculcated in the populace.¹⁴ Moreover, since the Christian doctrine is ascetic, and rooted in the notion of an after-life where redemption and salvation are found, Nietzsche sees it as life-denying.¹⁵ This perspective is substantiated by Lynn White Jr.’s evaluation of Christianity:

What people do about their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny ... [T]he victory of Christianity over paganism was the greatest psychic revolution in the history of our culture ... [In the story of Creation] no item in the physical creation had any purpose save to serve man’s purposes ... By destroying pagan animism Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects ... Christianity bears a huge burden of guilt [for the ecological crisis] (White, Jr. 1968: 1205-1206).

Active ethics, which in Nietzsche’s formulation are also rendered “noble virtues” or “knightly-aristocratic valuation”, reflect:

...the perfect functioning of the regulating *unconscious* instincts... perhaps a bold recklessness in anger, love, reverence, gratitude, and revenge by which noble souls have at all times recognized one another (Nietzsche 1989, orig. 1887: 39).

By contrast, reactive ethics are based in *ressentiment* (resentment, or in Deleuze’s 1983 terms, “bad conscience”); they stem from the fundamental negation inherent to ontological identity that

...from the outset says No to what is “outside,” what is “different,” what is “not itself” and *this* No is its creative deed. This inversion of the value-positing eye -- this *need* to direct one’s view outward instead of back to oneself -- is of the essence of *ressentiment*: in order to exist, slave morality always first needs a hostile external world; it needs, physiologically speaking, external stimuli to act at all -- its action is fundamentally reaction (Nietzsche 1989, orig. 1887: 36).

One of the key reactive notions is that of equality.¹⁶ To ask people to ascribe to this belief in equality is, for Nietzsche, “absurd”:

To demand of strength that it should *not* express itself as strength, that it should *not* be a desire to overcome, a desire to throw down, a desire to become master, a thirst for enemies and resistances and triumphs, is just as absurd as to demand of weakness that it should express itself as strength (Nietzsche 1989, orig. 1887: 45).

The notion of equality flies in the face of empirical experience: life shows that there is in life every variety of difference imaginable.¹⁷ Yet as demonstrated earlier in this chapter, in order to create stable ontological identities, it is necessary to erase internal difference, to generalise, and to universalise, and equality is the conceptual spoon with which the contents of the ontological melting pot are stirred. This has some very specific political consequences which will be brought up briefly at the end of this chapter and elaborated upon later in the dissertation.

In order to maintain the illusionary ideal of equality, Christianity used guilt, or 'bad conscience' (the confessional...), so that those who judged themselves to be different in a positive sense would be obliged to turn upon themselves (Lechte 1994). Guilt is closely tied to the success of capitalism and to the environmental crisis. Deleuze and Guattari (1983) argue that *guilt* and *blame* are intrinsically linked to notions of *debt* and *lack*. To support this contention, Saraq (1993: 46), points out the etymological relation between the German words "debts" (*Schulden*) and "guilt" (*Schuld*). In the modern world, debt and the perception of lack (the latter is the root of consumerism, or what Lao-Tzu referred to as "acquisitiveness") have become both universal and infinite; these are the forces that at once drive capitalism and the annihilation of the biosphere (Conway 1997; Deleuze and Guattari 1983; Purdom 1997).

Reactive ethics are also reinforced by a certain form of memory, a negative dwelling in the past (past wrongs, past debts). People in a reactive society passively accept existing structures without actively proposing a new way of doing things. They

complain about the way things are being done, blame others, and consider themselves “victims” because they have been conditioned not to comprehend their own agency. By contrast, the active is characterised by a positive memory of history that focuses on knowledge and power, acknowledges the inevitability of fate and thereby affirms the present and future (*amor fati*) (Nietzsche 1983, orig. 1874). Rather than attempting to alter relationships of power by mobilising guilt through blame, active ethics are creative, offering *new* ideas, *new* relationships, *new* political forms.

Deleuze proposes an active ethics of joyful affirmation to banish the reactive “sad passions” (guilt, blame, resentment, etc.) from human thought (Deleuze 1988; Deleuze 1990). Difference, rather than being a source of either guilt or resentment, must be celebrated wherever it is manifested because this is the very essence of life on Earth. What is affirmed is the will-to-power of every being. Deleuze concludes that a person

...can be called *good* (or free, or rational, or strong) who strives, insofar as he [sic] is capable, to organize his encounters, to join with whatever agrees with his nature, to combine his relation with relations that are compatible with his, and thereby increase his power (Deleuze 1988: 22-3, emph. orig.).

Though this statement might appear at first blush to be highly individualistic, as we saw earlier, for Deleuze all beings are ontologically continuous with one another. The increase in personal power he counsels, and the combination of relations to which he refers, cannot be abstracted from this idea of continuity. As we will see next, Deleuzean ethics have some important ecological implications.¹⁸

Ecocentrism and Deleuzean Naturalistic Empiricism

Well I guess the term “community” is much more encompassing as far as the Mi'kmaq are concerned. First of all, we don't just consider ourselves as being a part of the human members of our natural world. And the word that we use quite often, which I think fits, is *no'kmaq* which literally translates into English to mean “all my kin”... So I have difficulty [identifying]¹⁹ myself with just the human-kind and excluding every other being (A. Marshall 1997 - Int.).

Hayden (1998) has argued that Deleuze is a “radical naturalist” or “naturalistic empiricist” and that therefore Deleuzean philosophy is of considerable value for the arenas of environmental ethics and political ecology. Saraq (1993) contends that the ecocentric ethical position of deep ecologists is the most reflective of Deleuzean and Nietzschean philosophy. In brief, ecocentrism is an ethical stance which holds that philosophy cannot defend an arbitrary ontological or ethical boundary between humans and non humans (Naess 1993b; Zimmerman 1994). This is also the ineluctable conclusion of Deleuze's philosophical inquiry: in order to be truly differential and life-affirming, we must recognise our ontological continuity with the rest of Gaia, and joyfully affirm the will-to-power of all living things.

At the ontological level, anthropocentrism is an error arising from a reactive belief in identity. If humans are taken as ontologically discrete from nature (rather than being continuous with it), then anthropocentrism is the outcome of rational self-interest. Yet as Ryogi (1991: 201) points out, Nietzsche believed that the entrenched modern European ideas of anthropocentrism and individuality (identity) were in error, that humans are in fact but a “bud on the great tree of nature.” Richard Brown concurs, adding that Nietzsche felt

...that modern European man is essentially depraved. Nietzsche defines depravity as the loss of natural instincts, in particular the instinct to grow and enhance one's power. To lack these natural instincts, to lack will to power, means that the individual posits values which are actually hostile to life (Brown 1989: 139).

This depravity is contrary to the implicit message of Taoism, which holds that humans should seek to stay in harmony with the natural world (Miles 1992: 8), since disharmony with the natural world leads ultimately to death for the individual and extinction for the species.

For ecocentrists the centre of value is not humanity, but is instead considered to reside in the ecosphere as a whole, and simultaneously, to be immanent or inherent in all ecospheric components. The development of an ecocentric ethic is something which, as with knowledge, cannot be achieved through the intellect alone. As Leopold (1949: 225) points out, "the evolution of a land ethic is an intellectual as well as an emotional process." For Deleuze, as for Bergson, ethics is shaped strongly by epistemology. When we surrender to the voice of our instinct,

[t]hen, by the sympathetic communication which it establishes between us and the rest of the living, by the expansion of our consciousness which it brings about, it introduces us into life's own domain, which is reciprocal interpenetration, endlessly continued creation (Bergson 1907: 195).

Another way of putting this is that maintaining an active awareness of our corporeality through a celebration of wisdom of the body and the Dionysian passions allows us to empathise with non-humans (Ford and Hipwell 2001).

Deep ecology, an ecocentric philosophy developed by Norwegian philosopher Arne Naess (see Naess 1993a for an overview of the philosophy), and articulated more fully in his collaborations with Bill Devall and George Sessions (e.g. Devall and Sessions 1985), has been reduced to eight fundamental tenets (see Figure 2.1). While these written

The Tenets of Deep Ecology

1. The well-being and flourishing of human and nonhuman Life on Earth have value in themselves (synonyms: intrinsic value, inherent value). These values are independent of the usefulness of the nonhuman world for human purposes.
2. The richness and diversity of life forms contributes to the realization of these values and are also values in themselves.
3. Humans have no right to reduce this richness and diversity except to satisfy *vital* needs.
4. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.
5. Present human interference with the non-human world is excessive and the situation is rapidly worsening.
6. Policies must therefore be changed. These policies affect basic economic, technological and ideological structures. The resulting state of affairs will be deeply different from the present.
7. The ideological change is mainly that of appreciating *life quality* (dwelling in situations of inherent value) rather than adhering to an increasing standard of living; there will be a profound awareness of the difference between 'big' and 'great'.
8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.

Source: Devall and Sessions (1985: 70).

Figure 2.1 - The Tenets of Deep Ecology

accounts are useful, deep ecology can not be divorced from its *praxis* as manifested in radical environmental activism such as Earth First!. In a nutshell deep ecology recognises inherent value in all life forms, and also the value that derives from the interaction of diverse life forms in creating an interdependent living world. At the same time, it does not shrink from an acknowledgement that the human species is drastically over-populated and that the resulting over-consumption is having catastrophic ecological consequences.²⁰

An examination of the tenets of deep ecology make it immediately clear that they are fundamentally compatible with Deleuze's ontological, epistemological and ethical arguments outlined above. The first three tenets of deep ecology are derived from an ontological position which acknowledges continuity among life forms, and reject an anthropocentric ethical position which would posit humans as the source or centre of all values. The fourth and fifth tenets are ethical positions based on a pragmatic assessment of the degree to which human activities have impaired the will-to-power and becoming of other beings. Tenets six and eight are rooted in *praxis* which requires action based on an affirmation of life, and tenet seven is an epistemological point, since arguably quality is an intuitive value while quantity is an intellectual value.

The "endlessly continued creation" to which deep ecologists must ultimately surrender their individuality comprises, as was discussed in Chapter One, a singular, moderately open system, Lovelock's "Gaia". An ontology of power shows that Being is a continuum which includes both human and non-human life. This necessitates an awareness that the Self is co-extensive with the rest of the natural world, and that therefore a healthy, egoistic ethics must be ecocentric.

“Deleuzoguattarian” Politics

RHIZOMATICS = SCHIZOANALYSIS = STRATOANALYSIS =
PRAGMATICS = MICROPOLITICS (Deleuze and Guattari 1987: 22).

It was not until he began collaborating in earnest with French psychotherapist Félix Guattari that Deleuze attempted to explicitly tie his philosophical work to the formulation of a political theory. Their writings are complex and at times seem deliberately obscure, and rather than pretend to provide a comprehensive overview, the following few pages will extract a few key components of that body of work which will be of use in supporting the arguments developed later in this study. Readers interested in a more extensive engagement with “deleuzoguattarian” politics are directed especially to *Capitalism and Schizophrenia*. This work was published in two parts, the first being *Anti-Oedipus* (Deleuze and Guattari 1983), which can in many regards be taken as their development of an anti-Freudian and post-Marxist ethics (Foucault 1983), and *A Thousand Plateaus* (Deleuze and Guattari 1987), which is more explicitly political, directed against the “‘bureaucrats of pure reason’ who speak in ‘the shadow of the despot’ and are in historical complicity with the State” (quoted in Massumi 1987: ix). While Deleuze and Guattari’s work has been the subject of intense focus by scholars working in a speculative Marxist tradition (see for example Pearson 1997), the most insightful, accessible, and nuanced explanation of their political project is provided by University of Sydney philosopher Paul Patton (2000a; 2000b).

If there is one thing that can be stated emphatically and without reservation about Deleuze and Guattari it is that their enemy is “the State” -- not a particular state or even the contemporary state system *per se* but the complex ways in which coercive, reactive

power (negative will) has developed the state form to further its exploitation of humanity and the Earth. In the following chapter this idea of the supra-historical State is embodied, described and given the name “Industria”. For the present, it is necessary to look at a few of the concepts developed by Deleuze and Guattari lend support to what they would call a rhizomatic (literally, “grassroots”) micro-political resistance.

The State Apparatus

In Deleuze and Guattari’s formulation, the state apparatus is an essentially sedentary apparatus of capture, and inseparable from its *striation* of the Earth and its peoples (Deleuze and Guattari 1987; Patton 2000a). By striation they mean the imposition of fixed, sedentary boundaries (enclosures) onto hitherto “smooth” space in order to create “homogeneous space of quantitative multiplicity” (Patton 2000a: 112). Another way of putting this would be to say that striation is the imposition of ontological identity on land and people through a system of laws and borders backed up by violent force. This process was fundamental to the creation of a system of private property.

The word *state* is linked etymologically to *stasis* and is therefore quite comfortably associated with concepts such as “sedentary”, “fixed”, and “quantitative”. By contrast “smooth space” is Deleuze and Guattari’s term for territorial differentiability or what Patton calls “the heterogeneous space of qualitative multiplicity” (Patton 2000a: 112). “Qualitative multiplicity” can be understood as the world of ontological difference. Striation, the imposition of artificial identity on smooth space, was accomplished first through the deterritorialisation of aboriginal²¹ communities and the incorporation of their territories into the state system, and later by the enclosure of public lands and the creation of a legal system of private property rights.

The deterritorialisation of aboriginal peoples was accomplished militarily (through invasion, physical occupation and settlement), cartographically (see Brealey 1995 on how colonial cartographers erased the aboriginal use of territory on the Pacific Coast of North America), discursively (as Willems-Braun 1997 has shown in his analysis of the writings of (de)forestry corporations and early explorers), or legally (as made clear in Mercer's 1993 discussion of the doctrine of *terra nullius* in Australia, or in Waldram et. al.'s 1992 description of the B.C. Supreme Court's judgement in *Delgamuukw v. The Queen.*) Once pre-existing territoriality is erased, the Earth is then reterritorialised and smooth (nomad) space is replaced by striated (sedentary) space. In general it might be said that the state apparatus *domesticates*. This domesticating or taming (reactive) tendency is considered in Chapter Three.

War/Metamorphosis-Machines

The state apparatus, being an apparatus of capture and striation, is effectively opposed only by "the war-machine", a nomadic form of group subject which is "outside and hostile to the state" and has the power to deterritorialise sedentary structures (Patton 2000a: 111). A war-machine is revived "[e]very time there is an insurgency of some kind against the state, whether this takes the form of revolution, riot, guerrilla warfare or civil disobedience" (Patton 2000a: 111). Patton points out that the war-machine has only a synthetic relation to war, and should not be confused with the more popular use of the term to refer to the military-industrial complex, which is far closer in nature to the State than to the nomadic groups Deleuze and Guattari describe. They chose the term "war-machine" because they feel that war (as opposed to lawful state violence) is an activity used historically by tribal peoples to prevent the concentrations of wealth and power

which gave rise to the state form in the first place (Patton 2000a: 113). Patton feels that the term “war-machine” might be more appropriately replaced by “metamorphosis-machine”, since the disruption (metamorphosis) of sedentary patterns is its chief attribute.²² The war/metamorphosis-machine is an agent of becoming and difference, operating ceaselessly against sedentary being and identity. Wherever it is able to act it deterritorialises the State, making striated space smooth. Examples of war/metamorphosis-machines include tribal peoples, local communities and “marginal” groups (Esteva and Prakash’s 1998 “social majorities”) such as those involved in anti-globalisation actions in Seattle, Prague, and Québec City.²³

Conclusion

To recap, Deleuzian philosophy can be broken down into four areas: ontology, epistemology, ethics, and politics. At the ontological level, Deleuze shows that the belief in hermetic and internally equal identities which underlies the universalism of all aspects of the Enlightenment project is erroneous. Instead, we are counselled to view reality as a continuum of difference, within which there are only intensities, but not completely discrete entities. This has implications for resource-use management, for example because it lends support to Gaia Theory, and promotes an ecological over a biological approach. It also has geopolitical implications, since it calls into question the universalist pretensions of the state-as-container (Taylor 1994) and the assumptions of individual equality upon which modern state “democracy” is predicated. It also serves as the basis of his epistemological and ethical arguments.

Epistemologically, awareness of ontological difference underscores the need to augment intellectual approaches to knowledge such as representation, rationality, and reductionism with intuition-based “wisdom of the body”. This helps to explain the persistent resource-use management failures which have plagued the state system. It also lends support to calls for greater inclusion of local knowledge in decision-making as regards resource-use and politics, and emphasises the importance of field-work in any research endeavour.

In the ethical realm, Deleuze’s active/reactive binary is of use in accounting for the failure of democracy and the rise of individualistic consumerism. It also makes it clearer why colonisation by Christian empires was so culturally devastating for colonised peoples. Moreover, it provides philosophical support for ecocentrism, which lies at the heart of bioregional theory and the ecological practices of aboriginal cultures.

Deleuze and Guattari’s political notions about the opposition between the state apparatus and war/metamorphosis machines also stimulate new ways of thinking about global eco-politics and potential new forms and methods of resistance available to local communities.

The above discussion could do little more than provide a very brief introduction and overview of Deleuze’s complex thought. In the next chapter Deleuze’s ideas are deployed in an analysis of politics and resource-use management to describe the global state apparatus, described here as “Industria” -- a global web/pattern/system of power/knowledge feeding parasitically on the Earth and its communities. Then in the chapters to follow, these ideas are applied to the emerging theory of bioregionalism, the

history and ecological politics of the Bras d'Or, and finally, to Mi'kmaq ecological management and legal and political strategies.

Notes to Chapter Two

¹ I would like to reclaim here the word "radical" from Marxist geographers and emphasise that a non- and post-Marxist geography too can criticise the *roots* of contemporary problems.

² A complete list of acronyms used in this work may be found as Appendix C.

³ Critiques of deep ecology have been most virulent and unfair from social scientists working in the Marxist tradition. It will be argued below that this is a manifestation of reactivity (Nietzsche's slave morality) stemming from the Hegelian ontological negativity and implicitly Christian morality inherent to Marxism.

⁴ Merry's book provides a simple primer on Chaos, Self-Organization, and Complexity.

⁵ It should be noted here that an ontology of power is also central to Mi'kmaq stories of the creation. In Ruth Holmes Whitehead's (1988: 165) telling of the story of "Kluskap" (now more commonly spelled "Kluscap"), the world is made by a figure named *Kji-kinap*, which translates to "Great Power".

⁶ "Pointillism" is a form of neo-impressionistic painting. Neo-impressionist work was based on the principle that juxtaposed dots of colour (e.g. red and blue), are seen from a distance as a single colour resulting from their combination (e.g. purple).

⁷ The nuances and implications of this ontological "difference" will be explored in a separate section below.

⁸ As Wolch and Emel (1995: 632) point out, "Animals are the ultimate Other."

⁹ Jacobs uses the word "nation" though she evidently means "state". The importance of this distinction has been discussed at length by Fourth World theorists including Nietschmann (1994), Clay (1994), and Stea and Wisner (1984).

¹⁰ As will be argued below, this has some extremely interesting implications for ecology, and therefore, resource-use management. Lovelock (1979), in his discussion of how life forms appear to cheat on Newton's second law of thermodynamics (entropy), says, "The death sentence of the Second Law applies only to identities, to closed systems, and could be paraphrased 'Mortality is the price of identity'" (Lovelock 1979).

¹¹ One of the best explications of Deleuze's relationship to Bergson is provided by Boundas (1996).

¹² For example, when a company clear-cuts a forest and replaces it with a monoculture plantation, its actions are *reactive* because it has separated the power of the forest from what it can do. It has limited the *power* of the forest to be creative by replacing difference (biodiversity) with identity (monoculture), and therefore acted unethically.

¹³ In Nietzsche's view, this ethical revolt was required by a group of slaves (the Jewish people under Roman occupation) in order to make their subjugation bearable. It was simple pragmatism that people be taught to "turn the other cheek" and that "the meek shall inherit the Earth", for any other course of action or expectation in the face of the overwhelming force of the Roman oppressors would have resulted in death. It is nonetheless important to note that a literal reading of the *New Testament* reveals that the *praxis* of Jesus Christ was anything but passive, as his reaction to the money-lenders in the temples makes clear. Yet it can be safely asserted that for most of history the Catholic Church has presented a caricature of "Christ the lamb" which has promoted a passivity in the populace quite unlike the behaviour of the historical Christ. Very recently, Catholic "liberation theologies" have sprung up in Latin America which may be more active than traditional Catholicism, but they have not enjoyed widespread acceptance by the institution.

¹⁴ It is no coincidence that throughout the colonial era, colonisation was accompanied by a "softening up" of aboriginal peoples by Christian missionaries. This was most certainly the case in *Mi'kma'ki*, where the entire Mi'kmaq people converted to Catholicism shortly after the baptism of the Grand Chief Membertou in 1610 (Davis 1997; Henderson 1997; RCAP 1996: v.1, c.5, s.3).

¹⁵ White Jr. (1968: 1205) also argues that Christianity is also "the most anthropocentric religion the world has seen."

¹⁶ Todorov (1982: 161, 162) has noted that equality is "an unshakeable principle of the Christian tradition" and that "since Christianity is universalist, it implies an essential non-difference on the part of all men [sic]." In Christian morality this takes the form of making the expression of difference (especially *superior* difference) a *sin*. The *good* is to create and maintain the illusion of *equality* (before God).

¹⁷ It should be noted that Christian morality and belief in equality are implicit in Marxism. While the famous slogan "...from each according to his [sic] ability, to each according to his needs!" (Marx 1977, orig. 1874: 569) does acknowledge difference (in ability and needs), it asserts equality of "rights" to having needs fulfilled. A deep ecologist (see below) would certainly ask why human animals should have *rights* to having their needs fulfilled, since it would be absurd to grant similar rights to non-humans. Imagine, for example, if the individual "right" of every ungulate (Woodland Caribou, Moose, etc.) to eat as much food as it needed and to be protected from predators were affirmed and defended, how quickly herds would become overpopulated and eventually cause massive ecological damage by overgrazing. From the perspective of the thousands of species of wild animals being presently driven to extinction by anthropogenic habitat loss, would this not appear to have been precisely the consequence of belief in *human rights*?

¹⁸ The active/reactive typology is applied to Bras d'Or politics in Chapter Eight. In particular, it will be shown that initiatives such as those of the Bras d'Or Watershed Working Group (BOWWG) and the Mi'kmaq of *Unama'ki* are an active politics in contradistinction to the reactivity of state agencies and groups such as the Bras d'Or Stewardship Society.

¹⁹ The respondent actually said "differentiating", but the context of the sentence makes it clear that he meant "identifying". This is an interesting semantic point, since the common use of the verb "to differentiate" implies differentiation between discrete entities ("identification") rather than the acknowledgement of ontological difference.

²⁰ Earth First! may be accurately characterised as "neo-Malthusian" in outlook. Neo-Malthusian is a reference to Reverend Thomas Malthus' (1989, orig. 1798) famous *Essay on the Principle of Population*, first published in 1798. According to Malthus' formulation, the environment, in the form of the availability of agricultural resources, sets finite limits on human societies, particularly their ability to expand in population. Eventually (and he saw that point as imminent), the expanding population must outstrip the available food supply, and "positive checks" such as mass starvation will bring the population back down to within environmental carrying capacity. It has become almost trite now to point out that Malthus undertheorized the role of technological advancement, especially in agricultural techniques, which have for the better part of 200 years allowed food production to stay ahead of population growth. Those who suspect that the crisis predicted by Malthus was merely forestalled but not avoided have become known as neo-Malthusians. As demographer John Weeks (1996: 462, emph. orig.) grimly notes in his discussion of ecological degradation resulting from population pressure and the impacts of technologies employed to feed, clothe, house, and *amuse* that population, "Perhaps Malthus was right". Deep ecologists such as Devall and Sessions (1985) are very clear that overpopulation is most serious in "industrialised" states because of the effects of consumption. They do not, as suggested by some critics (e.g. Bookchin 1990), ignore spatial disparities in consumption or suggest that overpopulation is a problem only in the "developing" world.

²¹ This word is used here to refer to any culture in any place that was there "from the beginning" according to their myths, and includes the nomadic tribes of Northern Europe prior to the capture of their territories and their eventual cultural assimilation by Rome.

²² Despite Patton's suggestion, there is nonetheless some importance in the use of the word "war" in Deleuze and Guattari's formulation, most notably in the ways nomadic tactics often take the form of guerrilla "warfare" (this applies equally to hit-and-run non-violent tactics used by many civil society groups at Seattle and Québec City). For this portion of the theoretical discussion, "war/metamorphosis-machine" is used to capture the full range of meaning of the concept. Later, in discussing the Mi'kmaq, the term "metamorphosis machine" is used to describe Mi'kmaq legal, economic and political operations which deterritorialise state claims, while "war-machine" is used to describe Mi'kmaq direct action tactics, including those of the Mi'kmaq Warrior Society.

²³ Based on the author's own direct observations, it can be asserted here that it was when protesters in Québec City behaved like a war-machine (i.e., *nomadically*, where the site of their "attacks" could not be pre-determined by state security forces), they were successful in pulling down a section of the 3.4 metre security fence which had been erected to keep protesters away from the site of the Summit of the Americas. However, when they adopted sedentary strategies, returning again and again to the *same section* of fence, state forces were victorious.

Chapter 3 The Industria Hypothesis

Let me tell you why you are here. You are here because you know something. What you know, you can't explain, but you feel it. You've felt it your entire life. That there's something wrong with the world. You don't know what it is, but it's there, like a splinter in your mind, driving you mad. It is this feeling that has brought you to me... (Morpheus in Wachowski and Wachowski 1999).

It could be that, spiritual or temporal, tyrannical or democratic, capitalist or socialist, *there has never been but a single State*, the State-as-dog that "speaks with flaming roars." [...] A concerted destruction of all the primitive codings, or worse yet, their derisory preservation... The Earth becomes a madhouse (Deleuze and Guattari 1983: 192, *emph. orig.*).

"Identifying" Industria

As we enter a new century, the pace and severity of ecological dislocations which marred the latter half of the previous one are accelerating. While it is tempting to lay the blame for collapsing biodiversity, vanishing habitat, climate change and looming shortages of natural resources on the global economic system's dominant capitalist ideology, careful consideration of the results of the industrial experiment in socialist Eastern Europe or China reveals that while capitalism may be a sufficient condition for ecological problems, it is by no means a necessary one. What, then, can account for the worsening relationship between segments of humanity and the rest of the natural world?

Are Fourth World resistance movements, civil protesters in Seattle, Washington and Québec City, or environmentalists in the old-growth forests fighting one enemy or many?

If the world is undergoing a cultural homogenisation, then what is the *nature* of the emerging cultural hegemon? If we can discern an underlying *force* driving the human obliteration of the non-human world, then what new ways of imagining human politics does this recognition make possible?

Aboriginal peoples of the “Fourth World” have long argued that a set of forces unleashed by European colonialism preys on their territories and destroys their cultures. The argument in this chapter, building on earlier work (Hipwell 1997a) attempts to add to Fourth World theory by unmasking the common enemy of all Fourth World nations, and in so doing reveal that it is the same enemy being fought by activists of all stripes the world over. In order to accomplish this, it is necessary to look beyond superficial ideologies, at the deeper philosophical orientations that structure contemporary thought. As shown in Chapter Two, Deleuze’s work, alone, and in collaboration with Félix Guattari, helps us to see a little more clearly what is wrong with the ways of thinking that presently dominate human politics and resource-use management. At the same time, it exposes the existence of a self-organising and self-perpetuating system of power/knowledge which has come to dominate the majority of the infrastructure of civilisation. This system is called here “Industria”.

“Identifying” Industria is a project fraught with philosophical danger, and this should not be read as an attempt at a definitive account. Instead, some of Industria’s characteristics are outlined here and contrasted with the properties of the biosphere and non-Industrian human cultures in the hope of stimulating lines of flight that will make

biotic resistance to increasing Industrian intensity possible. The focus, as will be seen, is not on political ideology but rather on ontological and epistemological questions whose consideration might create some surprising alternatives to the political orthodoxy of Marxist/capitalist debates.

The Present Danger

They're selling water called 'naive' spelled backwards (The Mugworts 1995).

'Which corporation?' Bird asked.

'Does it matter? They've merged and remerged and taken each over so many times they're really all the same thing. They own... all the farmlands, the seeds, all the farm equipment... and the government -- what's left of it' (Starhawk 1993: 102).

The fault lay there, out there, in those evil electric lights and diabolical rattlings of engines. There, in the world of the mechanical greedy, greedy mechanism and mechanised greed, sparkling with lights and gushing hot metal and roaring with traffic, there lay the vast evil thing, ready to destroy whatever did not conform. Soon it would destroy the wood, and the bluebells would spring no more. All vulnerable things must perish under the rolling and running of iron (Lawrence 1928: 117).

It is widely acknowledged that industrial humanity is causing profound and potentially irreversible changes to the rest of the biotic community. Specific problems include the loss of biodiversity -- a euphemism for the highest extinction rate since the Palaeozoic and Mesozoic eras (Williams 1989); changes in atmospheric composition resulting in global warming, extreme meteorological events, and the destruction of the ozone layer (Kaufman and Franz 1993; Mitchell 2001) and the spread of anthropogenic toxic chemicals throughout the global food web (Beck 1992; Mittelstaedt 2000). When a global approach to ecological problems is taken, and it is recognised that the global biotic

community is most usefully thought of as a single, self-sustaining organism (Lovelock's "Gaia"), it becomes clearer that anthropogenic ecological degradation is at best pathological and at worst suicidal.

Linked to these global ecological challenges is the recognition that large-scale resource-use management approaches are failing to aid in what M'Gonigle (1989) suggests would be most aptly termed the 'development of sustainability'. In North America and elsewhere in the world, growing concerns about the replacement of wild forests by industrial monoculture plantations (Devall 1993; Hipwell 1997b; Williams 1989), the collapse of important commercial fish stocks (FAO 1998; Harris 1995; Rogers 1995), and the "mining" of soil by industrial agriculture (Blaikie 1985; Blaikie and Brookfield 1987), underscore the fact that conventional approaches to resource-use management need to be re-thought.

A common thread which emerges from these discussions is the notion that the needs of so-called "peripheral" communities have been largely ignored by government and corporate policy makers (Brownson 1995; M'Gonigle 1996). Demands by local communities for greater political empowerment pose a significant challenge to assumptions of the territorial sovereignty inherent to the state system. In particular, these communities object to the ways in which these state territorial claims have been utilised by trans-state corporations seeking access to natural resources (Knight 1994). Perhaps the most vocal among these communities are the aboriginal peoples of the Fourth World, who question the rights of state governments to make decisions regarding territory and resources which were annexed without their consent, especially where these decisions involve allocating resource wealth to corporations based outside the area of extraction

(Grand Council of the Crees 1995; Howitt et. al. 1996; Nietschmann 1994; Stea and Wisner 1984). Such concerns are echoed by scholars writing about the marginalisation of non-humans in contemporary politics (Devall and Sessions 1985; Manes 1990; Wolch and Emel 1995).

The Industria Hypothesis

“You can see it when you look out your window, or when you turn on your television. You can feel it when you go to work; when you go to church; when you pay your taxes. It is the world that has been pulled over your eyes to blind you from the truth... The Matrix is a system, Neo. That system is our enemy.” (Morpheus in Wachowski and Wachowski 1999).

The Leviathan is a cannibal. It eats its contemporaries as well as its predecessors. It loves a plurality of Leviathans as little as it loves the Earth. Its enemy is everything outside itself... The story of swallowings is the story of World His-story, which by its very name already prefigures a single Leviathan which holds all Earth in its entrails (Perlman 1983: 42-3).

Lovelock and others have shown that the biosphere constitutes a single, self-regulating and self-perpetuating system which could be considered “alive”. This observation is compatible with the new science of complexity, which studies how complex systems can become self-organising (Merry 1995). But it would appear that Gaia is not alone. There are reasons to believe that the diverse Leviathans that have historically struggled amongst themselves for planetary dominance have accreted into another self-regulating and self-perpetuating system, one that is parasitic on the living Earth.

This system is a global web of power/knowledge. It is not synonymous with the infrastructure of civilisation, since there are parts of that infrastructure not under central control. Nor is it merely the state system, but rather the multiplicitous expression of the

interplay between states and industrial technologies, and the political, economic and cognitive elites who control them. Its tendencies are toward striation, domestication, and monoculture, manifested in a continuum of decreasing intensity radiating outward from metropolitan centres (see Figure 3.1).¹

These systemic tendencies are a result of what James Scott (1998: 87) describes as “state simplifications”, all of which, he argues, “have the character of maps”, in that they summarise details thought to be important for certain aims, and ignore other details. In a discussion which closely parallels Deleuze and Guattari’s work (neither of these thinkers is cited), Scott (1998: 2) argues that the development of the state system depended upon a process of “sedentarization”. This included the creation of permanent last names, the standardisation of weights and measures, cadastral surveys and population registers, the invention of freehold tenure, the standardisation of language and legal discourse, the design of cities, and the organisation of transportation. “Sedentarization” (Deleuze and Guattari call this “striation”) was effected in order to “create a standardised grid whereby [complex, illegible, and local practices] could be centrally controlled and monitored.”

The imperatives of this system include growth, centralisation and homogeneity. These are evident in the drive toward increasing yields and monoculture in farming and (de)forestry, the increasing indistinguishability and ceaseless expansion of “world cities”², the disappearance of diverse human languages, and the precipitous decline in biodiversity wherever the system is strongest.

Metropolitan centres act like black holes, their *gravity* drawing labour and natural resources from the “wild zones” (Dalby 2001) for processing and consumption

Figure 3.1 - One Nature, Two Intensities

(see Figure 3.2).³ In Canada, the expansion of cities and their capture of rural territory and resources is accomplished through a processes of “amalgamation” and “annexation”, whereby urban centres take control over zoning and other aspects of municipal governance from surrounding rural municipalities. The urbanite-dominated council of the newly expanded city then tends to overturn local rural zoning restrictions in favour of high-density residential and industrial uses.⁴ The amalgamation process occurs in a hierarchical manner, with rural municipalities rarely even consulted, and almost always bereft of power to oppose the process initiated by provincial governments.

Many rural residents consider the expansion of cities to cause a *vital* loss.

Consider the comments regarding the opposition of cities and life related by a Mi'kmaq family interviewed in the summer of 1997:

M9: The only thing that's attracts people to a city are the people. It's not the city that attracts people to a city. There's no energy to be attracted to. It's all concrete, you know what I mean? The only energy there is people energy. What else would draw you to a city?

Researcher: So outside of a city where does the energy come from?

M11: Life.

M9: Everything that lives.

M8: Forests.

M10: Nature.

M9: Everything that's alive.

M10: That's alive and growing and breathing.

M11: Every animal.

M9: Even inanimate objects. We are all one and the same.

M8: We're all energy.

M9: We're all the same. We've got to co-exist with each other, rather than using it up and spitting it out in the atmosphere --

M8: And destroying everything that's in your path.

M9: End up making this an empty husk... I don't know. It's a lot of things (Focus Group 1997 - Int.).

In the “wild zones” distant from urban areas we find the greatest Gaian intensity, or wilderness.⁵ Linked to the progressive destruction (de-intensification) of wilderness is

Figure 3.2 - Flow of Natural Resources in Industria

the anthropocentrism of the Industrian world-view which was discussed in Chapter Two.

The global system is not synonymous with industrial capitalism; its qualities are also manifested in socialist states. Its 5000-6000 year evolution has been most brilliantly chronicled by Perlman (1983), who confirms that the Marxist “solution” to the problem of capitalism is, from the perspective of the biosphere, nothing more than old wine in new bottles. In confronting the existence of this system and developing a sustainable future, it would be pragmatic to remain open to the potential of capitalism under the territorial control of small communities rather than simply rejecting it as inherently unjust, self-contradictory and unsustainable.

This global system has been described elsewhere in a bewildering array of terms (see Figure 3.3). For example, University of Montana geographer Chris Field notes that today the northern boreal forest faces “the invasion of the *international industrial revolution*” (cited in Brownson 1995: preface, emphasis added), while Kirkpatrick Sale (1991) and countless others have spoken of the ecological threats posed by “industrial civilization”. This is the same entity referred to by Ould-Mey (1999) as “the global command economy”, and by Dr. Martin Luther King Jr., who described

[m]ammoth production facilities with computer minds, cities that engulf the landscape and pierce the clouds... Gargantuan industry and government, woven into *an* intricate computerized mechanism...” (quoted in Devall 1993: frontispiece, emphasis added).

Deleuze and Guattari speak of this system as the *Urstaat* or the State apparatus.

Although technically, any one of the terms in Figure 3.3 and above could be adopted as the standard description of the global system described above, for a number of reasons “Industria” is pedagogically preferable. A few examples should make this clear. Field’s “international industrial revolution” describes a process, not a thing. “Modernity”

<u>Term Used to Describe Industria</u>	<u>Source</u>
"The global city"	Dalby (1998)
"Leviathan"	Perlman (1983)
"Modernity"	Most "postmodernists"
"The neo-liberal international order"	Wallace (1998)
"Neo-liberalism"	Zapatistas in Wild (1997)
"The global economic system"	Wallace (1990)
"The capitalist world economy"	Wallerstein (1979)
"The global command economy"	Ould-Mey (1999)
"Industrial, capitalist, patriarchal society"	Fike and Kerr (1995)
"Industrial civilization"	Sale (1991) and many others
"Gargantuan industry and government"	Martin Luther King Jr. in Devall (1993)
"State-capital alliance"	Sandberg and Clancy (1996)
"Industrial growth society"	Tompkins (1993)
"The international industrial revolution"	Field in Brownson (1995)
"Single, planet-wide system"	Roszak (1979)
"The network system"	McTaggart (1993)
"Tame zones"	Dalby (2001)
"Western Civilization"	Numerous
"Biosphere people"	Dasmann (1988)
"Modern Western culture"	Wallace and Knight (1996)
"White society"	Numerous aboriginal interviewees
"The Termite People"	Kayapo people in Boorman (1985)

Figure 3.3 - Industria: Its Name is Legion...

is a temporal term and one with normative dimensions (“modern conveniences”, etc.). “Civilisation”, given its connection to the process of urbanisation, might be more appropriate, but the term has also taken on a normative dimension in contemporary society and implies that opposition to the global system is by necessity “uncivilised”, “primitivist”, or “barbaric”, whereas most critics would likely argue that it is possible to create a sustainable “civilisation” quite unlike the one presently dominating the Earth. “Industrial civilisation” implies falsely that a sustainable civilisation cannot include the use of industrial technologies and techniques. “Western civilisation” and “European civilisation” are both inadequate to describe a system that is now global in nature, and includes centres of power in such places as Tokyo. Economic terms such as Wallerstein’s (1979) “capitalist world economy” imply that capitalism is an essential feature of the system, which, as argued above, is untrue. Deleuze and Guattari’s (1983; 1987) “*Urstaat*” and “the State” promote needless conceptual confusion between the global system and the states through which it operates. Dalby’s (1998) “global city” obscures the existence of the global power structure in non-urban areas, for example in industrial agriculture and forestry operations.

Aside from these conceptual problems, many of these terms are also linguistically unwieldy. “*Industria*” can readily be changed to adjective form (“*Industrian*”) to describe processes or cultural attributes that are unique to the emerging global hegemonic system and its dominant culture. “*Industria*”, it might be added, also has a certain melodic resonance with “*Gaia*”. For all of these reasons, the neologism “*Industria*” is employed here.

Industrians are those humans who have surrendered their own will-to-power to Industria, i.e. whose ability to survive is determined by the “health” of the Industrian system. By this standard, relatively few humans are completely “Industrian”, though it is possible to discern a pattern of increasing dependence on the global technological system. In Latin “*Industria*”, means “diligence” (Nelson 1999), which Random House Webster (1998: 554) defines as “constant and earnest effort to accomplish what is undertaken; persistent exertion of body and mind”. This suggests that Industrians might be nicknamed “the busy people”. Certainly an atmosphere of constant toil characterises existence in Industria.

Industria can be seen as the confluence of Relph’s (1976: 90-117) “Five Media of Placelessness” (see Figure 3.4).⁶ It has been implicated in every significant global environmental problem. For Roszak,

[t]he problem the biosphere confronts is the convergence of all urban-industrial economies as they coagulate and thicken into a single planet-wide system everywhere devoted to maximum productivity and the unbridled assertion of human dominance (Roszak 1979: 33).

As such, this single Leviathan holding “all Earth in its entrails” (Perlman 1983: 43) can be considered the fourth, and final⁷ “ominous discordance” between humanity and nature (Sauer 1963b, orig. 1925). The reasons for this discordance are ontological in nature, as will be discussed a little later.

Industrian Political Economy

The relationship between Industria and its peripheries is one of complementary, but opposite processes of development and underdevelopment (deVries and MacNab-deVries 1987), meaning that there are serious constraints on the possibility of regions far

Adapted from Relph (1976: 90-117).

Figure 3.4 - Industria and the Five Media of Placelessness

from the centres of Industrian intensity to develop diversified economies (Wallace 1990; McCann 1987a). Even staples production, the mainstay of many rural communities, has tended to benefit industrial-urban centres rather than peripheral areas (Galois and Mabin 1987: 64).

Industrian infrastructure (roads, railways, shipping and air lines, telecommunications links, pipelines, electric grids, etc.) takes on a starkly arboreal form (Deleuze and Guattari 1987) at the periphery. Rural communities, though linked directly to urban centres, tend to be relatively disconnected from one another. This is epitomized by the rural quip “you can’t get there from here”, and has had the effect of decreasing the probability of regional economic integration. Though viable interdependence among peripheral communities is “a pre-condition of sustainable development”, development patterns in Canada, Australia, and elsewhere have worked in the opposite direction (Jacobs and Mulvihill 1995: 9). In the case of nineteenth century Cape Breton/Unama’kik, the result was the lack of an integrated regional economy, with staples producing regions connected more to urban centres than with one another (Hornsby 1989). This facilitates the net transfer of resources and wealth from rural communities to urban areas mentioned above and illustrated in Figure 3.2. All of these factors play out rather predictably in the way resources are allocated and extracted from Industria’s peripheries, with the result that under Industrian control, the economies of rural communities are undermined, key ecological values are degraded, and the possibility of developing sustainability is forsaken.

Fundamental to neo-Marxist or “political economy” analysis are the twin concepts “core” and “periphery” or “heartland” and “hinterland” (McCann 1987a). Gradus provides an explicitly geographic definition for the former pair of terms:

Core regions are territorially organized subsystems of society that have a high capacity for innovative change. They are the functional centers of organization and derive power from their ability to centralize economic activity, capital formation, decision making and other functions consequent to the modernization process. Peripheral regions are subsystems of low accessibility to core areas, typified by limited access to markets, means of production, private and public services, cultural facilities, and sources of economic and political power. Core and periphery stand in an asymmetrical relationship of dominance/dependence... (Gradus 1983: 389).

For McCann (1987a), these terms refer to the supposedly deterministic relationship between urban centres of industrialism (Industria) and the areas of lower Industrian intensity (rural communities) upon which Industria relies for its supply of raw materials. Weller (1977: 731) notes that concept of “hinterland” is geographically vague and “infinitely regressive”, as is “heartland”.⁸ The implicit hierarchy in these terms is itself problematic, implying as they do that hinterland regions are “behind” (Hipwell 1997b: 6, Note 9). Weller invokes Cranston to suggest that hinterland is a “boo” word and heartland a “hurrah” word in popular discourse (731).

Another difficulty with the use of the heartland/hinterland dichotomy is an overemphasis on the degree to which “hinterland” areas depend on the “heartland” for their “patterns of living, social organization, and [economic] well-being” (McCann 1987a: 10). This point is also argued by Maureen Reed (1995). While most rural communities would undoubtedly continue to exist with some form of local economy were they suddenly cut off from the Industrian network, since there is presently a net transfer of wealth from these areas to the metropolitan centres of Industrian intensity, it is equally

certain that Industrian centres could *not* survive if they were deprived of this supply of raw materials. In this sense, "dependency" theory has in important ways bought into the Industrian myth of superiority and priority. The reactive attitude of inferiority thus inculcated in rural peoples may -- combined with the undeniable structural barriers discussed above -- contribute to a tendency of people in areas such as Cape Breton/Unama'kik to look to Industria for bailouts rather than focusing on active strategies for local economic autonomy.

A purely economic analysis can not account adequately for the core-periphery dynamic. An analysis of power disparities arising from the political structure is also necessary (Gradus 1983). Moreover, any attempt to redress economic disparities arising from the political economy can not depend exclusively on socio-economic prescriptions, but rather must also include changes in political representation to more adequately reflect territory (399-400). This idea will be explored in more detail in Chapter Four.

A Global Protection Racket?

So there was a lot of tension from the RCMP. To me, they were like working for the company, you know what I mean? They were not respecting our beliefs. They were more concerned with the company's loss or whatever (M4 1997 - Int.).

The Mi'kmaq man quoted above was describing the use of state police forces to prevent protesters from disrupting the spraying of toxic chemicals over forests in Cape Breton/Unama'kik by the forestry corporation Stora in the late 1970s and early 1980s, but he could have been describing any one of dozens of contemporary conflicts. Though much of what is wrong with Industria can be accounted for by reference to systemic imperatives, it has also been argued that the upper-echelons of the Industrian power-

structure are dominated by people and institutions strongly implicated in what amounts to criminal conspiracy against the global civilian populace (Chossudovsky 1998; Tilly 1985). While scholars of Atlantic Canadian history need little reminder that state military forces are frequently used against the civilian populace in defence of industrial corporations, the globalization of this tendency is cause for alarm.

When Canadian students at the APEC summit in Vancouver in 1997 peacefully protested Indonesia's human rights abuses, they were pepper-sprayed by the RCMP in order to prevent their embarrassing Canadian Prime Minister Chretien and Indonesian dictator Suharto, with whom Chretien and the heads of large Canadian resource corporations had been carefully cultivating friendly relations for several years. It is similarly no coincidence that Australian-based corporations have major interests in Indonesia, particularly in offshore oil-fields near East Timor, and that the Australian government officially sanctioned Indonesia's invasion of East Timor in 1975 and subsequent brutal repression of the civilian populace.

In Québec City, April 20-22, 2001, even greater repressive force was deployed by the Canadian government to protect the sensibilities of North, Central and South American heads of state who had assembled at the "Summit of the Americas" to discuss the formation of a free trade area of the Americas. "Security" measures included 6000 armoured riot police officers, 1200 troops, and a 4 kilometre-long, three-metre high fence, and the indiscriminate and massive deployment of tear gas, pepper spray, and plastic bullets.⁹

In these cases, and more generally, not only do state governments put the interests of trans-state (often mistakenly dubbed "multi-national"¹⁰) corporations desiring access

to natural resources in peripheral regions ahead of human rights, they actively co-operate in repressing civilian opposition to exploitation. For example, the 'elite' Kopassus special forces of Indonesia who directed the recent massacre of civilians in East Timor were trained by the governments of Australia, Britain and the U.S., "largely in the techniques of internal control" (Watts 1999).¹¹

In what Ould-Mey (1999) calls "the global command economy", corporations utilise the global system of territorial states, the governments of which they have thoroughly penetrated, to gain access to natural resources from non-urban regions, and especially the territories of colonised nations (see Figure 3.5). In general, when the bureaucrats and politicians empowered to make decisions about the allocation of natural resources are centralised to large urban centres, this facilitates the activities of corporate lobbyists working to get a share of resources.

Corporate power also plays an active role in repressing communities who attempt to resist this exploitation of their territories. For example, during the Mayan indigenous uprising in Chiapas in 1994-5, the Chase-Manhattan Bank, according to a leaked internal memo, contacted the Mexican government and advised them to "get rid of" the Mayan freedom fighters known as "Zapatistas" if it wished to become a full participant in the new global economy (Wild 1997). A similarly disturbing situation occurred in Nigeria and has led to global calls for a boycott of Shell Oil, which was accused of purchasing weapons for state police forces engaged in repressing Ogoni nationalists protesting the destruction of their homelands by oil exploration. This alarming state of affairs (no pun intended) has led one prominent international relations scholar to conclude that state

Diagram showing how a) Nation territories tend to reflect ecogeographical features such as watersheds, b) State territories tend to transect such features and simultaneously divide Nation-territories c) the Industrian web transcends state boundaries, and d) the Industrian web utilises the territorial claim of State II, the capital of which is in the territory of Nation B, to extract resources from the territory of Nation A. Extraction at M1 and M2 could trigger violent inter- or intra-state conflict respectively.

Figure 3.5 - Nations, States and the Industrian Network

governments represent a form of “organized crime”, “protection rackets” designed to ensure that economic elites maintain an unequal share of wealth (Tilly 1985).

In the case of communities in peripheral regions of Atlantic Canada, this wealth takes the form of natural gas, minerals, timber, and fish. Sandberg’s (1991) excellent discussion of the incestuous relationship between the pulp industry and the Nova Scotia government during the “Big Lease” of 1899-1960 illustrates this perfectly (Sandberg 1991). Hundreds of thousands of hectares of the best forested land in Cape Breton/Unama’kik were handed over to American timber barons for scandalously low stumpage fees, and with ultimately no guarantee of local manufacturing jobs (see also May 1998). Disparities in access to resource wealth are most severely felt by the Mi’kmaq and other First Nations communities, who have discovered that Industrian structures are not only economically, but also racially biased.¹²

Even without the aid of state-sanctioned or state-sponsored violence¹³, Industrian elites are able to use the myth of so-called “global economic realities” to facilitate the net transfer of wealth from remote regions to Industria’s urban core. As residents of these communities watch helplessly, corporate rationalisations increasingly move jobs from their regions to urban centres, or at the global level, to jurisdictions where environmental and labour rights are weaker. When jobs are moved to the Industrian core, the children of rural communities have little choice but to follow. This “flight of youth” has radically altered demographic profiles, and the loss of youthful energy and innovation has contributed significantly to economic decline in rural Canada. Automation, invariably justified by large corporations as necessary for “competitiveness” (another code-term, this one used to describe the demands of Industrian shareholders for rates of return on

investment tantamount to usury), replaces human labour with machinery, and in the case of the fishery and (de)forestry industries, results in extraction methods with a greater negative impact on ecosystem health and resilience than labour-intensive methods of extraction. Moreover, the capital-intensive nature of industrial resource extraction limits the ability of local communities to participate in ownership, as the 1999 rejection of the coal-workers' bid to take over the Cape Breton Development Corporation (DEVCO) coal mining operations makes clear.

Pointillism in Industria

The most fundamental problem with Industrian thought is the ontology of identity or "pointillism" discussed in Chapter Two above. Industrian thought determines not only what constitutes knowledge but also who is designated as qualified to bear that knowledge (Foucault 1980), and those ways of knowing and knowledge-bearers not so designated are marginalised or exterminated.¹⁴ Pointillism has profound implications for the way politics and resource-use management are undertaken in Industria, and the ways these two areas of endeavour intersect with one another. These areas will be examined in turn.

Pointillist Politics

Industrian pointillistic politics are characterised by state or sedentary territoriality, individualism, and "representative" democracy. The principle of state territorial sovereignty has created a world neatly divided by linear boundaries into 189 supposedly self-identical states. This creates problems in a number of ways. At the most general level, state boundaries create notions of inside/outside (Walker 1993) which stand in the

way of global co-operation (as can be seen from the failures of the UNCED process and the Kyoto negotiations on climate change).

Moreover, the myth of the "state as container" (Taylor 1994) implies a degree of internal homogeneity which simply does not obtain. State boundaries also tend to transect rather than reflect eco-geographical regions, which increases the likelihood of trans-boundary ecological issues while simultaneously rendering more difficult co-ordination in addressing these issues. Paradoxically this is compounded by the fact that the majority of the oceans of the earth do not fall within any jurisdiction, and the resulting free-for-all has rapidly led to the obliteration of entire marine ecological communities (Rogers 1995). Finally, state boundaries seldom reflect the pre-state territoriality of human cultural groups, which has resulted in a geopolitical situation where the vast majority of military conflicts occur at the sub-state level (Smith 1997). This process of "State-building", which Nietschmann (1994) stresses is more aptly termed "nation-destroying", has contributed to the homogenisation of global culture and the entire disappearance of "minor" languages and ways of life.

The reification of states is a pervasive problem in Industrian society. As Magnusson and Walker note:

When sociologists talk of 'society' or economists discuss 'the economy' they are normally referring to something contained (geographically) within the boundaries of a state. Most of the concepts we use and the data we construct when speaking of economies, societies and politics may be understood as expressions of statist boundaries, and we often get ourselves into theoretical difficulties -- and self-righteous indignation -- when we forget the practices through which these boundaries have been reified historically (Magnusson and Walker 1991: 239, Note 2).

The Fourth World has seriously challenged the legitimacy of these historically reified State boundaries, giving rise to increasing numbers of territorial challenges from

colonised peoples (Stea and Wisner 1984; Nietschmann 1994; Hipwell 1997a).

Unfortunately, pointillist formulations are frequently reproduced by nationalist groups movements formed in the state image (for example nationalism in the former Yugoslavia), which contributes to violent conflict (CCPDC 1997).

While Fourth World opposition to the claims of state sovereignty is understandable, there remain considerable problems with formulations that will repeat the identity-based, exclusionary practises of the state system. The replacement of 189 larger states by hundreds or thousands of smaller ones runs the risk of increasing group territorial conflicts and problems of co-ordination in addressing environmental problems. This is especially true in post-colonial societies where the descendants of settlers now co-exist in territories with aboriginal inhabitants (Hipwell 1997a). The creation of an ethno-national state is akin to constructing a dam to protect the nation from the force of the river of Industrian political culture. Yet paradoxically the power of Industria grows with the creation of each new state.

Economic globalization has meant that the limited protections traditionally afforded by state boundaries have been effectively undermined by currency speculators and trans-state corporations (Chossudovsky 1998). Iain Wallace (1998) suggests that in the “neo-liberal international order” the power of corporations operating in global markets has effectively eclipsed not only that of governments, but of all the institutions of “territorialized civil society”.

The formation of states was to a significant degree predicated upon the myth of individualism as reflected in Hobbes' *Leviathan* (1968, orig. 1651: 185). Hobbes claimed that in “the state of nature” humanity was engaged in a “war of all against all”.

This myth has served ever since as the “prime assumption of modernity” (Henderson 2000b: 11) and the principal apology for the establishment of coercive, centralised political power. Deleuze makes use of 18th century philosopher David Hume to show that contrary to Hobbes’ assertion, human beings were never lost in an anarchy of individualism (note the ontological identity at play in this formulation) but rather were organised into *communities* (cited in Hayden 1998). Though these communities occasionally skirmished with one another, the situation could hardly be characterised as constant war.¹⁵ More importantly, neighbouring tribal communities tended to be “rhizomatically” (Deleuze and Guattari 1987) or horizontally linked through inter-marriage, shared territories, and seasonal festivals. As Simon Dalby (2000) notes, Bedford and Workman (1997) similarly challenge Hobbesian assumptions in their discussion of the Great Law of Peace of the Haudenosee (Iroquois) Confederacy.

Though Nigel Thrift (1993) argues that (post)modern life is characterized by a blurring of the distinction between *Gesellschaft* and *Gemeinschaft*, this cheapens the notion of community as it is understood at the Industrian periphery. Indeed, one might better talk of the destruction of community (*Gemeinschaft*) by individualistic, identity-based consumer society (*Gesellschaft*) through the diffusion of a seductive mass culture (on this point see Mander 1991).

Zimmerman (1951: 814) blames the threatened future on “rugged individualism run ragged”. He notes that “[t]he rugged individualist is not likely to be interested in the conservation of natural funds or stocks...” (27). These observations were echoed four years later by Price (1955). Petras (1994) has argued that community bonds and traditions must be conserved in order for there to be effective, collective opposition to

free market individualism. Michel Foucault, in his preface to *Anti-Oedipus*, alludes to Deleuze and Guattari's call for the formation of "group-subjects" as a form of resistance. He points out that the very notion of the "individual" is a product of power, and he counsels that "what is needed is to 'de-individualize' by means of multiplication and displacement, diverse combinations" (Foucault 1983: xiv).

As Nietzsche (1989, orig. 1887) foresaw, the promotion by elites of a reactive belief in individualistic equality -- "herd instinct" and "slave morality" -- has led to what has been billed as the democratisation of the world. In fact, as Esteva and Prakash (1998) point out, "representative" democracy is not in any significant way either representative or democratic, but rather a means for keeping the masses happy through the illusion of empowerment. The one area in which the Industrian populace has any power is in the expression of greed. Politicians and corporate elites are extremely sensitive to consumer demands, including demands for sufficient income to support continued consumption.

It is assumed falsely under the modern "democratic" system that all citizens are equally capable of wisely choosing their political representatives, and that a simple majority if these citizens is enough to create a legitimate government. Moreover, the way in which elections are conducted in "first past the post" systems ensures that political power interests are able to sway voters through advertising and mendacious promises, and that frequently only a minority of these voters is required for electoral victory. When the next election comes around, the fact that the masses have been bombarded by trivial information such as professional sports statistics, "Who Wants to Be a Millionaire" trivia questions, or the staged "political" machinations of "Survivor" contestants ensures that they are unable to remember clearly how and by whom they were previously deceived.

Since the majority of the electorate in Industrian democracy are urban consumers, and since Industria's growth is fuelled by the consumption of raw materials, representative democracy is directly implicated in the destruction of the biosphere. For Lynn White Jr. (1968: 1204), the issue is "whether a democratized world can survive its own implications". Under "representative" democracy, non-humans have no vote, and the votes of rural peoples most immediately dependent upon a healthy environment are "obliterated" by metropolitan voters (MacLeod 1989: 262-3). Spurred on by decision-makers whose sole interest appears to be economic growth and the consolidation of power, the Industrian majorities consistently vote with their repressed libidos (Deleuze and Guattari 1983; Ford and Hipwell 2001). These metropolitan voters are dependent upon and predominantly loyal to a global system which treats rural communities as resource extraction outposts, outposts where, in an era of increasingly automated resource extraction, the human population is becoming redundant. Put bluntly, for the majority of Industrials (as noted above, these are the people resident in and dependent upon the areas of greatest Industrian intensity), the destruction of rural communities, their way of life, and the wilderness surrounding them is "the price of progress". This suggests a distinctly urban answer to Dalby's (1999b) question, "*whose globalisation?*"¹⁶

Pointillist Resource-Use Management

I truly believe that even though the governments have delegated themselves to be the so-called stewards of these resources -- and I think that through time they have lost sight of their responsibilities, and they have allowed themselves to be influenced by these bigger companies. And by losing sight of their objectives they have lost sight that the objective of a company is not to protect the environment, but rather economics. Their main objective is how they can best maximise their resources for profits and ignore nature. (A. Marshall 2000 - Int.).

Recent collections by Boardman (1992) and Mitchell (1995b) demonstrate that in Canada as elsewhere, Industrian resource-use management has led to increasingly severe ecological problems. These failings stem from both political and philosophical issues. Politico-economic imperatives see the lion's share of natural resources consistently allocated to large corporations. By virtue of state territorial claims, governments centred far from areas of resource extraction are empowered to make decisions regarding resource allocation without the specific consent of the residents of the areas in question. Interestingly, the Mi'kmaq (see below), like other aboriginal nations such as the Haida (Richardson and Green 1989), the Gitksan and Wet'suwet'en (Morell 1989), and the Nuxalk (Hipwell 1997b), have noticed that the imposition of centralised control of resource harvesting seems quite consistently to increase the relative share of the resource taken by large, commercial interests at the expense of local communities. As noted above, these decisions reflect to a large degree the demands of individualistic urban consumers, as well as of industrial labour unions and corporate shareholders, rather than serving the interests of long-term socio-ecological sustainability in resource-producing areas.

Resource extraction corporations increasingly automate their operations, rendering human labour redundant, while simultaneously lacking any long-term vested interest in the sustainability of the resource being harvested. When resources are eventually depleted in one location, corporations, utilising state territorial claims, will simply move on to another area. One result of this is increasing pressure from resource corporations to open previously protected areas (wilderness preserves, game refuges, and parks) to resource extraction.¹⁷ These problems are compounded by an emerging

tendency in government to devolve management authority (including “self-policing” of regulatory compliance) to these same corporations. The result has been the over-harvesting of resources and destructive resource-use management practices in every sector.

The resulting frustration felt by local communities is evident in the words of a resident of the remote Bella Coola valley, British Columbia in 1996:

“[A] lot of these [logging] camps that I’ve been to, these guys are from God knows where... They don’t have families there. They don’t live there... They work ten-on, four-off. And then they come back again and just give ‘er shit... and make their money and leave... They’ve got no stake in where they’re at... They don’t think, ‘Holy Christ, I can’t show this to my kids in the next ten-fifteen years.’ They have no stake in it!” (quoted in Hipwell 1997b: 197).

The photographic and textual contributors to Bill Devall’s (1993) *Clearcut: The Tragedy of Industrial Forestry* make it abundantly clear that one of the things at “stake” is Gaian wilderness as ancient forests are obliterated and replaced by patchworks of industrial monoculture plantations.¹⁸ As Dan Eidt, the Director of Forest Management on Crown Lands for the Nova Scotia Department of Natural Resources (NSDNR), admitted recently “We have gone way beyond conservation and moved into the realm of managed forests” (Eidt 2000 - Int.). These Industrian plantations are designed for mechanised, large-scale resource extraction operations, not for local resource users or habitat values. Industria’s elites increasingly evoke the good of an undifferentiated “public” to justify their predations (Hipwell 1997b: 198-200; Willems-Braun 1997). This undifferentiated “public” is in political terms much more synonymous with the Industrian population discussed above than the rural human and non-human communities who must live with the ecological and socio-economic consequences of these processes.

Epistemological Chauvinism

Through a process of state- and church-run education which Marie Battiste (2000: 194) elegantly describes as “cognitive imperialism”, Industria has cultivated in its populace an unquestioning faith in the conventional scientific method. Conventional science’s pointillist preoccupation with static identities has made it more difficult for environmental scientists (especially biologists, as in the case of Darwinian evolutionary theory) to grasp the holistic expression -- “creative evolution” (Bergson 1907) -- of life in Gaia.

It might be objected that some level of abstraction is necessary to study and understand the role of various organisms in the ecological web. This is certainly true, but the problem is that there is a tendency in biology-based approaches to environmental “management” to deal with impacts on a species by species basis. The result is that while it might be determined for instance that an impact on one species might be within acceptable limits, the interdependence of the ecological web means that inevitably longer-term impacts on other species, some potentially unacceptable, will become manifest. This is the central difference between the science of biology, which is identity-based, and the new science of ecology, which is attuned to difference (Goldsmith 1998). At present, biology remains the primary discipline called upon by policy makers to provide analysis in support of environmental decision-making.

This is not to deny the usefulness of conventional science. The contributions of natural scientists in general, and biologists in particular, to our understanding of natural processes and therefore our ability to manage human use of natural resources are far too numerous to exhaustively list here. Johnson (1992b) argues that the flexibility of

scientific analysis provides us with the unprecedented ability to view phenomena either microscopically or telescopically, and that these abilities allow management at scales beyond the grasp of traditional societies. She suggests that conventional science has three primary characteristics. The first is reductionism, where understanding complex phenomena is achieved by breaking down data and reassembling it in different ways. This approach enables the rapid accumulation of data, and allows for the development of what DeWalt (1994: 124) calls “immutable mobiles”, or “information that can be transferred [and applied] without any transformation to any spatial or social location” . The second characteristic is objectivism, or the belief that observers must deliberately separate themselves from the observed in order to obtain accurate knowledge. Such an approach is taken in order to guarantee that subjective values and preferences do not “contaminate” the results of research; that the facts should speak, as it were, for themselves. Thirdly, science is positivist, or based on the belief that the proof of any proposition is in the method of its verification, or put another way, that anything measurable is scientifically real, and that what is scientifically real can be measured. As such, scientists are suspicious of knowledge systems in which “superstitious” explanations of phenomena are given. The positivism of science has ensured that testable hypotheses rather than metaphysical theories hold sway in the development of knowledge about the external world, and that in theory at least, in most cases this knowledge achieves greater correspondence with “reality” as a result. Each of these characteristics has enabled startling advances in technology and contributed to the spread of Industria around the world.

However, in recent years, a number of problems with the application of conventional science to resource-use management have come to light. The first is that when scientific research is translated into policy decisions, political considerations are sometimes given priority over the hard results of scientific research. Anna Steele, an environmental engineer working for the Nova Scotia Department of Environment and Labour, relates the following anecdote:

I'll tell you a little story about a meeting I attended in Neil's Harbour. [The Department of Fisheries and Oceans] came down to talk about the crab fishery. And they were saying that there weren't enough crab to go around. So I started asking them about their science, how they did their sampling, how they developed their models. And eventually I said, "Your science is flawed. Because your sampling is flawed then your interpretation and analysis are flawed. So basically you have come here today to establish political boundaries, not conservation boundaries." [...] Following that, because there is an election coming, this spring they said, in contradiction of what they were telling people the year before, because there was an election coming this year, [that] suddenly there was all kinds of crab. [...] Sometimes I think they don't go out and use the proper science because if they did they wouldn't be able to make those political decisions. Now next year, after the election, you are probably going to hear: "Oh my God, the crab stocks have been grossly depleted!" The same thing happened with respect to the cod fishery before... The politicians didn't want to say what the truth is. They didn't want to know what proper science said. They wanted to know what was politically expedient to get votes. And of course in fishing communities crab is everything. The crab fishery makes the world go around where they are, and that is votes. (Steele 2000 - Int.).

Moreover, scientists employed or funded by governments are sometimes discouraged from pursuing certain avenues of research, or the results of research are suppressed through implicit threats of dismissal or demotion (PIPSC 1998). As a result, discrete scientific "facts" are frequently picked and chosen by policy makers without adequate regard for their ecological context. A second problem is that while in theory a scientific approach should ultimately provide a complete explanation of all bio-physical

phenomena on Earth, in practice there simply does not exist the funding nor the adequately trained personnel to generate the volume of data which would be required for such an objective (Acheson and Wilson 1996). As such, scientists must rely on sampling and modelling of natural phenomena in order to make predictions about future trends and phenomena in wider areas. The emerging science of ecology has shown that the sheer volume of ecosystemic interactions renders precise causal explanations and prediction impossible. At best, scientists can hypothesise, as in stock-recruitment models for example, that fish populations will change predictably according to a consistent level of fishing effort, and then make suggestions based on statistical averages for sustainable harvest quotas.

From the holistic perspective of indigenous nations and others who perceive the world *differentially* as a web of complex ecological relationships, “the reductionism of science often leads to a woeful ignorance of the wider context within which the particular phenomenon under study occur... Complex systems and those characterized by myriad interactions are likely to be ignored” (DeWalt 1994: 124). DeWalt argues that reductionism is also problematic for resource-use management because the selection of which phenomena are to be studied is often based on the ability of researchers to break them down into researchable pieces. It also means that scientists often advocate changes to one ecosystem component without paying adequate attention to the implications for the overall system. Reductionist approaches by definition tend to oversimplify complex ideas and conditions to the point of minimising, obscuring, and distorting them (Random House Webster 1998: 1618) Svensson (1991: 132) argues that “white bureaucrats and technocratic experts... do not apply a holistic perspective, which is far more adequate

[than reductionism]...” Another problem DeWalt points out is that for a variety of reasons, limited research funding not being the least, there is a tendency for scientific investigations to focus on the short term, not looking at what the potential long-term implications of a given phenomenon might be.

In the fisheries as in other sectors a reliance on models provided by scientists has led to the collapse of chaotic ecological systems (Acheson and Wilson 1996). In Leslie Harris’ view,

...our biological knowledge is still so deficient that we can not be sure that particular populations represent one stock or many, whether spawning sub-groups make up genetically different stocks, or whether observed aggregations are fortuitous or dependent upon behavioural patterns as modified by fluctuating environmental conditions (Harris 1995: 133).

Harris also echoes Rogers’ (1995) claim that quotas assigned to fishery corporations are based on untestable hypotheses and averages-based mathematical models dependent upon data that frequently prove to be wholly inaccurate. Such errors lead in many cases to entire stocks being wiped out. In forestry, ignorance of ecological difference (as expressed in the multiple interdependence of flora and fauna in a healthy forest) supports a belief that monoculture plantations can be made viable through massive intervention with chemicals and genetically-modified organisms. Similar problems could doubtless be discovered in virtually every area of the management of human interaction with the rest of the natural world.

Towards a Post-Industrial Civilisation

If we somehow can change the mindset of the corporation -- by "the corporation" I mean that the government *is* the corporation -- if we were to harness all the energies just on remediating some of the impacts that have been posed to the environment, they could be so labour intensive that the unemployment would just disappear (A. Marshall 1997 - Int.).

At the forefront of any discussion of "development" must be the fundamental question of whether communities really wish to increase their functional integration into the Industrial economy. The United Nations Trade and Development Conference repeatedly stresses that globalization has been characterised by increasing systemic financial instability (Beauchesne 1999; UNCTAD 1998), raising for rural communities the unsettling spectre of a direct correlation between their degree of integration into Industria and their degree of vulnerability to potentially catastrophic global economic events.¹⁹

An awareness of the existence of Industria and the problems inherent to Industrial approaches to politics and resource-use management force a reconsideration of what has been conventionally understood as "development". Indeed, government emphasis on increasing the integration of rural communities into the Industrial economy is at odds with the recommendations of many "development" experts, who now stress the political empowerment of local communities, an emphasis on labour-intensive methods of resource-extraction and production, and support for cottage industries, co-operative financial mechanisms, and alternative economic ventures such as ecotourism (e.g. Esteva and Prakash 1998; Weaver 1978).

In summary, the Industrial-style development is characterized by ecologically and socio-economically unsustainable resource-use management practices, exacerbated

by the marginalisation of local knowledge, political decisions favouring large trans-state corporations over small businesses and community co-operatives, jurisdictional boundaries organized on sectoral rather than eco-geographical lines resulting in overlap, inefficiency, and conflict, and centralized political institutions in which so-called democratic governance erases the voices of rural communities in favour of the urban populace and powerful economic elites.

At the pragmatic level, the question remains of how such ideas might be brought to bear on human politics and interactions with the rest of Gaia. Clearly, an alternative way of ordering human affairs is urgently needed. At the theoretical level, one promising avenue is suggested by Black (1990), who, building on work by Blaikie and Brookfield, calls for a “regional political ecology” to bridge the gap between locality-based research and theoretical endeavour in development geography. Black feels that such work needs to pay greater attention to the “dialectical relationships” between economy and environment, the rôle of local governing structures in political dependency, and the agency of local people. A practical alternative has been termed a “bioregional” approach. Bioregionalism, which has important repercussions for the consideration of ecological problems, the design of alternate approaches to resource-use management, and the reconfiguration of human politics. In the next chapter, we will look at the solutions to the “problem of Industria” proposed by bioregional theorists.

Notes to Chapter Three

¹ What is meant here is that while it is possible to identify the Industrian system (of property laws, names, etc. as detailed in the discussion of Scott's work below) and the agents who control it (large corporations, bankers, political leaders, etc.) that its *effects* become progressively less intense the further one moves away from metropolitan centres of power.

² Incidentally, the fact that cities continually expand territorially, annexing land from adjacent areas, is an indication that at any given moment they are overpopulated (in that territorial expansion is necessary to accommodate the growing population, and because any animal the numbers of which have grown too large for its territory is by definition "overpopulated").

³ This process is accelerating, as are most other aspects of human life within Industria (Sachs 1998). Space does not permit a detailed examination here of how the combined processes of acceleration and time-space contraction might necessarily increase *gravity*, though this will be undertaken in future work, when I find the time to slow down.

⁴ This is precisely the process underway in Chelsea, West Québec, where the local municipal council is, at the time of writing, fighting a losing battle against being amalgamated with the urban centre of Gatineau.

⁵ Wilderness and Industria are not mutually exclusive binary categories. In the heart of the largest city we can still find wilderness, albeit in low intensities and at small scales. Similarly, as Ulrich Beck points out, no portion of the Earth is immune from contamination by anthropogenic chemicals, or isolated from Industrian appetites (Beck 1992). This said, wilderness as a concept is not empty of content, as numerous species require levels of wilderness intensity incompatible with human settlement or industrial resource use (including most forms of tourism).

⁶ However, the phenomenological approach embraced by Relph is deeply problematic due to its inherent anthropocentrism.

⁷ "Final" because it will either lead to humanity's extinction or else we will have learned how to establish a harmonious co-existence with the rest of the biotic community.

⁸ As will be discussed in Chapter Three, similar criticisms have been made of the "bioregion" concept. However, the alleged need for "precision" can itself be seen as symptomatic of Industrian pointillism or arboreal thinking. An ontology of difference emphasises that reality itself is "vague and infinitely regressive". This is why it is emphasised here that "Industriality" and "rurality" are *continua* which themselves form a rhizome of interpenetration. Bioregionalism will be introduced in Chapter Four as a strategy which could serve to "de-Industrianise" rural areas as a precursor to the creation of a post-Industrian global civilisation.

⁹ The author attended the protests, and was clubbed, pepper-sprayed, tear-gassed, and shot at with plastic bullets repeatedly despite having undertaken absolutely no illegal activities nor having attempted to pass police lines or the fence itself. Even former Progressive Conservative Industry Minister Sinclair Stevens, in an article entitled "A Police State in the Making", has denounced the "security" measures as "a provocation... an assault on all our freedoms" (Stevens 2001).

¹⁰ As Nietschmann (1994) and others have pointed out, it is erroneous to use the term "nations", of which there are more than 5000 on earth, to refer to the 189 modern states.

¹¹ Earlier reports confirmed that Western intelligence agencies knew of the planned genocide for months in advance yet did nothing to prevent it.

¹² There is considerable complicity by the media in this regard, as witnessed by coverage of the recent dispute over lobster fishing at Esgenoôpetitj. Media, including the Canadian Broadcasting Corporation, consistently differentiated *between* "fishermen" and Mi'kmaq, ignoring the fact that the Mi'kmaq fishery has been ongoing for thousands of years. The media also persisted in portraying the conflict as being over conservation rather than what it was really about: distribution of resources.

¹³ NATO can be best understood as the main body of the Industrian armed forces, though once again, as the experience of protesters at the 1997 APEC meetings in Vancouver, or on logging blockades across Canada shows, state and provincial police forces also frequently act against citizens in the interests of the Industrian power structure.

¹⁴ Consider the mass execution of so-called "witches" in Medieval Europe.

¹⁵ Warfare in tribal societies bore little resemblance to warfare in the era of states or the pre-state Leviathans of Europe and Asia. Tribal battles took on a highly symbolic form, and casualties were typically in the single to double digit range. Compare this to the estimated 250,000 killed in less than three months during the Gulf War of 1991, or the millions killed during the first and second World Wars.

¹⁶ "Industria" is the answer to another formulation of Dalby's question: The globalisation *of what?*

¹⁷ The rhetorical tool used in this game is the blatantly self-contradictory concept "multiple use".

¹⁸ The same is true of other sectors. For example in fisheries as wild stocks are decimated, production is taken up by aquaculture operations. Ironically, aquaculture further contributes to the destruction of wild stocks.

¹⁹ This is a lesson that has already been learned at the state level by Brazil, Mexico, and much of Asia, and at the sub-state level almost everywhere.

Chapter 4 Resisting Industria: a Bioregional Approach

Only where the state ends, there begins the human being who is not superfluous: there begins the song of necessity, the unique and inimitable tune.

Where the state *ends* -- look there, my brothers! Do you not see it, the rainbow and the bridges of the overman? (Nietzsche 1954, orig. 1892).

Oh, for a small state with few inhabitants! (Lao-Tzu 1992: Ch. 80).

Bioregionalism: Coming to Geopolitical Terms with Gaia

From the air it is easier to see that the land outlives the state, that mountain ranges and rivers are free to violate the boundaries and borders of civilizations (Weyler 1992: 21).

In the previous chapter it was shown that the dominant mode of human organisation, dubbed "Industria", has had and continues to have the effect of severely damaging Gaian health. Gaia is healthiest in zones of high wilderness intensity at Industria's peripheries, where Industria's power is the weakest, its infrastructure sparsest, and its population densities the lowest.¹ Wilderness -- and its correlate, Gaian health -- is quantifiable in terms of the level of biodiversity, the presence of large, highly-evolved "wild" mammals, and the size of contiguous ecosystems (minimal "island" effects), and is qualitatively obvious to anyone who takes the time to venture far beyond the

metropolis (the different “feeling” one has walking through an old-growth forest versus a monoculture plantation). To preserve this health it is becoming increasingly clear that the way politics is conducted must be substantially altered.

The reconfiguration of human politics at smaller scales than at present is a far more complex idea than a simple redrawing of political (b)orders. As Thom Kuehls sees it, the challenge faced by eco-politics

...cannot be reduced to a problem of geopolitical boundaries. The problem of ecopolitics is very much a problem of who we, as populations inhabiting political communities, are and how we relate to the earth. The problem of ecopolitics, in other words, is about governmentality (Kuehls 1996: 123).

In the context of ecopolitics, “governmentality”, as the word suggests, means the cultivation in the populace of an appropriate attitude toward both governance and the relationship of human communities to the rest of the natural world. Governance does not refer so much to top-down rule by formal government institutions, but to the assumption of responsibility by organisations of civil society and by citizens themselves (Lipschutz 1999).

In order to form a clearer picture of what politico-territorial strategies might make sense -- to communities wishing to resist further encroachment by Industria and develop socio-ecological sustainability in their local places, on the one hand, and to theorists concerned with the way localities interact at the global level (e.g. Dalby 1999c; Dalby 1998; Dalby forthcoming), on the other -- it is necessary to return briefly to the ontological ideas raised in Chapter Two above. To recap, atomistic understandings have obscured from view the fact that all phenomena are continuous, not discrete. Thus, all life forms are expressions of -- or intensities in -- one continuous life force (Deleuze and

Guattari 1987: 154). Similarly all regions are continuous with one another; that is to say, in no case is a portion of territory on the Earth entirely discrete from the next.² Even the highest mountain ranges may be traversed by the eagle, coastal zones harbour creatures equally at home in the water or on land, and the change from forest to grassland or tundra is a gradual transition, not an abrupt break. McGinnis (1999b) points out that humans and many of our closest neighbours in the biotic community -- bears, deer, and coyotes among others -- are edge or "boundary" creatures. By "boundary creatures" McGinnis does not mean that humans naturally need or create borders; quite the inverse is implied. Humans are among a class of beings whose habitat straddles different ecotypes, or which regularly move from one form of habitat to another.

How ironic, then, that Industrian territoriality adheres strictly to notions of discontinuity such as those manifest in the duality of inside/outside, and rather than celebrating and emphasising transitionalism and continuity, persists in reifying fixed linear borders. As argued in the Chapter 3, this reification characterises the state system, the geopolitical order that has gained hegemonic status over the last 250 years. The battle for complete dominance is ongoing: pockets of resistance may be found in Chiapas, the Caucasus, Esquimaux (Burnt Church, Canada), and in other remote regions in almost every state. These movements are what Deleuze and Guattari would describe as "nomadic", in contradistinction to the "sedentary" politics of the State. Patton (2000a: see especially Chapter 6) argues that nowhere does nomadic politics challenge Statism more powerfully than in the jurisprudence of aboriginal or native title.

Yet in postcolonial societies such as Canada, aboriginal title may be seen as a necessary but not a sufficient condition for the creation of a post-Industrian -- or what

might be most appropriately termed “Terran” (“of the Earth”, i.e., in harmony with Gaian systems) -- world order. Two issues are at play here. First, if a Fourth World challenge to state sovereignty simply reproduces pointillism at a smaller scale, replacing 189 large states-as-containers with perhaps thousands of smaller ones, then arguably none of the problems inherent to sedentary politics will have been addressed; indeed, many of the difficulties with co-ordination between allegedly discrete polities would be exacerbated. Secondly, given the territorial mosaic of aboriginal inhabitants, descendants of settlers, and more recent immigrants in states like Canada, the re-division of territory implied by Fourth World territorial nationalism would almost certainly lead to violent conflict with accompanying ecological damage. Clearly a third path is required, one which could, in a flexible manner, accommodate the aspirations for local autonomy expressed by Fourth World *and* other sub- or non-state communities, with the *Realpolitik* implied by existing sedentary modes of existence and the need for co-ordination among communities in confronting issues of ecological and social justice. In Deleuze and Guattari’s terms, the question is what form of “vital assemblage” might be created from the rhizomatic encounter between the sedentary State and the nomadic war-machine.

As will be argued in the pages to follow, the emerging theory of bioregionalism may well represent this third path. The Peace Research Institute Oslo (PRIO) and United Nations Environment Programme (UNEP) Programme on Military Activities and the Human Environment concluded that since so many international environmental problems are limited to a specific eco-geographical area, or bioregion, an increased focus on such regions should be a priority in addressing a broad range of security issues including environmental, politico-military, economic, and social security (PRIO/UNEP 1989: 21).

Similarly, Roussopoulos (1993) sees the “place” focus of bioregionalism as lending itself perfectly to ‘natural’ internationalism.

After a brief introduction to bioregional theory, emphasising its compatibility with a philosophy of difference, we will explore the history of geographical approaches to and critiques of “regionalism” in general. From there, we will assess more recent contributions to bioregional thought, in order to assess its potential as a bridge between nomadic and sedentary politics in a Terran geopolitical order. The difference that a differential approach would make to the way resource-use management is undertaken is profound, and we will therefore also look at how bioregionalism would facilitate a move away from pointillistic regimes. Finally, turning to the case of Cape Breton/Unama’kik and the Bras d’Or, we will look at what the preconditions of a successful bioregional politics for the island might be.

Bioregionalism in Theory and Practice

A bioregion is a living organism (Aberley 1993c: 100).

...it is through geographical studies that the link between sociology and ecology may be most readily forged (Moss and Morgan 1967).

Since humans are part of ecosystems, then socio-economic behaviour is one articulation of the human relationship with their biotic community (Barrows 1923). Awareness of this relationship, coupled with a recognition of the need to fundamentally alter the way Industrian humanity interacts with the Earth, spurred the genesis of the “bioregional” movement in the 1970s and has led increasing numbers of economic, political, and environmental theorists to advocate a bioregional approach.³

Bioregionalism can be seen as the theoretical convergence of contemporary environmentalist thought and the regional approach in geography. Put simply, bioregional theory criticises the way linear political boundaries frequently cut through ecosystems, and the way decision-making -- especially regarding resource-use and environmental protection -- is centralised to large centres often distant from the areas affected by those decisions. According to bioregionalists, communities of land and life must be reintegrated into overlapping political "units"⁴ defined according to a combination of eco-geographical and cultural features, and a significant amount of political power should be devolved from existing centralised state and sub-state governments to the bioregional level (Aberley 1993; McGinnis 1993; 1999; Sale 1991; Wadland and Gibson 1997). Frequently bioregions are defined according to watersheds or drainage basins. The most obvious and natural bioregional unit is an island (of any size). Islands are more than any other geographical formation "containers" of terrestrial ecological communities, since these communities are to a great degree isolated from other terrestrial communities by water. This is why bioregional theory tends to be continentalist (since continents can be viewed as giant islands) at larger scales (see for example Marshall 1993).

Five distinct assumptions underlying a bioregional approach may be divined from the literature:

1. That the cumulative impacts of industrial civilisation on the biosphere imminently threaten to precipitate the extinction of humanity and most other complex, highly-evolved life-forms, and to "roll back" Gaia's evolutionary achievements (quantifiable in terms of diversity and complexity) of the last several million years

2. That "the system" (Industria) can not be reformed through tinkering, but must be replaced by entirely new patterns of political and economic behaviour.⁵
3. That political decentralisation to smaller units defined by a combination of eco-geographical and cultural factors -- and co-ordinated through a vertical and horizontal federalism -- is a first step toward creating these new patterns of behaviour.
4. That any future human politics must emphasise a commitment to place.⁶
5. That humanity must accept some degree of ethical responsibility toward the non-human world.

While bioregionalism's strongest manifestations are found in informal community networks, its status as an academic theory has been strengthened by recent contributions, including those by Aberley (1993a), Alexander (1990), Cheney (1989), Cholette et. al. (1996), Fike and Kerr (1995), McGinnis (1993), McTaggart (1993), Parsons (1985), Sale (1991), Wadland and Gibson (1997); and most recently in an excellent collection edited by McGinnis (1999a).

The bioregional vision includes the ultimate redrawing of all political boundaries so that they reflect inter-nested bioregions. This is similar to Pogge's (1992: 48) idea of "cosmopolitan sovereignty" wherein political authority would be dispersed "over nested territorial units." Such a dispersal would accomplish a number of things, including facilitating appropriate land and resource-use decision-making and increasing the amount of local/traditional ecological knowledge used in such decisions -- in short, bringing culture, ecology, and economy together into a sustainable relationship. Speaking to fellow geographers, James Parsons suggests that "[bioregionalism] deserves our attention because its adherents are kindred souls" (Parsons 1985: 1).

Geography and the Regionalism Debate

Yet despite increasing interest in bioregionalism, it must be noted that the value of regionalism in general as a geographical approach has been the subject of vociferous debate. Opinions have ranged from the categorical assertion that “the regional concept forms the core of geography” (James 1952: 195) to the contrary position that the “hunt the region game” (Kimble 1996, orig. 1951) is inadequate for serious geographical research. Kimble argued that the world can not be neatly divided up into regional parcels, that geographers had been trying to “put boundaries that do not exist around places that do not matter” (499). This position stems not from a denial that different regions exist, but rather that it is impossible to precisely *define and measure* them. Indeed, Kimble’s criticism of geographers who believe they can divide the world up into “unitary entities” (494) is evocative of Deleuze’s critique of identity discussed in Chapter Two.

Regional geography was an early casualty of Industria’s consolidation era. After the technological “successes” of the Second World War, societal confidence in the hard sciences elevated sharply. Public and private funding for scientific research increased in turn, and this inspired many geographers to attempt to establish the credibility of the discipline as a nomothetic, or “law-giving” science. Schaefer (1953) argued that regional geography was ideographic rather than nomothetic, and could provide nothing more than isolated regional portraits (this accusation was levelled by Kimble as well) without heuristic value for scientists seeking to understand the way the world works through the development of generalisations and laws. Those geographers enamoured with the “State philosophy” (Deleuze and Guattari 1987) which imbued the quantitative revolution found

the “rhizomatic” qualities of natural regions -- with their porous, overlapping, and mobile ‘boundaries’ -- disturbing (e.g. McDonald 1966).

Peter Gould reminisces that the regional geographers had been defeated by

...a new generation, one that was both sick and ashamed of the bumbling amateurism and antiquarianism that had spent nearly half a century of opportunity in the university piling up a tip-heap of unstructured factual accounts (Gould 1979: 140),

though it is difficult to agree that works such as Sauer’s masterful *The Morphology of Landscape* deserve such a quick dismissal.

Though perhaps seriously wounded in the post-war skirmishes, regional geography was far from dead. Dickinson (1976: 382), in his survey of Anglo-American regional geography, went as far as to claim that the main lesson to be derived from an historical evaluation is that “the true geographer is a regionalist.” The alternative -- the division of the world into its extant political units (states and sub-state boundaries) -- was, as Fitzgerald (1943) had pointed out decades earlier, scientifically unsatisfactory and inadequate for the understanding of spatial relationships.⁷ Clyde Weaver (1978) wedded regionalism and a neo-Marxist political economy to suggest that regions should be defined socio-economically, and that work is needed to resist the functional integration of “regional population groups” into state and international economies.

While a purely ideographic approach to regionalism is scarcely given serious consideration any longer, “new” regional geographers are attempting to link empirically-derived local descriptions into broader theoretical frameworks (Archer 1993; Thrift 1991). Archer sees the new regional geography as a refrain of early 20th century French geography, especially the “organicistic” regional geography of Vidal de la Blache, and therefore in many important senses not “new” at all.⁸ Vidal de la Blache looked to

identify how various localised phenomenon are interrelated at larger scales, and how these larger wholes might be best understood as self-organising organisms.⁹ Kimble (1996, orig. 1951) similarly argues that it is links among places rather than borders allegedly dividing them that should hold the interest of geographers. This use of organicist metaphors and the attempt to link different places into a larger organic whole helps to reveal the dynamic interplay between humanity and biosphere (Buttimer 1990: 17) and illustrates the connection between a philosophy of ontological difference, Gaia theory and bioregionalism.

All of this said, the bioregional concept is open to some of the same criticisms launched at regionalism in general. The primary criticism is that regions are fuzzy, rather than rigorous concepts, and that regional studies do not easily lend themselves to the development of nomothetic theory. Alexander (1990) points out that while the boundaries of watersheds can be determined, they are inter-nested, making the choice of which watershed to consider a bioregion a purely cultural one. He warns against treating the bioregion concept dogmatically, and emphasises the need for researchers to give primacy to local community geographical identifications rather than attempting to impose some apparently “natural” political boundaries. Cholette et. al. (1996) note that while bioregionalists tend to envision some form of federation of regions, this vision needs to be more clearly articulated.

Bioregionalism versus Co-Management

There has been a great deal of interest in the resource-use management and aboriginal studies literature in the idea of “co-management” (Berkes et. al. 1991; Doubleday 1989; Nakashima 1993; Notzke 1995; Pinkerton 1989b; Shute 1994;

Sunderlin and Gorospe 1997; Winn 1991). Readers with some familiarity with this literature might perhaps wonder whether “bioregionalism” is anything more than the Emperor’s new clothes. While space here does not permit a detailed discussion of co-management, a few brief points can be made that will suffice to differentiate it from bioregionalism. Co-management as it is most prevalently described involves some measure of co-operation and power-sharing between aboriginal nations, state governments, and, on occasion, corporations. Sometimes co-management agreements might refer to specific groups of resource-users (e.g. lobster fishermen in Kearney 1989) in place of aboriginal groups. It is implicitly assumed in almost all of the co-management literature that state governments are the legitimate representatives of citizens in communities, and that therefore it is the state which should negotiate agreements with aboriginal or resource-user groups. Seldom does a co-management plan require the involvement of all citizens at the local level, nor even local representatives of all citizens. Political jurisdictions are not challenged by a co-management approach, nor is there questioning of political boundaries. In other words, co-management can be seen as *a way to make existing structures work*, whereas bioregionalism is about coming up with entirely new structures which involve all local people politically in the affairs of their community.

This said, there are undeniably strong affinities between co-management and bioregional theories, and bioregionalism could be made richer by an engagement with the co-management literature. As co-management expert Evelyn Pinkerton notes:

There is a renewed interest in the idea of resource-dependent regions and communities achieving greater control over their own development. This shift comes at a time of global economic change which has shown the inability of governments to buffer communities against change (Pinkerton 1989b: 7).

Lyon (1992: 139) suggests that “thought might be given to developing new institutions which would enable citizens and their governments to enter into meaningful, continuous dialogue.” This is particularly important for the protection of ecosystems in resource-use management regimes. Warner provides seven reasons for involving local communities in the management of marine resources:

1. Government departments do not have the capacity on their own to collect all the necessary data, as well as to provide ongoing monitoring and enforcement of regulations;
2. The involvement of the community in data collection and management decision making leads to greater compliance of the community with regulations and results in reduced enforcement costs;
3. Community-based management can lead to improved biological knowledge;
4. Community involvement promotes a sense of collective responsibility for the sustainability of the marine resources; it allows for a better balance to be struck between present and future consumption, and between commercial and other interests;
5. Community involvement provides a better perspective for defining the property rights of the community;
6. Community involvement helps to improve the relationship between the government and the fishers;
7. Community involvement enhances the status of fishing and other forms of marine resources harvesting as an occupation (Warner 1997: 36).

In their discussion of co-management and the fisheries, Sunderlin and Gorospe (1997: 334) explain that a premise of co-management is that both governments and communities have “a necessary but not individually sufficient role” in management, where governments provide “administrative, regulatory and infrastructural capabilities” while

communities contribute “their knowledge, their presence in the resource setting, and community-based mobilization.” They also note the need for devolution of management authority.

That bioregionalism and co-management seem to have developed along parallel yet mutually ignorant trajectories is unfortunate, and doubtless means that there has been much “reinventing of the wheel.” The latter half of this chapter, especially the discussion of appropriate knowledge, is an attempt to remedy this disjuncture.

Recent Developments in Bioregional Theory

One of the most practical contributions to bioregional theory -- and potentially of the most immediate interest to geographers -- is *Boundaries of Home: Mapping for Local Empowerment*, a collection of short essays edited by Doug Aberley (1993a). This excellent book explores some key issues in the development of a robust bioregionalism, including “the experience of place”, computer mapping and geographical information systems (GIS), and alternate ways of defining regions based on watersheds, cultural features, topography or vegetation. The latter half of the book is a longer essay by Aberley entitled “How to Map Your Bioregion” which provides practical instructions for community activists (Aberley 1993c).

One important weakness of Aberley’s work is that, despite his laudable effort to include discussion of aboriginal peoples in a manner which emphasises their inherent right to the territories they have occupied and used since before colonisation by Europeans, he unwittingly employs a mode of discourse which has the effect of erasing *present* aboriginal land and resource use. Specifically, notice the pervasive use of the past tense in the following passage:

...aboriginal nations *relied* so much on localized sources of natural resources for their survival, they *tended* to array their activities and settlements in ways which *demonstrated* their intimate knowledge of carrying capacity. In *traditional, pre-industrial era* societies resources needed to supply basic human needs *were harvested* in a yearly “round”. Many locations in a territory *were used* in each season to gain food and material goods. Knowledge of this complex pattern of opportunity *was passed* from generation to generation. Reinhabitants can learn important lessons by studying the land use of *pre-contact* Native cultures resident in their base map area (Aberley 1993c: 91, emphasis added).

The obvious mistake here is that he overlooks the fact that in many if not most cases, aboriginal nations continue to use natural resources in ways that are consistent with or at least an evolution of so-called “traditional” practices.¹⁰ This is most certainly true in the case of the *Unama’ki Mi’kmaq* (see especially Chapter Seven below), the Crees of James Bay (Berkes 1989; Grand Council of the Crees 1995), and the Nuxalk of the Pacific Northwest coast of North America (Hipwell 1997b).

An additional, and for the purposes of the present discussion much more significant, difficulty with this passage is the sub-text that “reinhabitants” or bioregionalists are by definition *not aboriginal people themselves*, an inference which also appears elsewhere in Aberley’s writing. For example, in the second chapter of *Boundaries of Home*, Aberley (1993b: 9) states, “What we seek is inspiration from the best attributes of those who remain close to the land...” He later continues this theme by advising his readers that:

The next step would be to investigate the aboriginal peoples who have lived, or who still do live in your bioregion, and to find out how they contextualized the folds and flows of your territory... it may be an incentive to speak with people you otherwise may not likely meet -- those who never left (16)

The identity of “we” and “you” versus “they” in these passages is unmistakable: bioregionalists, in this formulation, are not aboriginal people but rather the descendants

of settlers. Aboriginal peoples are the Other that should be investigated, albeit an Other with important lessons to teach “us” about how to live in the land appropriated by colonial settlement. In much later work, Aberley (1999: 15, *emph. added*) suggests that “[t]he way to the future can be found by *adapting* genetically familiar ways of life practised by...surviving indigenous peoples”. Once again, we must assume that the audience being addressed does not include aboriginal (indigenous) peoples, for why would indigenous peoples need to “adapt” indigenous ways of life? The dichotomy is even starker a few pages later in the same work, where Aberley asserts that “[b]ioregion-based cultures are knowledgeable of past and present indigenous cultural foundations, and seek to incorporate the best of these traditions in ‘newly indigenous’ or ‘future primitive’ configurations (37). To be fair, in cases where a bioregion contains a mix of aboriginal people and the descendants of later arrivals, Aberley’s discussion of incorporating “the best elements” of aboriginal traditions is reasonable. However, there are undoubtedly cases where 100% of the population of a bioregion is aboriginal, and this possibility is not adequately articulated in his work. These points are made not to denigrate Aberley’s prodigious achievement in making bioregionalism accessible to the public; the importance of this work cannot be overemphasised. However, given allegations that earlier bioregionalists such as Kirkpatrick Sale (1991) had naïvely produced work that could be used to support racial intolerance (for an example of such a critique see Goldstein 1999), it is vitally important that bioregional theorists develop a body of work that is inclusive of difference and does not unwittingly reproduce the ethnocentrism that many would argue played a large part in getting humanity into its current mess in the first place.

Taking quite a different tack on the bioregional question, McTaggart (1993) offers a systems approach. In his view, a regional system or "bioregional complex" can be understood as comprising, or being the product of, interactions between three classes of sub-systems: determinate biophysical systems (including geology, geomorphology, climate, and ecology), transitional network systems (economic systems, political systems, and ideological systems), and indeterminate local systems (inhabiting systems, communities, bioregions, cities, agricultural systems, and transport/communications systems). Biophysical and network subsystems each have a strong relation to local systems, but are only weakly linked to one another. The difficulty with this formulation is that cities and transport/communications systems are not at present a part of local systems as McTaggart suggests, but rather intrinsic parts of (in that they are controlled by) the "disembodied and deterritorialized" network system (Industria). This is due to structural realities (as identified by political economists) which place control over transport/communications and urban areas directly in the hands of state governments and transnational corporations. It is not difficult to agree with McTaggart that a key part of any bioregional strategy must be to wrest this control away from Industria and integrate them into the local systems. One thing missing from McTaggart's formulation is Gaia theory, which forces a consideration of the existence of at least one more "network system" -- one which can perhaps best be understood as containing or expressing all the others.

Fike and Kerr (1995: 22) argue that bioregionalists need to embrace eco-feminist perspectives which link the "domination, exploitation and abuse of nature, and the domination, exploitation and abuse of women."¹¹ Many such links undoubtedly exist,

and ecofeminist positions -- given their valuable insights and many evident commonalities with bioregional theory -- should continue to be advanced at continental bioregional congresses and in academic discussions along with numerous other critiques of Industria, including deep ecologist, Christian, Marxist, post-colonial, etc. However, it does not necessarily follow that in order to be an effective strategy bioregionalism “needs” ecofeminism any more than it “must consciously work against racism, homophobia and other forms of discrimination” (24) or embrace a “commitment to non-violence” (25).

The danger here is conflating a number of different agendas: most notably those of environmental sustainability and social justice. There are undeniably profound links between these two areas, but the precise configuration of a Terran politics must be the subject of debate and negotiation at both local and federal levels. There are for example on-going conflicts between those advocating a deep ecological position on the one hand and ecofeminists on the other, the latter accusing the former of race, class and gender discrimination (see Salleh 1993) while some deep ecologists suspect ecofeminism of a philosophically indefensible anthropo- (and more specifically gyno-) centrism. Similarly, while some Christian bioregionalists might join with Marxists in criticising the role of capital in ecological degradation, those of a more fundamentalist persuasion might be less comfortable with an agenda of anti-homophobia. In certain other contexts, an ethnically homogenous group of people in a bioregion they have historically occupied might understandably oppose an “anti-racist” platform which would affirm the “right” of people of other ethnicities to immigrate to that area.¹² Finally, in contradistinction to Fike and Kerr’s “anti-violence”, in some instances bioregional communities might feel quite justified in taking up arms to defend their homeland against state or corporate predation.

In a discussion of contemporary bioregionalism which does focus on scale, (Cholette et. al. 1996) contrast the de-centralism favoured by bioregionalists with the centralism of the political “Left”.¹³ The contention is that bioregionalists underestimate what the authors believe are the “defensive advantages” the state system offers to those wishing to resist “the hegemony of the global economy” (Industria). However, as indicated in Chapter Three, it is the state system itself which allows corporations to gain access to natural resources without having to answer to the local community about methods of extraction, levels of employment, or mitigation of local environmental impacts. In this sense the purported benevolence of the “welfare state” can be viewed as a romantic fantasy which masks the real issue: state claims of territorial sovereignty upon which global capital depends. If state territorial sovereignty were effectively undermined through devolution of political authority to smaller bioregions, then corporations hoping to gain access to natural resources would have to negotiate with local communities. That this is true is borne out by the experience of aboriginal communities in Canada. The courts’ acknowledgement of some degree of aboriginal sovereignty over natural resources has created a situation wherein resource corporations, especially those in the mining sector, increasingly enter into “impact-benefit agreements” with local communities before undertaking extraction operations (IGWG 1990; 1991; 1992; 1993; 1994; 1995; 1996; 1997; 1998; Cleghorn 1999; ICME 1999; Ker 1996). These agreements typically include guaranteed employment levels, skills-training, and community involvement in environmental impact assessment and mitigation. As will be discussed in greater detail in Chapter Seven below, the *Unama’ki* Mi’kmaq have actively

pursued and secured such agreements in the Bras d'Or watershed and elsewhere on the island.

Aside from their romantic view of the state, Cholette et. al. also find it necessary to construct a "straw-person" bioregionalist who allegedly overlooks the "fact" that "a bioregional utopia ... will not make all human problems and foibles magically disappear" and "multinationals or the American behemoth suddenly vanish" (36). This same, supposedly archetypal bioregionalist is a paranoid "radical" who pins the blame for environmental problems on a "conspiracy of rich powerful people". The bioregional vision is in fact much more complex and nuanced than this, recognising that systemic imperatives (see the earlier discussion of *Industria*) in many important ways render irrelevant individual human decisions -- or for that matter the sporadic co-ordination among the world's economic elites which any thinking person must acknowledge exists.¹⁴

A final problem with Cholette et. al.'s article is found in the afterword by co-author Frank Tester, who in criticising decentralisation as it is currently taking place in Canada has overlooked the reification of sub-state provincial boundaries both by corporate advocates of decentralisation and in his own analysis. Tester argues that as the federal government effectively off-loads responsibilities for social assistance, health care, unemployment insurance and education onto the provinces, the provinces are in turn pitted one against the other in a "race to the bottom" in contests over investment, as social and environmental standards are gutted to provide a more inviting climate for capital. The type of "de-centralisation" criticised by Tester, however, bears little resemblance to the kind of de-centralisation envisaged by bioregionalists. In many

regards, devolving responsibility to the ten provinces, most of them larger in terms of territory than many states around the world, does not represent a significant improvement over central control by the federal government. Indeed, it might be argued that under the *British North America Act* of 1867 (now officially called the *Constitution Act, 1867*)¹⁵, the provinces were established as effective resource protectorates under effective control by timber barons, fish barons etc. rather than as representative political units. Certainly the division of powers under the Act focuses more on the control over natural resources and the workforce needed to harvest them than it does on enhancing the expression of the democratic will of communities.

As intimated in the introductory chapter, for a bioregional federation to work in Canada, the current constitutional division of powers among the federal government and the provinces, and indeed the borders defining those provinces, needs to be fundamentally re-thought. The resulting bioregional political units would be much smaller in size and much greater in number than the existing ten provinces and three territories. This would mean that the ecological impacts of a hypothetical "race to the bottom" would be much more localised. It is also highly unlikely that many local communities would choose to sacrifice their surrounding ecosystems in favour of capital investment, while such sacrifices are much more easily considered, for example, by a bureaucrat in Toronto making a decision about the Lake Abitibi region 1000 kilometres to the north, or in Halifax making a decision regarding development in the Bras d'Or Lakes watershed. Experience in Canada shows that when such sacrifices are proposed or made by central governments, the communities that would be immediately affected by the resulting ecological damage strongly oppose the decision in question. Examples

include the aboriginal protests against over-harvesting of timber around Lake Abitibi by Abitibi-Consolidated (Timmins Daily Press 2000); the spruce budworm battles of Cape Breton/Unama'kik in the 1970s, where local people attempted to prevent the contamination of their water table by toxic pesticides (May 1982; May 1998); mobilisations by communities in British Columbia's Slocan Valley watershed against unsustainable logging (Valhalla Wilderness Society 1999); community opposition to the oil industry in Alberta (exemplified by the activities of Wiebo Ludwig's family) (Canadian Press 1999), and innumerable other community mobilisations against air and water pollution by local industries.

This is not to imply that local communities tend to favour the preservationism advocated by Industrian environmental movements. In the resource sector, community proposals tend to call for long-term socio-ecological sustainability, and include provisions for local employment as well as protection of key recreational and habitat values. An example may be found in the Bella Coola Local Resource Use Plan (LRUP) discussed in Hipwell (1997b).¹⁶

Bioregionalism in practice would have the most profound and immediate effects on resource-use management. The nuances of how resource-use management in a bioregional regime would look different are explored next.

Difference Applied: A Bioregional Approach to Sustainability

One of the striking aspects of bioregional theory is how well it accords with the Deleuzian ontology elucidated in Chapter Two above, and how in this respect it can be regarded as *an ecological politics of difference*. At the pragmatic level, the question

remains of how Deleuzean ideas might be brought to bear on human politics and interactions with the rest of Gaia. The incorporation of difference into a bioregional approach would have important repercussions for the consideration of ecological problems, the design of alternate approaches to resource-use management, and the reconfiguration of human politics.

Differential Politics

So what can an ontological theory of difference contribute to this discussion? First of all, a critique of identity would suggest that the individualism inherent to Industrian thought discourages citizens from recognising their interdependence and continuity with one another and the natural world. The contrasting focus on reciprocity and interpenetration in a philosophy of difference highlights the fact that human “individuals” are mutually constitutive, both with one another in human communities, and also with the larger biotic communities (Leopold 1947) which sustain them. As noted in Chapter Two above, this is the main premise of Naess’ (e.g. 1993) argument for a “deep” ecological ethic.

Individualism has also undermined notions of community. This is of central importance, for as Weaver (1978: 406) has pointed out, “[f]unctional power is dependent on the suppression of regional consciousness and the will of territorial communities.” He argues that this suppression must be countered by a doctrine of territorial development which through “willful community action, selective regional enclosure, and strategic regional advantage” (397) will usurp the unequal exchange created by the political economy of Industria. His solution hinges in part on diverting resources presently siphoned off by Industria back into the local economy. A focus on the service or

residential sector can replace former dependence on the export market, he argues, since like the global economy, "a space economy at almost any scale is capable of generating its own growth" (407).¹⁷

Differential Resource-use Management

The typical approach of governments to natural resource-use management has not been to acknowledge ontological difference and devolve decision-making power to the community or bioregional level. Instead, it is the pervasive practice to reinforce state *identification*, invoke Hobbesian metaphors such as Garret Hardin's (1968) much-cited "tragedy of the commons" and impose strict central controls on access to natural resources (Ostrom 1990). Such decisions are based on Hardin's argument that people using "common property" behave anarchically and in narrow pursuit of their individual short-term interests unless subjected to external coercion. This is an error, for as Warner points out,

Hardin later recognized that much of his characterisation of the negative aspects of the commons, which according to his analysis 'remorselessly generates tragedy'... was based on a description, not of a commons regime in which authority over use of the resources resides within the community, but of an open access regime, unregulated by any... social consensus Warner (1997: 34).

As Sandberg and Clancy put it:

Many empirical investigations have concluded that most open-access resources are in fact common property resources managed under a set of community rules and responsibilities. It is generally outside pressures that set in motion a process of excessive resource use, degradation and exhaustion (Sandberg and Clancy 1996: 44, Note 8).

Rogers (1995) has similarly noted that the term "common property resources" is repeatedly and mistakenly used to describe situations which would be better described as

open-access capitalism. Such open-access situations come about when tenure has been taken away from local communities (“enclosed”) and put in the hands of distant centralised administrative bodies. Community regulation, therefore, represents a “middle path” between the horns of the false dilemma -- anarchic individualism *or* state individualism -- which motivates current resource-use management policy.

A differential resource-use management approach will recognise that generalisations about the sustainability of resource-extraction based on large-scale scientific research are likely to generate micro-level problems, whose cumulative interactions can produce large-scale collapses such as those witnessed in most natural resource sectors in recent years. Generalisation means that harvest rates determined to be sustainable for a natural resource over a large area are likely to result in either over-harvesting (leading to ecological collapse) or under-harvesting (leading to economic collapse) at the local level. In the case of the fisheries,

large, mobile and efficient fleets can easily over-harvest a stock, and also cannot efficiently harvest small surpluses from minor stocks without a very high degree risk of over-harvesting. For this reason many small stocks are not harvested or effectively managed (Richardson and Green 1989: 260).

A model can be found in local systems of resource-use management developed over long periods of time. Numerous studies have demonstrated the existence of sophisticated cultural systems for environmental management and self-regulation by aboriginal peoples (see for example Blackburn and Anderson 1993), and other local resource users, a concept best described as ecological micro-management (EMM). Acheson and Wilson (1996) contrast the intellect-based, model-building approaches of large-scale resource-use management with the “folk management” practised by local

fishers who rely on intuitive epistemologies. One of the key characteristics of folk management is that what is regulated is *how* rather than *how much* fishing is done. Since ecological systems are chaotic, the authors conclude that small-scale and intuitively-based “parametric management” has a demonstrably greater likelihood of success than large-scale, purely intellect-based approaches. Such observations about the value of intuitive knowledge in resource-use management have been repeated in numerous case studies of traditional management regimes (see for example DeWalt 1994; Gottesfeld 1994; Johannes 1993; Swezey and Heizer 1993).

EMM often represents the most efficient and productive management technique at small geographical scales, by enabling discrete and flexible decisions to be made regarding harvest regulations. Just as importantly, EMM includes proactive measures such as habitat enhancement. EMM is by definition applied to small management units, which offers two advantages:

Management of small units eases the problems of obtaining information on biological processes, since it is easier to learn the intricacies of a small zone than a large one. Local-level management would presumably be more able to frame rules that fit local conditions that take into account local practices and norms. This in turn should result in a higher degree of political support (Acheson and Wilson 1996: 589).

EMM practices focus on the maintenance of regular biological processes or system parameters such as spawning potential,¹⁸ habitat, and migration paths. Knowledge of system parameters at small geographical scales is the speciality of Lo/TEK, and the development of appropriate practices to maintain these parameters characterises Lo/TEK-based EMM. One example of this is Saami fjord fishers, whose gill nets were designed to allow the biggest cod to escape, ensuring the survival of a healthy breeding stock (Eythorsson 1993). Similar principles underlie the “double-gauge” (maximum- and

minimum-size) rule first implemented earlier this century in the Maine lobster fishery after pressure by local fishermen, which has had a positive impact on lobster populations (Acheson 1997).

In aboriginal communities micro-level harvest regulations historically took ritual form. Swezey and Heizer (1993: 300) found a “remarkable similarity of form and function throughout Native California” of first salmon rituals that were “overtly managerial, conservational, or organizational in effect.” Socio-cultural control by “formulists” (ritual specialists responsible for managing the salmon harvest) included restricting harvest times and allowing sufficient escapement based on micro-ecological conditions. EMM rules are enforced by informal community pressure (Acheson and Wilson 1996). Voluntary compliance with these culturally-developed harvest regulations is typically almost universal and allows a sustained and sustainable yield of natural resources (Pinkerton 1989b).

Fisheries EMM can involve habitat modification and enhancement, the creation and/or maintenance of spawning areas, the removal of obstacles to fish migration,¹⁹ or the seeding of shellfish into public beds.²⁰ EMM of forests can involve controlled burning to promote the growth of wild foods and reduce the risk of cataclysmic fires, or selective harvesting of trees and other resources, or even non-lethal timber harvesting techniques such as those traditionally practised by the Nuxalk and other aboriginal nations on the Northwest coast of North America (Hipwell 1997b). Detailed knowledge of local conditions is a prerequisite to the success of such techniques.

EMM also involves finely-tuned harvesting practices that can respond to micro-level variations in stock levels and reproductive rates, allowing the efficient harvest of

small surpluses. By contrast, technologies employed by large-scale industrial resource users, such as feller-bunchers used to clear-cut forests, or factory trawlers and drift-net vessels on the open seas, are incapable of this kind of refined harvesting technique. In Industrian fisheries management, for example, managers set quotas based on average populations at large geographical scales. This means that pond-specific stocks can be wiped out if their sustainable harvest rate is below the centrally-determined average for the larger population. From this perspective, changes in allocation regimes to privilege such micro-level harvests would seem to be in order. Unfortunately, Industrian resource-use managers have so far not recognized this form of harvest as an effective management strategy which could be applied more widely, and cling dogmatically to harvest allocations which favour trans-state corporations over small-scale harvesters in resource-based communities.²¹

The Insurrection of Subjugated Knowledges

In order to provide the volume of locally-nuanced information required for differential management, local people's "subjugated knowledge" (Foucault 1980: 81) must be brought back into management systems, and in order to facilitate this, management units must be significantly reduced in size. In addition, ecologists should be recruited by government and industry in greater numbers in order to bring a relational, differential approach to bear on ecological problems.

Observations about the value of intuitive knowledge in resource-use management have been repeated in numerous case studies of traditional management regimes (see for example DeWalt 1994; Gottesfeld 1994; Howes 1980; Johannes 1993; Swezey and Heizer 1993).

Although considerable problems exist regarding the synthesis of conventional science and local/traditional ecological knowledge (Lo/TEK), a prerequisite to such an integration relates to the scale at which decisions are made. When decisions are centralised and made by managers far from the resource setting, there is less likelihood that there will be significant inputs from local people with immediate, corporeal knowledge of the local ecology into questions of resource allocation or the development of harvesting/extraction regulations (Hipwell 1998).

While Lo/TEK epistemological systems are commonly associated with subjective, intuitive, and holistic knowledge, it should be made clear that Lo/TEK is strongly empirical as well. Local ecological knowers focus more upon the relationship between things than on the things themselves. Since biological relationships endure and evolve, understanding them requires empirical, diachronic (small area, long time period) data, and because they are continuous and mobile, they can only be fully grasped with the aid of intuitive or instinctive processes.

Moreover, while scientific knowledge is predicated upon “a world view where society is conceived of as an entity apart from nature, able to manipulate its environment in the pursuit of its own ends” (Howes 1980: 342), Lo/TEK includes “symbolic meaning” established through oral history, place names, and spiritual relationships, and operates with a cosmological understanding distinct from science/ecology in that it necessitates reciprocity toward the community, including non-humans (Berkes 1993). In this vein, the Mi'kmaq phrase *mset no 'kmaq* translates roughly as “we are all related” and carries with it the implication that non-human organisms and even geological structures and water are enspirited and deserving of moral consideration. Similarly, in his analysis of

Gitksan and Wet'suwet'en management of salmon harvesting on the Skeena River, British Columbia, Morell notes that

In the Gitksan and Wet'suwet'en view of the world, fish and all other animals are seen as conscious beings who possess intelligence, power and spirit. The world is seen as a complex partnership in which all species have important roles to play. The partnership functions smoothly and to the benefit of all as long as all the partners perform their roles properly (Morell 1989: 232).

From an ecocentric or deep ecological perspective, it is absolutely critical that the science underlying resource-use management embrace such an ethical position.

A bioregional politics would, by devolving decision-making authority to the areas where the effects of these decisions are felt, increase the likelihood of Lo/TEK being included in those decisions. Moreover, it would give greater control over resource-allocation to the people who have the greatest interest in long-term sustainability. Cynics might suggest that this will not always be the case -- that there is evidence that local control can lead to real "tragedies of the commons". While this seems doubtful for reasons already articulated, such criticism could be adequately dealt with in a revamped federal system. As Esteva and Prakash (1998: 172) argue, "[l]imited functions not absorbed by local political bodies can then be entrusted to larger umbrellas, webs and other institutions which respect the [democratic] principles applied at the grassroots." A federal government, might for example, be charged with developing minimum environmental *standards* with the participation of bioregional representatives, within the confines of which bioregional communities would be free to develop their own allocation and management regimes.

Deleuze's work on the epistemological importance of legitimising "wisdom of the body" shows that the intellect on its own is prone to misunderstanding ecological realities

and engaging in general representations that obscure the small-scale variations which lived experience makes apparent. This strongly suggests that physical experience of the "resource-setting" is essential to sound management decisions.

However, all political decisions -- including those regarding environmental protection and resource-use management -- are presently centralized to large urban centres. This alone is problematic since it results in resource-allocation which favours larger, urban-based corporations over small, local businesses.²² It is compounded by the fact that the civil servants and corporate executives who jointly make these decisions -- like the majority of the voters and consumers who ultimately choose these decision makers -- are almost universally urban residents, increasingly detached physically, mentally, and culturally from the natural world.²³ Thus, resource-use management decisions have been entrusted to precisely those people who are the least epistemologically equipped to make them. One might go further, and suggest that the same is true of most academics advising these decision makers.

One of the most important and contentious issues in resource-use management is the ways in which place-based knowledge can be integrated with conventional (Industrian) science. Industrian natural resource managers presently place more value on the opinions of conventional scientists (who often have little or no direct experience of the ecological setting in question) than on the Lo/TEK of local residents, despite mounting evidence that Lo/TEK usually contributes to a more accurate and nuanced understanding of ecological processes (World Bank 1995; DeWalt, 1994; Johannes, 1993).²⁴ Bowers (1999) identifies the ideological underpinnings of the persistent privileging of conventional science over Lo/TEK (which he calls "low-status

knowledge”), arguing that “institutional values” include assumptions of autonomous individualism, the progressive nature of change, anthropocentrism, the authority of scientific knowledge and empowerment through technology. Goldstein (1999) explicitly ties this debate into bioregionalism, arguing from the perspective of phenomenology and structural anthropology that a bioregional epistemology must utilise some combination of *Lo/TEK* and conventional science. This mirrors the conclusions reached in research into integrating *Lo/TEK* with conventional science in fisheries management (Hipwell 1998). However, the case for *Lo/TEK* need not depend on the structuralism (and some would say environmental determinism) of anthropologists such as Roy Rappaport (1979). A far stronger case for the inclusion of *Lo/TEK* may be made based upon Deleuze’s epistemological arguments since *Lo/TEK* always includes “wisdom of the body” and in general can be understood as a knowledge system attuned to the interconnections, reciprocal interpenetrations, continuity, and fluidity which characterise the natural world.

Thom Kuehls has pointed out that new understandings of ecology force us to rethink our old preconceptions of permanence, simplicity and unity in nature (Kuehls 1996: 11-12). Deleuze has shown that reality is characterised ontologically by difference, or in other words that all things are intensities or multiplicities in a continuum of substance, not static, but in a process of unceasing change. The intellect, in order to make sense of the world, imposes a grid-work of static identities over this continuity, resulting in an atomistic view of reality. While this epistemological strategy is greatly useful in many regards, if ontological difference is forgotten, then attention to interactions among things is underplayed. Deleuze went further and emphasised that the intellect is actually incapable of fully comprehending the nature of ontological difference, and that the

intuition, or “wisdom of the body”, is required in order for people to have accurate knowledge of the world.

The literature on Lo/TEK makes clear the fact that local ecological knowers focus as much upon the relationship between things as on the things themselves. They acquire knowledge of these relationships through a sophisticated combination of historical memory, intellect, and wisdom of the body (“gut feelings” etc.). While Lo/TEK epistemological systems are commonly associated with subjective, intuitive, and holistic knowledge, it should be emphasised that wisdom of the body is strongly empirical as well.

There is far from a consensus on the accuracy of Lo/TEK or its merits relative to conventional science, but it is clear that the two epistemologies bear many similarities (see Figure 4.1). Indeed there is little doubt that in some cases Lo/TEK may simply prove to be wrong about local ecology. However, there exist sufficient examples of Lo/TEK providing superior assessments that its continued epistemological exclusion can be no longer justified. The observations of local resource harvesters would at a minimum provide a sounding board for the conclusions reached by scientists, and the discussions between each type of knower will likely generate productive investigations into aspects of ecology which might have otherwise been missed. At the very least, local people will notice small-scale nuances in ecological interactions and species behaviour completely overlooked by biologists focusing at a larger scale.

The inextricable relationship between power and knowledge means that synthesis between conventional science and Lo/TEK will require political as well as cognitive action. Berkes emphasises that because Lo/TEK and conventional science are

Lo/TEK versus Conventional Science

Similarities	Differences
Intellectual process: Imposition of order on disorder	Data sources: Lo/TEK - resource users Science - specialized researchers
Organization: Bodies of data systematised according to an internal logic	Transmission: Lo/TEK - oral tradition (narratives) Science - written
Data acquisition: Empirical observation	Speed: Lo/TEK - slow accumulation of information Science - rapid accumulation of information
Methods: Observation, comparison, classification	Methods: Lo/TEK - does not use isolated experimentation. Science - uses isolated experimentation
Concepts: Nature as system of relationships	Data type: Lo/TEK - mainly diachronic (small area/long time period) Science - mainly synchronic (large area/short time period)
Goal: Acquisition of objective knowledge	Analysis: Lo/TEK - holistic, qualitative Science - reductionist, quantitative
	Ethical Stance: Lo/TEK - normative (human role in and responsibility toward nature) Science - value-neutral

Adapted from Mailhot (1993) and Berkes (1993).

Figure 4.1 - Lo/TEK and Conventional Science Compared

[r]ooted in different world-views and unequal in political power base, these two systems of knowledge are certainly not easy to combine. Serious attempts at integration inevitably come up against the question of power sharing in decision making (Berkes 1993: 6).

The involvement of local communities in resource-use management through bioregional arrangements may represent the most practical means of achieving such power sharing. A bioregional politics would, by devolving decision-making authority to the areas where the effects of resource-use management decisions are felt, increase the likelihood of Lo/TEK being included in those decisions. Moreover, it would give greater control over resource-allocation to the people who have the greatest interest in long-term sustainability.

A Thousand Plateaus: A Bioregional Federalism?

We call a "plateau" any multiplicity connected to other multiplicities... in such a way as to form and extend a rhizome (Deleuze and Guattari 1987: 22).

A politics of difference will require quite radical adjustments in the way politics has been traditionally understood. Simple decentralisation to smaller territorial units merely reproduces the problem of identity, and begs the question of co-ordination at larger scales (Dalby 1998: 313). Similarly Fourth World nationalism, while being a legitimate and understandable response to colonialism, will require new conceptions of sovereignty and territoriality if it is to avoid reproducing the group ethno-territorial identifications that have led to so much bloodshed in the Balkans and elsewhere.²⁵ For this reason, bioregional theorists have suggested that post-state political configurations must include a more flexible notion of territoriality, one where boundaries are fluid rather than fixed. The task is to establish "rhizomatic" (Deleuze and Guattari 1987) connections

among human members of specific places, between humans and the rest of the biotic community, and among different bioregions. The question of how such bioregions might be associated in new forms of federalism “hasn’t yet been articulated with sufficient clarity” (Cholette et. al. 1996: 35), though there seems to be some potential in the sharing of sovereignty both horizontally and vertically (Pogge 1992).

Marshall (1993) sets out the following bioregional categories: neighbourhood, community, bioregion, sub-biome, biome, continent, and planet (see Figure 4.2).

Whereas Marshall’s taxonomy is vulnerable to questions such as, “Where exactly does the Southern Great Prairie sub-biome begin and end?” in the case of Cape Breton/Unama’kik, such a delineation is made simpler by the fact that it is an island with eco-geographical features (including climate, topography, vegetation, fauna, etc.) and cultural features (history of settlement, ethnic mix, economy, etc.) quite distinct from the rest of Nova Scotia and other parts of the Northwest Atlantic Maritime biome.²⁶

Bioregions are multiplicities of individual human and non-human actors, human tribal groupings (political and cultural organisations), animal tribes (packs of coyotes, murders of crows, schools of fish) and the biophysical context (habitat) of all of these actors. The preceding argument has attempted to make the case that organising economics and politics on such multiplicitous lines is a prerequisite to reintegrating human activities into local ecological communities and the broader global ecosystem called Gaia.

It was noted earlier that some critics suggest local control can in fact lead to “tragedies of the commons”. It is undeniable that since no one bioregion can be a container of ecological phenomena -- winds move pollutants across continents, mammals

A Bioregional Taxonomy		
General Geographic Categories	Examples from (Marshall 1993)	Examples from the Case of the Bras d'Or
Neighbourhood	Timber Creek Watershed	Indian Brook Watershed (Eskasoni)
Community	Bois d'Arc Creek Watershed	Bras d'Or Lakes East Bay Watershed
Local Bioregion	Red River Flats	Bras d'Or Lakes Watershed
Sub-Biome	Southern Great Prairie	Cape Breton/Unama'kik
Biome	The Great Prairie	Northwest Atlantic Maritime Biome
Continent	Turtle Island (North America)	North America/Turtle Island
Maritime Watershed*	X	North Atlantic Ocean Watershed
Planet	Earth	Earth (Gaia)

Adapted from (Marshall 1993)

The taxonomy developed here for the Bras d'Or implies that Canadian provinces such as Nova Scotia and Newfoundland and U.S. states such as Maine and Massachusetts belong together in one political unit, and that Cape Breton/Unama'kik should be an semi-autonomous entity within that unit. From a bioregional perspective, the inclusion of Cape Breton/Unama'kik in Nova Scotia, and indeed the very existence of Nova Scotia, makes no sense whatsoever.

* In Marshall's categories, the maritime watershed is ignored. This is an error, since international co-operation is necessary to protect marine ecosystems.

Figure 4.2 - Bioregional Taxonomy

and fish commonly migrate thousands of kilometres -- there is at least the potential of conflict among bioregions, and of over-harvesting of natural resources over larger areas. As such, the issue of co-ordination among bioregions deserves consideration.

What is required is that plateaus be formed by connecting bioregions into rhizomatic federations, ideally at the continental level.²⁷ The word rhizomatic is used to stress that the arboreal, top-down hierarchical relationship of state governments to sub-state units is rejected in the vision of a bioregional federalism.²⁸ The precise configuration of such a rhizomatic politics will require a great deal more work than there is space or time for in the present discussion, but some preliminary considerations of the resource-use management aspects come to mind.

It will be recalled from the discussion of Industria in Chapter Three that at present, for all the talk of the "withering" of the state, state claims to territorial sovereignty are an absolutely fundamental precondition for the exploitation of natural resources by corporations based far from the area of extraction and using increasingly automated technologies. As such, while there is clearly a need for inter-bioregional co-ordination in management of mobile resources such as fish (e.g. through assigning maximum quotas to the various bioregions concerned), and in general for a federal authority with the power to develop and enforce minimum environmental standards, bioregions must hold the authority to develop their own allocation and management regimes.

As suggested earlier, a post-Industrian, bioregionally-organised civilisation might best be called "Terran", since it would exist harmoniously with Gaian systems and would be *grounded* in specific places on the Earth. Rejecting the exclusively digital, CD-like

compartmentalisation of thought and action which typifies Industria, a Terran civilisation would be analog, like an LP recording, adapting and responding to changes in a continuous flow of life, and in Buttimer's (1990: 28) terms, "rediscover the art of dwelling". In Nietzsche's (1967b, orig. 1886) terms, this would entail tempering the "Apollonian" spirit of Industria with the "Dionysian" spirit of aboriginal peoples. In short, bioregional politics will be about nomadic alliances on the smooth space of a deterritorialised Earth. And it is in the smoothest spaces of Industria -- at the periphery -- that bioregional resistance has the greatest hope of success. As Nettie Wild -- in her documentary of the Zapatista uprising -- says of the Chiapas village of La Realidad, "In English, it means "reality". This is where the road stops, and the rebellion began" (Wild 1997).

Attempts at establishing a bioregional politics in the Bras d'Or watershed of Cape Breton/Unama'kik have to date been unsuccessful, due to a combination of factors including the power-imperatives of Industria, the lack of a clearly identifiable community at the watershed level, the historical annexation of Cape Breton/Unama'kik by the province of Nova Scotia, and unresolved political conflicts between the Mi'kmaq nation and the Canadian federal and provincial governments. Yet recent conflicts, such as that between Mi'kmaq and non-Native lobster fishermen in the wake of the Supreme Court of Canada (1999a) *Marshall* ruling recognising Mi'kmaq treaty rights, highlight the need for the establishment of local institutions dedicated to the resolution of conflict and the establishment of conservation and allocation regulations developed by residents of specific bioregions. Next, we will look at how the Industrian capture of Cape

Breton/Unama'kik has caused serious cultural and ecological damage, and poses a significant barrier to bioregionalism.

Notes to Chapter Four

¹ Gaian "health" is not synonymous with some "pristine" myth. Scott (1998) points out that peasant agrarian systems in non- or pre-industrial societies, for example, were able to provide food for humans and simultaneously exist symbiotically or complementarily with surrounding wild ecosystems. See also the discussion of ecological micro-management below.

² As can be seen from this sentence, pointillism infests language as well as action. The terms "portion" and "the next" falsely imply precisely the discontinuity rejected by an ontology of difference.

³ An excellent and thorough history of the bioregional movement is provided by Aberley (1999: 13-42), and will not be recapped here.

⁴ See Note 2 above.

⁵ In this regard a commonality between bioregionalism and "deep" or "radical" ecology may be discerned. See Zimmerman (1994).

⁶ This is an obvious refrain of Relph's (1976) work on authentic and inauthentic attitudes toward place.

⁷ This may help to account for the pervasive and -- from a Fourth World perspective (Nietschmann 1994) -- perverse use of state-based statistics by geographers embracing the later "systemic" or "nomothetic" rejection of regional geography.

⁸ Of course, Archer was writing before the publication of Thrift's (1993) irredeemably urban reaction to untold months at UCLA in the infinitely mobile madness of Los Angeles. There is much that is new, though little that is organic in that piece.

⁹ Compare this to modern complexity theory (Merry 1995) and Gaia theory.

¹⁰ For an excellent discussion of how the notion of "traditional" aboriginal practices is used to further neo-colonial appropriation of aboriginal territories, see (Keen 1993).

¹¹ All specific page references estimated from an electronic version of article. For a more detailed discussion of eco-feminist perspectives see Hessing (1993) and Mies and Shiva (1993).

¹² This is a major problem in Indonesia.

¹³ The linearity of the "left-right" spectrum in classifying political philosophies is so simplistic as to have little or no analytical value. Though Cholette et. al. they do not acknowledge this problem, it becomes evident as they grapple with the fact that bioregionalism appears to simultaneously contain "left" and "right" wing visions. As the Green Party slogan goes, "Neither left nor right, we are in front!"

¹⁴ For example, on the corporate imperatives of growth and profit, which must override any individual executive's moral preferences, see Mander (1991).

¹⁵ The recent name changes are confusing. When the *Constitution Act, 1982* was enacted, the legislation formally changed the name of the pre-existing *British North America Act* to the *Constitution Act, 1867*.

¹⁶ It is noteworthy that since the publication of that research, the provincial government of British Columbia, seen by many as being greatly influenced by large (de)forestry corporations, has killed the Bella Coola LRUP, replacing it with a Land and Resource Management Plan (LRMP). The LRMP covers a much wider geographical area and allows the Chief Forester (a Victoria-based civil servant) to retain the authority for setting timber harvest levels. This effectively negates the possibility of the degree of local community control envisaged by the LRUP committee.

¹⁷ Weaver may be wrong on this latter point since growth as it has traditionally occurred depends on the input of external resources. That is precisely why the global economy is not sustainable: the Industrial economy must draw more and more heavily upon resources (and pollution sinks) further and further from its core(s). This is true at the local, state, or global scales: an industrial economy depends upon a resource hinterland, and where growth means increased consumption of resources, that hinterland must either be expanded (e.g. through colonialism or neo-colonialism) or more intensively exploited. The problem, simply put, is the belief in the possibility of infinite growth in a finite world (though there is some potential for "soft" growth in knowledge/service intensive economies). Certainly if *population* is allowed to grow, material consumption (e.g. food) must increase, and eventually reach finite limits.

¹⁸ A vivid example of how important spawning potential can be is the cod. A mature female cod can produce 8,000,000 eggs each spawning. Even given the 99.9 percent mortality rate for eggs, larvae, immatures and adults, this means that just one mature female will, if given the opportunity to spawn,

increase the cod population by 8000 individuals every year (Harris 1995, 135). Harris appears to have made a minor miscalculation and states that the 99.9% mortality rate on 8,000,000 eggs results in the survival of 800 mature cod.

¹⁹ As practised by Mi'kmaq gaspereau harvesters (see Chapter Seven below), and Gitksan and Wet'suwet'en (Morell 1989) or Nuxalk (Hipwell 1997b) salmon harvesters.

²⁰ As practised by the Mi'kmaq Eskasoni Fish and Wildlife Commission in *Unama'ki* (EFWC n.d.) and clam fishers on the New England coast (McCay 1989).

²¹ In fact, an internal Department of Fisheries and Oceans memorandum (Breton and Payne 1998) written in response to a DFO-commissioned report Hipwell (1998) which urged increased allocation to small-scale fishing operations, stated explicitly that departmental policy is to maintain fleet allocation shares at historic levels.

²² This is most evident in the fisheries (Rogers 1995) and in forestry (Hipwell 1997b). It is "problematic" in that it contributes to the depopulation of rural areas, as rural youth are forced to migrate to cities looking for employment. This in turn leaves fewer people with a cultural attachment to the local ecosystem(s) living in these areas, which I would argue leads to less-sustainable resource-use management practices.

²³ Porteous' (1990) work on 'soundscapes', 'scentscapes', etc. suggests a new approach to comparative research into the impact of urban living on geographic sensibilities. As sensory experience of the natural environment is curtailed by technological interference in Industria (one is unlikely to hear the call of an owl in a downtown neighbourhood or over the stereo system in a Lexus SUV, nor smell the blooming of wildflowers amidst the stench of automobile exhaust and designer fragrances), it seems likely that urbanites are losing their intuitive knowledge of how to live harmoniously as members of the Gaian community.

This seems to be reflected in the consumption decisions and electoral behaviour of urban people.

²⁴ The term Lo/TEK is used here to emphasise that while such knowledge frequently has "traditional" elements (i.e. incorporates information collected over generations) its local character is most important. The more popular term TEK is used almost exclusively to denote aboriginal knowledge, falsely implying that non-aboriginal resource users have no such knowledge. Lo/TEK is the purview not just of aboriginal peoples but of any local community of resource users. In addition, the acronym hints at the *corporeality* of this knowledge, and the fact that it is not dependent on high-technology to be gathered or transmitted. That said, many resource users groups, including the Mi'kmaq of *Unama'ki*, are utilising technologies such as Geographic Information Systems to facilitate the storage and transmission of this knowledge.

²⁵ See Patton (2000: Chapter 6) for an in-depth discussion of the implications of aboriginal title as a "war-machine with de-territorialising effect".

²⁶ This is reflected in the fact that in Mi'kmaq political history *Unama'kik* has always been a distinct political district.

²⁷ The intractability of state politics is not ignored here, and it is acknowledged that initially bioregional federalism will be practised at the state level. However, continentalism such as manifest in NAFTA, the European Union, etc. raises the hope that if the bioregional groundwork is undertaken, this will, in bioregions situated along state borders, help to erode these hitherto impermeable boundaries and that eventually continental federalism will 'naturally' emerge.

²⁸ It should be mentioned in passing that arboreal systems are actually "bottom-up". The way in which Deleuze and Guattari use the word implies that they are thinking of upside-down trees when they refer to hierarchical arboreal politics.

Chapter 5 Industrian Capture of Cape Breton/Unama'kik

[Its] lack of separate Provincial status or any regional government, despite its population being considerably in excess of the Province of Prince Edward Island, means that decisions affecting Cape Breton are made outside it. There have been suggestions that this has not always been to its benefit.... (Royle 1993: 173).

This is not a democracy (G2 1998 - Int.).

Colonisation as Capture

If anything is made clear by the case of Cape Breton/Unama'kik, it is the falsity of the notion put forth by Garth Stevenson that in Canada the terms “region” and “province” are synonymous (cited in McCann 1987b: 26).¹ It is only by statistical sleight of hand, where economic data are aggregated at the Provincial level in order to show how provinces relate to one another in the “Canadian” economic system, that such a conclusion could be supported. Cape Breton/Unama'kik is for historical, cultural and geographic reasons distinct from the province of Nova Scotia, which since 1820 has claimed sovereignty over the 10,300 square kilometre island, and most importantly, over its resource-wealth. It was argued earlier that state² claims to sovereignty form a key part

of the web of Industrian power, giving access to resource wealth to companies or government agencies based far from the areas where extraction is undertaken. In the case of Nova Scotia, the claim of the provincial government, based in Halifax, of territorial sovereignty over Cape Breton/Unama'kik means not only that decision-makers reside in Halifax, but also that the majority of the electorate which chooses the government that rules over Cape Breton/Unama'kik resides off-island.

In order to understand Industria's parasitic relationship to Cape Breton/Unama'kik, it is necessary to look back at the history of the island prior to and after its colonisation by proto-Industrian European powers from 1500 onward. The Mi'kmaq occupied the territory of *Mi'kma'ki* (present-day "Atlantic Canada") for at least 1500 years prior to European arrival, and in that time had developed a sophisticated culture with democratic political institutions³ and a resource-based economy.

Colonisation was an incremental process; initially the French and Basques formed a working partnership with the Mi'kmaq, while later the British waged a war of extermination against the land's aboriginal occupants to clear the way for waves of settlers. Yet despite the differences in approaches among the different colonial powers, in all cases Cape Breton/Unama'kik was treated primarily as a resource-extraction outpost or a "population sink" to mitigate the overpopulation of Europe and accompanying depletion of resources on that continent.

That said, in the early colonial period European powers acknowledged Mi'kmaq territorial sovereignty, a fact reflected in the "Covenant Chain" of nation to nation treaties signed between European powers and the Grand Council of the Mi'kmaq (Patterson 1987). One Mi'kmaq administrator pointed out that the treaties did not even discuss

territory, which was uncontested, but rather dealt only with Peace and Friendship. It was only later that the British began to systematically disregard their treaties with the Mi'kmaq and proceed as though their own sovereignty over the Atlantic region was uncontested. This deterritorialisation has proceeded uninterrupted since Canadian Confederation. Today, Industria siphons billions of dollars of resources (fish, timber, oil, gas, etc.) from *Mi'kma'ki* (Atlantic Canada) without offering any compensation or share in decision-making to the Mi'kmaq. When the Mi'kmaq attempt to assert their treaty-backed and court-affirmed rights to a measure of control over resources, governments respond with violent force and arrests. Nowhere has this been clearer in recent memory than during the confrontation between the Mi'kmaq and the Canadian Department of Fisheries and Oceans at Esgenoôpetitj (Burnt Church).

The experience of non-Native communities in the region is similar. The Atlantic provinces as a whole are economically disempowered in comparison to the rest of Canada. Cape Breton/Unama'kik in particular has been the site of intensive resource exploitation coupled with the violent suppression of residents fighting for a more equitable share of the wealth generated by this extraction.

Re-Inscribing the Mi'kmaq

In providing an historical overview of Cape Breton/Unama'kik history, a serious effort will be made to redress in some small way the conspicuous erasure of the Mi'kmaq from most historical and contemporary accounts. Thrift (1991) discusses the importance of recognising "absence as presence" in academic writing, since these absences effect the erasure of difference. In this light, one of the most troubling aspects of the literature on

Cape Breton/Unama'kik and the Atlantic Provinces is the invisibility of the region's aboriginal inhabitants. In historian Brian Campbell's (1987: 7) view, "[a]ll too often, surveys of Cape Breton/Unama'kik history display only a passing interest in the island's aboriginal inhabitants and the way they lived before the coming of the white man."

An example may be found in Royle' (1993) otherwise informative discussion of the position of Cape Breton/Unama'kik in the global and Canadian political economy, where he mentions the Mi'kmaq only twice, both times in a dismissive tone: "Only a few descendants of the island's original native inhabitants, the Mi'kmaqs, remain..." (172) and "...as with PEI, though there are some Mi'kmaqs... the majority of the population are descended from migrants from the British Isles" (173). The enormous upheaval posed by Mi'kmaq land claims aside, the fact that Cape Breton/Unama'kik contains the largest concentration of Mi'kmaq people in all of Atlantic Canada, or that the Mi'kmaq suffer disproportionately from socio-economic inequality, is for some reason not considered important enough to warrant even brief discussion in Royle's account.

Even more detailed analyses of the culture and economy of Cape Breton/Unama'kik such as those provided by Wynn (1987; 1998) fail so much as to mention the existence of the Mi'kmaq. While this might be justified partially by the admittedly minor rôle the Mi'kmaq play in the regional economy, it should be pointed out that even in Wynn's passages purporting to list all of the cultural groups in Nova Scotia (Scottish, Acadian, Black, Irish, etc.), the Mi'kmaq are conspicuously and inexplicably absent. An identical error of omission is found in deRoche and deRoche (1987: 13-15), made even more glaring by the fact that almost three pages of the article are devoted to a supposedly comprehensive review of descriptions of "the groups that

comprise the population of Nova Scotia” yet from which the Mi’kmaq are, once again, mysteriously absent.

Nor is the erasure of the Mi’kmaq restricted to academic accounts. An informal review of Cape Breton/Unama’kik tourist information distributed by the government of Nova Scotia reveals that the Mi’kmaq are either completely invisible (Mi’kmaq Reserves are not marked on the maps of Cape Breton/Unama’kik in most brochures, though smaller Cape Bretoner settlements are), or more rarely, described in a couple of throw-away sentences as a source of “festivals and handcrafts” (e.g. Tourism Distribution Centre n.d. - possibly 1999: 5). Although this review of government tourism literature was not comprehensive, several dozen tourist publications including the *Nova Scotia Doers and Dreamers Guide*, maps and brochures were carefully read. In addition, research visits to Nova Scotia Tourism Centres were made during the summers of 1999 and 2000 in order to ascertain the level of knowledge about the Mi’kmaq among staff (almost zero) and the accessibility of information about the Mi’kmaq (no brochures specific to the Mi’kmaq are available, and the only time information about the Mi’kmaq was provided, the process, which required a search of a computerised database, took more than fifteen minutes and caused great consternation among staff). It is revealing that the computer database consulted eventually produced a highly contestable “history” of the Mi’kmaq, and references to “Native Reservations in Nova Scotia” although there are no “Reservations” in Canada (the equivalent to U.S. Reservations in Canada are “Indian Reserves”).

At the Highland Village, a reconstructed “pioneer” village in Iona near the Grand Narrows, which purports to provide tourists with a look into the history of Cape

Breton/Unama'kik, visitors in 1997 were shown a video entitled "200 years of Human Experience". The video details the first arrival in Cape Breton/Unama'kik of Scottish settlers such as the MacNeil, Cameron, MacPhail, and Ross families in the late 18th and early 19th centuries. Yet from the perspective of the film-makers (and as the title suggests) "human" experience of Cape Breton/Unama'kik is something that evidently began only with the arrival of white people from Europe. Of the island's aboriginal inhabitants, who taught early settlers the principles of survival, and on whose hunting territories the early "highland villages" were built, not one word is mentioned. Watching the film, one could get the impression that Cape Breton/Unama'kik was truly a *terra nullius* at the time of Scottish arrival. The problem of Mi'kmaq invisibility in tourism materials is relevant because it can be seen as contributing to the economic disempowerment of the Mi'kmaq, since they are as a result of their invisibility denied a chance to profit from tourist traffic.⁴

Similarly, literature put out by local conservation groups such as the Bras d'Or Stewardship Society consistently ignored the Mi'kmaq until only recently. Part of this could be explained by the old saw "out of sight, out of mind" but for the facts that two of the Mi'kmaq Reserves are on the Trans-Canada highway, and that Mi'kmaq people are quite visible as they go about their business in Sydney. In this light, the lack of attention to the Mi'kmaq begins to seem rather deliberate. A more systematic and formal evaluation of the (in)visibility of the Mi'kmaq in popular discourse, government publications, and academic literature would help to clarify the gravity of the situation and provide a basis for further research into the impacts this may have on Mi'kmaq economic development.

This call for increased academic attention to the Mi'kmaq has pragmatic as well as ethical grounds. As is the case with aboriginal communities throughout Canada⁵, Mi'kmaq birth-rates are higher than the local non-aboriginal population of the island. This, combined with the accelerating rate of Cape Bretoner out-migration, will likely mean an increase in the Mi'kmaq nation's relative contribution to the total population.⁶

It is also likely that Mi'kmaq migratory patterns, which see thousands of *Unama'ki* Mi'kmaq travelling to New England each summer to join in agricultural harvests, significantly alter the pressure of this population on local resources, and their dependency on the local economy. A member of a focus group conducted in 1997 spoke about the nomadic nature of many Mi'kmaq families:

M10: I lived in a lot of forests in Maine, all over Maine. And we'd go to harvesting, and picking berries.

R: What kind of berries?

M10: Blueberries. And then we'd go potato picking in the fall. And then we'd stay, we'd go back in the forest. And we did that for years until my brothers were born in Maine, and that's where I started school. And then after and when we all grew up old enough to go to school, we were taken to Boston. And we lived in Massachusetts, all over Massachusetts. Again my father was working there. And then when we got older, my father was afraid for us, because we lived in the city and the city was getting kinda tough and rough, and moved us back [to Cape Breton/*Unama'kik*]. Because my father missed the forest and so did we. We missed wilderness because there was nothing but concrete and cement (Focus Group 1997 - Int.).

This nomadic lifestyle can be seen as a deterritorialisation of colonial impositions, since it re-affirms the pre-colonial land-use patterns of the Mi'kmaq.

The absence of any treaty ceding Mi'kmaq territory to colonial powers means that land tenure in the region is extremely uncertain. If sovereignty over so-called "Crown" lands were to revert to the Mi'kmaq this would have enormous impacts on the regional economy, significantly altering rates and patterns of resource exploitation and levels of

employment. There has been little discussion of this in the literature. As the Mi'kmaq administration, under the auspices of the Union of Nova Scotia Indians, moves unilaterally on a number of initiatives for resource-use management on the island, including timber harvesting on so-called "Crown Lands", enforcement of fisheries regulations through the Native Guardians program, habitat rehabilitation, and broader initiatives for ecological protection, and as the degree of federal fiduciary responsibilities to safeguard Mi'kmaq resources is clarified (Federal Court of Canada Trial Division 1996), the need for research into the Mi'kmaq/resource dynamic becomes more urgent.

Mi'kmaq History: The Pre-Colonial Period

Part of the larger Algonkian cultural grouping, the Mi'kmaq nation has historically occupied all of the Atlantic provinces in Canada and parts of New England in the United States. The pre-colonisation Mi'kmaq population is the subject of widely varying estimates, the highest providing a figure of 75,000 (McMillan 1996), while Henderson (1997: 33) suggests a range of 35,000-50,000. However, it should be noted here that successive scholarly estimates of pre-Columbian aboriginal populations in North America have been almost constantly increased (Denevan 1992; McNeill 1976), and future research may well lead to estimates of a higher pre-colonisation Mi'kmaq population.

Mi'kmaq territory -- *Mi'kma'ki* -- is divided into seven districts (*sakamowti*), of which Unama'kik has almost constantly been the political centre (NCNS 1997) (see Figure 5.1).⁷ It covers approximately the same area as what is now known as Atlantic Canada (see Figure 5.2), with the exception of present-day western New Brunswick,

Note that Mi'kmaq territoriality conforms to river watersheds and coastlines. Adapted from (Clarke et. al. 1987), Native Council of Nova Scotia (1997) and Microsoft (2001).

Figure 5.1 - The Seven Districts of *Mi'kma'ki*

Source: Microsoft (2001).

Figure 5.2 - Industrian Representation of Mi'kma'ki

which is the territory of the Maliseet nation. Then, as now, the legitimate Mi'kmaq government was the *Mi'kmawey Mawio'mi*, or Grand Council, comprised of a Grand Chief, Grand Captain, and District Chiefs (*keptin*) (McMillan 1996).⁸ The Royal Commission on Aboriginal Peoples (RCAP) discusses the important rôle that the Grand Council played in maintaining internal political harmony:

Internal peace was maintained among the families by dividing up the national territory into seven districts, each with a chief, and by acknowledging family rights to certain hunting grounds and fishing waters. District and territory divisions depended on the size of the family and the abundance of game and fish. These families made up several small gatherings or councils. From each settlement of kinsmen and their dependants, or *wigamow*, the Holy Gathering, also known now as the Grand Council of the Mi'kmaq (*Santé Mawíomi*) was created (RCAP 1996: v.1, c.4, s.1).

The admittedly sketchy historical record of the pre-colonisation period describes an advanced, ecologically sustainable culture (Coates 2000: 26) with representative political institutions, sophisticated technologies adapted to the unique ecology of the region, and standards of health and morality by many accounts superior to the Europeans whom they initially welcomed to the island (Bollan 1746; Paul 1993; Whitehead 1991). There is no question that the Mi'kmaq fully used and occupied all of Cape Breton/Unama'kik prior to colonisation, since there are Mi'kmaq place names for every river, lake and geographic feature of the island (Pacifique 1934; Rand 1919). The Royal Commission of Aboriginal Peoples explains that[t]he Mi'kmaq were neither settled nor migratory. The environment of their birth has always been suited best to seasonal use so that, compatible with the rhythms of the earth, families were responsible for a hunting ground, a fishing river or waters and a planting home, and they travelled to other resources throughout the year. They lived within the beauty and cycles of their lands. Given this deep attachment to the land, it is not surprising that all natural features within the Mi'kmaq territory have ancient names in the Mi'kmaq language, names that bear witness to their continuous use and possession of them. The trees, the shore, the mist in the dark woods, the clearings were holy in their memory and experience, recalling not only their lives but also the lives of their ancestors since the world began. RCAP 1996: v.1, c.4, s.1).

The Mi'kmaq economy was predominantly based on the harvest of natural resources, especially from the sea, and appeared to have included some forms ecological

micro-management such as the construction and maintenance of fish ponds (Whitehead 1991: 17). The Mi'kmaq have developed over generations a comprehensive knowledge of medicinal plants available in the island, and have recently engaged in a determined effort to preserve and develop such knowledge. To this end, they are now actively interviewing their Elders and combining traditional accounts with conventional biology to reconstruct Mi'kmaq pharmacology and knowledge of foods and ecological relationships (UNSI n.d. - probably 1999; see also Lacey 1993 for a cataloguing of medicinal plants used by the Mi'kmaq).⁹ This effort is especially important given the severe interruption in cultural transmission effected by the Residential School program, which will be discussed below.¹⁰

European Colonisation

They promised to leave us some of our land -- but they did not -- they drove us from place to place like wild beasts -- that was not just...
(Mi'kmaq petitioners at the Legislative Assembly of Prince Edward Island, 1832, quoted in Whitehead 1991: 208).

The first recorded European contact with Cape Breton/Unama'kik was John Cabot's brief stop at Cabot's Landing on Cape North in 1497. It is thought that the Portuguese had established a settlement in Cape Breton/Unama'kik as early as 1521, and Mi'kmaq place-names appeared on Portuguese maps by 1550 (Whitehead 1991). The Mi'kmaq played a central rôle in the early settlement of the region by Europeans, establishing trade relations, rescuing shipwreck victims, supplying food during the harsh winters, and generally teaching settlers the fundamentals of survival (Paul 1993; Prentie 1991, orig. 1780). However, soon after contact the Mi'kmaq population began to be decimated by waves of European diseases: it has been estimated that 80%-90% of the

Mi'kmaq population was wiped out within the first 100 years (Davis 1997). There is historical evidence that some of these diseases, most notably smallpox, were deliberately spread into aboriginal communities by the British via infected blankets in an attempted genocide (Chisholm Alexander cited in Sark 1992: 11).

The first major settlements on Cape Breton/Unama'kik were French (earlier Basque and Portuguese settlements were small fishing ports), and the first major international relationships were therefore developed between the Mi'kmaq and the French. The Mi'kmaq converted *en masse* to Catholicism shortly after the baptism of their Grand Chief Membertou in 1610. The Santé Mawiommi and the Catholic Holy See subsequently concluded a treaty -- the *Concordat* -- outlining a constitutional relationship which was confirmed in a wampum collar (Henderson 1997). The Mi'kmaq-French relationship continued until the defeat of the French by Britain in the mid-18th century.

Cape Breton/Unama'kik was from first contact viewed by the proto-Industrian European powers as a resource-extraction outpost. After the defeat of France in her New World colonies, Cape Breton/Unama'kik's strategic position vis-à-vis control over the fisheries was its primary importance to the British as well. As Bollan (1746: 117, *emph. orig.*) notes, "the possession of *Cape Breton* is the thing, and *the only thing* that can enable us efficiently to destroy the power of *France*, and turn it to our own benefit". He also quotes Salmon's 1739 description to the effect that

[Cape Breton/Unama'kik] would probably never have been planted [colonised], if it had not lain *so convenient* for the *French* to preserve their communication with the River of *St. Lawrence* and *Canada*; and to protect their Fisheries, as well as to disturb the Trade and Fisheries of *Great Britain*, in Times of War (Bollan 1746: 49, *emph. orig.*).

Similarly, Harold Innis (1956), in his economic history of the Maritime region, notes that the French construction of the Fortress of Louisburg on Cape Breton/Unama'kik was motivated primarily by the French desire to increase their control over the fishery. From the viewpoint of colonisation, one of the disadvantages of Cape Breton/Unama'kik was a relatively small percentage of land suitable for agriculture (see Figure 5.3). For these reasons Cape Breton/Unama'kik began its connection to the proto-Industrian web as a "colony of exploitation" rather than a "colony of settlement" (Wallace 1990).

After the Seven-Years War ended in 1763 with the defeat of the French and the fall of Louisbourg, "Cape Breton" became a separate British colony, and remained so until its annexation by Nova Scotia in 1820 (Forbes 1983). Innis (1956: 361) speaks of the handicap to settlement posed by the "limited resources" of the island. This is evocative of observations by Stephen Hornsby (1989; 1992) and Rusty Bitterman (quoted in Muise 1994: 255), who remarked that waves of nineteenth century Scottish immigration to the island resulted in "too many settlers chasing too few resources". The population of the island increased thirty-two-fold between 1774 and 1838 alone. Since the overwhelming majority of land in Cape Breton/Unama'kik has little or no agricultural value, by the mid-nineteenth century all of the little viable agricultural land had been settled, leaving newcomers and subsequent generations to clear-cut and then attempt to farm the infertile uplands. Due to a harsh climate, short growing seasons, and generally poor soils, even the best lowland farming was marginal (Hornsby 1992: 23). For those attempting to cultivate the uplands or "back country", subsistence farming was insufficient to feed a family, necessitating a search for supplementary income in the wage economy (Hornsby 1989).

Source: Hornsby (1990: 57).

Figure 5.3 - Distribution of Agricultural Land in Cape Breton

Compounding this problem of immigration to an island that was in many important regards already "full" was prolific breeding among the predominantly Catholic population, leading to waves of second and third generation internal migrants searching for work in urban centres by the end of the nineteenth century. This mass of people was initially able to find employment in the newly-developed coal fields, but eventually even this employment market was overwhelmed.

Cape Breton/Unama'kik's economy through the eighteenth and nineteenth centuries was a mix of staples (cod, and later, coal) and subsistence agriculture (Hornsby 1992). The National Policy of 1879, which saw tariff protection for Canadian industry, served to increase exports of Cape Breton/Unama'kik coal to Ontario and Québec and thereby the importance of coal to the local economy (Hornsby 1989). Coal and codfish exports generated some backward linkages to shipping and shipbuilding. The latter was a short-lived industry as Cape Breton/Unama'kik's forests -- already under considerable logging pressure -- were quickly depleted and iron ships supplanted wooden ones in the global economy (Hornsby 1989). Few forward linkages were created until steel production began in the twentieth century. The result, as Hornsby notes, was the lack of an integrated Cape Breton/Unama'kik economy, with staples producing regions connected more to external economies than with one another. As argued in Chapter Three above, this pattern of development is typical of Industria, and ensures a net flow of wealth and resources into the Industrian core, while rendering local development exceedingly difficult.

The Twentieth Century

The Mi'kmaq: Cultural Dislocation and Rejuvenation

By the early twentieth century, the *Indian Act* (Parliament of Canada 1985b) Band Council system had been imposed upon the Mi'kmaq, and the Canadian government refused to recognise the authority of the *Mi'kma'wey Mawio'mi*. For some Mi'kmaq, the Band Council system is a colonial tool for keeping their nation in a state of dependency:

Our leaders are agents of Indian Affairs. They are paid for and financed by the Department of Indian Affairs. They're brought in through the [state] democratic process, not by the same values that held us as a community and that defined leadership previously, in the past. Now the leaders remain leaders by maintaining a dependency. They keep the people dependent (E. Marshall 1997 - Int.)

This perspective was quite commonly expressed to the author by a wide variety of Mi'kmaq people in informal conversation. People also expressed concerns about the honesty of the Eskasoni Band Council, which appear to have been at least partially substantiated by recent RCMP investigations into misappropriation of funds by former Chief Allison Bernard (CBC 2000).

The twentieth century also saw generations of Mi'kmaq children taken from their families and sent to Residential Schools, where they were routinely beaten for speaking their own language or practising their culture, and were subjected to various forms of horrific abuse.¹¹ As one Mi'kmaq woman described the impact of the program,

I think the Residential School was one of the most *damaging* things to our spirit. Because I guess the intent was to wipe away our plate which held our codes. And to wipe away our traditional values, the traditional knowledge, language, ceremonies, symbols, so on and so forth. And supposedly to replace them with European - Eurocentric... Christian, Anglo beliefs. But that didn't quite happen (E. Marshall 1997 - Int.).

Ms. Marshall's suspicion about the intent of the Residential Schools is borne out by a statement by an Indian Affairs bureaucrat who said,

Assimilation would be most speedily and thoroughly accomplished by means of boarding and industrial schools... All the Indian there is in the race should be dead (quoted in Milloy 1999).

Another interview respondent described the Residential Schools and their impact on his life and his culture:

First it was back in the early twenties and thirties where they came up with the Indian Residential Schools. They'd take all the young native people and take them to this school and brainwash them of their culture and way of life and to teach them, Christianise them so they wouldn't have any knowledge of the stories that were told at one time. We were just like farm animals to them. We were trained to be ashamed of our way of life and our culture, our stories weren't told when we were kids. That's what the Residential Schools across Canada had planned for the Native people that in the year of 2000 there won't be any Native people, that they'll be ripped of all their culture and their way of life... I went back in 1960 to 1966. That school, if it wasn't for us underdogs that ran in the woods and spoke our Native tongue and kept it up underground, our culture would've been destroyed... If we talked Indian in school we would've been severely punished and beaten and shunned from the rest of the children that were there, eh? (Lafford 1997 - Int.).

The 150 "pupil" Shubenacadie School, which opened in 1930 and operated until 1966, received most of the *Unama'ki* Mi'kmaq. In all, more than 1000 Mi'kmaq attended "Shubie" (NCNS 1997). Today, survivors of that school are still awaiting compensation for decades of sexual and other abuse.

In the 1940s, during so-called "centralisation", Mi'kmaq people throughout Nova Scotia were coerced into moving from twenty Reserves scattered across *Mi'kma'ki* to two large Reserves at Shubenacadie and Eskasoni (NCNS 1997).¹² The effects of centralisation included

...a loss of isolation and autonomy, and the Mi'kmaq saw community control shift even more into the hands of outsiders. For example, the RCMP took the place of community-based discipline, and health authorities began interfering with the way infants were nursed and children were raised. Traditional community leadership was displaced by the Indian agent and other government officials. The resident priest now looked after all religious matters, and nuns and priests were put in charge of education (RCAP 1996: v.1, c.11, s.2).

To increase pressure on the Mi'kmaq to accept the policy,

The government enlisted the support of the church, and the devoutly Catholic Mi'kmaq found it hard to reject the instructions of their priests, who told them they must move (RCAP 1996: v.1, c.11, s.2).

Nonetheless, Mi'kmaq resistance and logistical problems eventually led to the policy being partially abandoned by 1953 (Coates 2000: 47), and instead of only two Reserves at Shubenacadie and Eskasoni, five Reserves were set up in Cape Breton/Unama'kik and eight elsewhere in Nova Scotia. The move, while supposedly intended to facilitate the provision of services, also had the effect of racially "purifying" or ethnically "cleansing" areas such as Baddeck.

"There Goes the Neighbourhood!"

In accounting for recent Mi'kmaq reluctance to participate at Bras d'Or Stewardship Society meetings in the town of Baddeck, interview respondents stated that during centralisation the Mi'kmaq had been "burned out of Baddeck" (CB1 1997 - Int.; CB2 1997 Int.). Another person interviewed, a member of the Bras d'Or Stewardship Society, described the events of the 1950s as being "KKK-style", and spoke specifically about the burning of Mi'kmaq residences on Water St. in Baddeck (CB3 1997 - Int.). These specific allegations, while unsubstantiated, are well-triangulated by anecdotes related by numerous Mi'kmaq, and help to account for the statement by one Mi'kmaq

administrator who described Cape Breton/Unama'kik the "Mississippi of the North", a site of "extreme anti-Mi'kmaq racism, violence, and discrimination" (M2 1998 - Int.).

The historical record bears out this contention. In 1915, for example, Sydney City Council passed a resolution requesting the federal government to remove Mi'kmaq people from their own homes on Kings Road Reserve, complaining that the presence of the Mi'kmaq was devaluing property in the area. The Mi'kmaq, who had been labelled as "dirty, immoral, debauched, and unsightly", were forcibly moved to less valuable land at Membertou on the outskirts of town. Eighty-four years later the Mi'kmaq finally received a formal apology, but no financial compensation (Gillis 1999: A4). According to Kim Paul, Environmental Technician with the Union of Nova Scotia Indians, Membertou residents are plagued with health problems from toxins in the soil of their Reserve, which had formerly been a dump site (pers. comm. 1998).

The problem of discrimination has not gone away. Today the Mi'kmaq continue to suffer from systemic racism, as the inquiry into the wrongful arrest and imprisonment of Mi'kmaq Donald Marshall has made abundantly clear (Mannette 1990; Coates 2000: 3). Nor is the problem restricted to federal and provincial institutions. As one member of the Bras d'Or Stewardship Society remarked, "there is an incredible amount of racism in municipal structures" (CB3 1997 - Int.). One Mi'kmaq woman related being discriminated against by local businesses:

Being a Mi'kmaq was intolerable to the outside community. Cape Breton is probably the redneck capital of the world if you ask me. Living here and being a part of here all my life, you see the racism and it's just such a reality. It's like, I've been refused motel rooms on the island, and just because I'm a Mi'kmaq. I've been told outright, blatantly told "I don't rent to you people" (E. Marshall 1997 - Int.).

The majority of the Mi'kmaq population is now geographically marginalized at the Eskasoni Reserve on the shores of the Bras d'Or Lakes' East Bay, far from any major transportation routes.¹³ Eskasoni unemployment rates are exceptionally high,¹⁴ due to a combination of lack of economic activity on the Reserve and consistent discrimination in hiring practices by many Cape Bretoner-owned businesses which severely limit the possibility of Mi'kmaq people obtaining off-Reserve jobs. As one Mi'kmaq man put it,

You gotta remember just eighty, a hundred years ago, they were paying money for our scalps.¹⁵ Just across the goddamn bay. So we haven't had much choice or say in what the economy is, or what it does (M9 in Focus Group 1997 - Int.).

Living with the not very distant cultural memory of overt and murderous violence directed toward them, the *Unama'ki* Mi'kmaq continue to resist being reduced to a state of dependency and oppression in their own lands.

A key part of this resistance is cultural. As with many aboriginal communities in Canada and around the world at the end of the twentieth century, the Mi'kmaq began to experience a kind of rebirth of pride and a cultural renaissance. For the first time in generations, pow-wows (traditional festivals) were held in different locations around Cape Breton/Unama'kik, the first at Waycobah First Nation next to the town of Whycocomagh in 1990:

And I asked my grandmother, where was the last place that they had a traditional gathering. She said "Here in Whycocomagh." I grew up in Whycocomagh. I told her, "OK, a friend and I are trying to bring back the traditions, the old ways." (M4 1997 - Int.).

Traditionalists have stood up and are finding out who we are again. The UCCB has played an instrumental rôle, believe it or not. Because of Mi'kmaq studies programs there. They've re-awakened that sense of pride, that sense of roots, of who we are. Because for a long time we were lost. We didn't know who we were for the most part the older people remember, but the younger people didn't know, because we were all conditioned to be white. Think white, be white, and that's right. And in the last fifteen years or so there has been a movement to re-establish our roots, or not re-establish but understand, or attempt to understand who we are. Who we have been. And to bring back the ceremonies, to bring back the symbols that were Mi'kmaq, that are Mi'kmaq. And that is happening for the better. But still we have so much to learn and relearn again as a community (E. Marshall 1997 - Int.).

A pow-wow held in Eskasoni in the summer of 1997 was typical of these events, featuring dancers from Mi'kmaq communities across *Mi'kma'ki* and even visitors from further afield, including Mohawks and Cherokees. A free feast was given for all the visitors, and following Mi'kmaq custom, Elders were served first. Throughout the three-day festival a "sacred fire" was kept burning in a corner of the grounds, constantly tended by a traditionalist. The fire was in the simple "tipi" style, fed by hardwood logs, and there was a steady parade of solemn visitors who made tobacco, sage, and sweetgrass offerings (these substances were thrown into the fire along with a prayer).

Fifteen years ago such an event would have been unheard of. Mi'kmaq people interested in reviving their spiritual traditions, or inventing new ones, were derisively described by the majority of predominantly Catholic Mi'kmaq as "dog-eaters" (according to one interview respondent, this was a reference to an historical Mi'kmaq custom) whose "heathen" practices were taken as an affront to God:

This was in the eighties. Although, the ones that were practising the ceremonies at first were called dog-eaters. There was a lot of prejudice and mistrust and they were made fun of. There was a lot of conflict (E. Marshall 1997 - Int.).

One self-described traditionalist described the conflict posed by two religious traditions:

Back then there was a lot of influence with the Roman Catholics, you know, "Your ways are no good." But growing up with Elders, my beliefs were more stronger than the Roman Catholic beliefs. Because I respect the nature, I respect my culture and my traditions... And there was a time I lost my wife and my children because of who I was. I was more a traditionalist than a Roman Catholic. You see my teachings come from my grandparents, and I believe strongly what my grandparents taught me (M4 1997 - Int.).

Yet as the years have gone by there is a greater and greater acceptance of "traditionalist" practices. This researcher took part in several dozen sweat-lodge ceremonies over a four year period, and found these ceremonies to be a site of healing, social bonding, sharing of news about misfortunes affecting members of the community, affirmation of ontological connection with the non-human world (expressed by the Mi'kmaq phrase "*mset no'kmaq*" which means "we are all relatives"), and spirituality. With specific reference to the Mi'kmaq of Unama'ki, Alf Hornborg (1994; 1998) has suggested that the discourse of the sacred arising from aboriginal traditionalism may be the only effective strategy for communities attempting to resist the predations of "modernity" (his word for Industria).¹⁶

This discursive argument notwithstanding, perhaps the most significant facet of Mi'kmaq resistance is their efforts to reassert effective control over resource-use management in the Bras d'Or watershed, Cape Breton/Unama'kik as a whole, and more broadly across all of *Mi'kma'ki*. Chapter Seven examines in detail the various management techniques, institutions, programs, and legal challenges developed by the *Unama'ki* Mi'kmaq, suggesting that taken collectively, they provide evidence that the Mi'kmaq constitute a "metamorphosis machine" which has the strong potential to deterritorialise the Industrian hold over Cape Breton/Unama'kik and open up a smooth space within which local solutions may be developed.

The Political Economy of Twentieth Century Cape Breton/Unama'kik

In the wake of the January 27, 1999 announcement by the Canadian government that it was putting the Cape Breton/Unama'kik coal industry on the auction block (*The National Magazine* 1999), Royle's observation in the epigraph to this Chapter that the lack of a Cape Breton/Unama'kik regional government may have exacerbated the island's problems is essentially correct. While some may pin the blame for environmental and socio-economic problems in Cape Breton/Unama'kik exclusively on the capitalist economic structures which have marginalized the Cape Breton/Unama'kik economy, equally significant, as Royle (1993) points out, is the lack of any local decision-making power to combat this structural deficit and implement ecologically sustainable regional economic strategies. This fact has not been lost on Cape Bretoners: numerous movements for secession from Nova Scotia and even from Canada have arisen over the past century (MacGillivray 1973).

Federal military and Provincial police support for the British Empire Steel Corporation and its predecessors Dominion Steel Corporation and Nova Scotia Steel and Coal Company against striking workers lends credence to the discussion of the Industrian alliance between capital and the state. In the 1920s, coal miners and steel workers saw their wages fall and work-hours cut back as the global economy moved into a recession. Socio-economic conditions in Industrial Cape Breton/Unama'kik were so bad that the infant mortality rate in Glace Bay reached an appalling 305.9 compared to a Canadian average of 88.1 (MacGillivray 1973: 53). Protesting against starvation-level wages and extremely hazardous working conditions, unions saw their leadership rounded up and arrested, a response the severity of which can be explained at least in part by general

fears about then recent events in Russia and Manitoba ("the Red scare"), but which may very well also have been related to the Nova Scotia government's long-standing dependence on royalties from the coal industry (Forbes 1983: 10). Draconian responses to labour unrest frequently resulted in bloodshed or even loss of life. Indeed, between 1876 to 1925, troops were sent to Cape Breton/Unama'kik on average once every seven years (Forbes 1983: 56). These events fostered a fierce independence movement within Cape Breton/Unama'kik, and have contributed to an outside perception of Cape Breton/Unama'kik's labour force as being strike-prone and uncooperative, a perception that Gilson (1988) demonstrates is in contemporary times unwarranted and has therefore unfairly created a barrier to investment.

In recent years, the island has continued to exhibit many of the characteristics which typify peripheral regions of the Industrian system. The incidence of diseases such as influenza, diabetes, and pneumonia is far above the Canadian average (Wynn 1987). Unemployment rates show a similar pattern. This is in keeping with the conclusions of research undertaken by deRoche and deRoche (1987a: 8), who note that "the Atlantic falls behind other regions [of Canada] in terms of all major socio-economic measures." In contemporary Cape Breton/Unama'kik this has remained the case after the injection of more than one billion dollars from Ottawa into the coal mining industry since 1969, which may have had the effect of increasing regional dependency and persistent economic backwardness.

The coal industry, which after the oil crisis of the 1970s enjoyed a minor reprieve from a more or less steady decline in industrialised states since World War Two, has formed the backbone of the Cape Breton/Unama'kik economy since the late nineteenth

century. Forward linkages saw the development of a significant steel industry as well. However, neither industry has been profitable for decades due to declining global demand, increased competition from newly developed states, and lack of product diversification (Wynn 1987).¹⁷

Wynn (1998) and Royle (1993) both suggest that Cape Breton/Unama'kik's economic problems stem in part from a lack of economic diversification, and argue that solutions may lie in the stimulation of numerous, geographically dispersed, small-scale enterprises to replace the large-scale employment once offered by the large-scale staples industries. If they are correct, there is considerable work that needs to be done to assess the potential of the island for sustainable economic recovery. Today, as the federal government is pulling out of its Cape Breton Development Corporation (DEVCO) commitments to the coal industry in Cape Breton/Unama'kik, the future of the island economy appears bleak. In addition to the end of large-scale coal mining, decades of overfishing and the degradation of important spawning areas such as the Bras d'Or Lakes have destroyed the codfish economy. Attempts at the development of new staples industries, for example granite quarrying on Kluscap's (Kelly's) Mountain, or the expansion of existing gypsum mining operations, have met with fierce resistance from the Mi'kmaq nation and other local residents (Dalby and Mackenzie 1997; Federal Court of Canada Trial Division 1996; Hornborg 1994).

Contemporary Eco-Politics in the Bras d'Or

[T]he functionality of any government probably relies on legislation they have and staff they have and enforcement they have for the regulations. I think that people have been looking for years, and in some cases, the legislation to keep that watershed healthy was in place. The staff to do the work to carry out that legislation was not there. Or the staff was there to carry out the legislation but the enforcement wasn't there. Or the staff and the enforcement was there but they sat in Halifax because they didn't have the funding and they didn't have gas to drive to Cape Breton (Taylor 2000 - Int.).

We don't have the ability to enforce. We don't have the staff or money to allocate for enforcement on the Bras d'Or Lakes themselves... (G1 2000 - Int.).

As governments increasingly slash budgets to keep up with tax cuts and to reduce debt, agencies tasked with enforcement of environmental standards (standards which when enforced frequently raise the operating costs of corporations) seem to be the first and hardest hit. Although there has been some minor restructuring of government departments over the past decade, the jurisdictional situation is much the same as it was when Dr. Donald Arseneau (1989) identified 11 federal and provincial departments or agencies with mandates for managing some aspect of human interaction with the rest of the environment in the Bras d'Or watershed. Six years later, the Bras d'Or Watershed Working Group (BOWWG 1995: 1) stated that 22 different agencies "share responsibility for activities in the watershed," though the agencies were not listed and the source of this figure was not provided.¹⁸ A more comprehensive accounting has been attempted for this study which has identified 25 agencies with overlapping mandates for activities in the Bras d'Or watershed which might be relevant to discussions of ecology or resource-use management (see Figure 5.4). While there is, as will be shown below, no question that the briny broth of the Bras d'Or is being spoiled as a result, compounding

Agencies “Managing” the Bras d’Or*	
Canadian Federal Departments and Agencies	Municipalities (cont.)
1. Department of Fisheries and Oceans	15. Municipality of Richmond
2. Canadian Coast Guard	16. Cape Breton Regional Municipality
3. Environment Canada	
4. Department of Indian and Northern Affairs	First Nations Reserves
5. Atlantic Canada Opportunities Agency/Enterprise Cape Breton Corporation	17. Waycobah First Nation
	18. Wagmatcook First Nation
Nova Scotia Provincial Departments and Agencies	19. Eskasoni First Nation
6. Department of Environment and Labour	20. Chapel Island First Nation
7. Department of Natural Resources	21. Membertou First Nation (interest in Malagawatch)
8. Department of Agriculture and Fisheries	
9. Department of Health (water quality)	Mi’kmaq Government and Agencies
10. Department of Transport and Public Works	22. Grand Council of the Mi’kmaq
11. Department of Municipal Relations	23. Union of Nova Scotia Indians
12. Office of Aboriginal Affairs	24. Eskasoni Fish and Wildlife Commission
	25. Unama’ki Institute of Natural Resources
Municipalities	
13. Municipality of Victoria	
14. Municipality of Inverness	

*The above agencies and institutions are all mandated to oversee human activities which are likely to have an impact on the ecology of the Bras d’Or watershed.

Figure 5.4 - Agencies Mandated with “Managing” the Bras d’Or

this problem of “too many cooks” are some more fundamental issues regarding federal-provincial division of authority.

Vanderzwaag and Duncan (1992) argue that the Canadian *Fisheries Act* (Parliament of Canada 1985a) has the potential to be the most powerful federal weapon for environmental protection. In this regard, a number of important decisions by the Supreme Court of Canada, including the *Water Powers Reference* and *Northwest Falling Contractors vs. the Queen* have affirmed the right of the federal government to restrict or even prohibit provincial water developments, and to prosecute corporations and individuals who pollute “fisheries water” (Skogstad and Kopas 1992). Section 36.3 of the *Fisheries Act* clearly states that

no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water (Parliament of Canada 1985a: S36.3).

Upstream pollution, for example from timber debris, is not prosecutable unless the pollutants reach fishery water and harm the fish therein (Vanderzwaag and Duncan 1992). In the case of *marine* waters, federal powers are broader. The Peace, Order and Good Government (POGG) clause of the Constitution grants the federal government the right to prosecute all polluters because of pollution’s extra-provincial and international character.

On a practical level, it appears that Fisheries and Oceans Canada has only sporadically and inconsistently prosecuted activities contrary to the Fisheries Act. Vanderzwaag and Duncan suggest that this may be due to a trend towards “co-operative federalism”, wherein the federal government is reluctant to appear to be intruding into

provincial domains. As Skogstad and Kopas (1992) point out, this reluctance stems from agreements reached at the federal-provincial Constitutional Conference of 1970, when the two levels of government agreed to co-operate in managing human-environment interactions. Enforcement of Section 36.3 of the Fisheries Act, which deals with the pollution of waters frequented by fish, was turned over to the provinces, and there was a subsequent decline in the number of prosecutions under this section.

Adding to the problems arising from limited constitutional powers and a desire to maintain good relations between provinces and the federal government is the political influence of resource corporations. Skogstad and Kopas (1992: 47) note that corporations, with the advantage of a "high degree of organizational development", wield considerable leverage over government policy at both provincial and federal levels. These corporations, effectively allied with government managers, are "determined to resist fundamental challenges to the 'business as usual' patterns of resource development" (Wilson 1992: 124). Since the federal government has exclusive jurisdiction over the management of the marine fisheries (except where stipulated otherwise in special memoranda of understanding (MOU) with provinces), this has been a recipe for disaster. Encouraged by "inconsequential fines and administrative policies of infrequent prosecution" (Schrecker 1992: 104), corporations have successfully lobbied for and engaged in harvesting practices that undermine ecological stability (often to the point of collapse) in order to reap short-term profits. A perfect example may be found on the island of Grand Manan in the Bay of Fundy, New Brunswick. The government of New Brunswick signed an MOU with the federal government that would allow private companies to harvest rockweed in the waters around the island, despite scientific

evidence that the harvest would have negative impacts on the marine ecology and threaten community-based niche fisheries (Marshall 1999). Readers interested in a more general description of the destructive industrial practices and government mismanagement which have decimated most major fish species in the North Atlantic, are encouraged to consult Harris (1995) and Rogers (1995).

In this regard, a Bras d'Or Stewardship Society member made an interesting observation while explaining the permitting process for a land-fill site near his home:

So I think the original engineer's report that was written by the province's engineers, stated that the site was not suitable for the landfill. But the government saw fit to allow the owner or the land to hire his own engineer who wrote a very good report and said that it would be okay if they did quite a few things including plastic envelopes to put the garbage into and so on. It's been a while since I read that report but that was very eye-opening for me when I realised that perhaps the Department of the Environment wasn't there to protect the environment but rather was there to dole it out to whom they saw fit (Sober 2000 - Int.).¹⁹

As will be seen in the next few pages, these multiple problems with governmental regulation have had a profoundly negative impact on the Bras d'Or.

The Bras d'Or Watershed: An Ecological Sketch

Lying outside so-called "Industrial Cape Breton", the Bras d'Or watershed exists on the periphery of the Cape Breton/Unama'kik economy. As discussed in the previous chapter, Cape Breton/Unama'kik itself occupies a peripheral position in Atlantic Canada in general, which in turn has been described as the periphery of the North American economy. Yet there is something less than satisfying about describing the Bras d'Or as triply peripheral, especially since as noted earlier, the watershed is, in real terms, the geographic centre of the island (see Frontispiece). Ecologically, it is clear both intuitively and on the basis of detailed scientific study (Kenchington 1998) that the

watershed also occupies a central position in the island's life processes. Certainly for the *Unama'ki* Mi'kmaq, the Bras d'Or is a centre of physical and cultural sustenance, having been the site of principal Mi'kmaq settlements for untold centuries²⁰, while for the Cape Bretoners -- descendants of later settlers -- the Bras d'Or Lakes have also come to be a centre, especially of recreational activity.

The huge Bras d'Or Lakes, with a surface area of 1200 km² and a total shoreline circumference of 1,166 km, would be most accurately described as an inland sea. The lakes' 2500 km² drainage basin includes six major rivers which drain 42% of the watershed (Arseneau 1977). Tidal action brings in salt water from the ocean through the Great Bras d'Or and St. Andrew's Channel. The combination of freshwater and ocean water flows has created a system with salt content approximately 72% that of ocean water. While the salt content fluctuates slightly with the seasons, overall, the lakes contain approximately 2.5% salt as opposed to approximately 3.5% salt in open oceans (UMA Group 1989: 9).

This mixing of fresh and salt water gives the entire system estuarine characteristics (Krauel cited in UMA Group 1989: 9), and like most estuaries, the Bras d'Or Lakes are therefore a key habitat for fish reproduction. The Jesuit Père Biard, writing in 1611, noted that

In the middle of March, fish begin to spawn, and to come up from the sea into certain streams, often so abundantly that everything swarms with them. Anyone who has not seen it could scarcely believe it. You cannot put your hand into the water, without encountering them (quoted in Whitehead 1991: 38).

This supports the Mi'kmaq claim that the lakes are an important hatchery and nursery for key North Atlantic fish species, including herring, smelt, gaspereau (alewife), cod,

mackerel, sea-trout, salmon, flounder and others.²¹ As Charlie Dennis, Executive Director of the EFWC put it:

...we consider the Bras d'Or lakes as a nursery and a hatchery because most of the species that come into the Bras d'Or lakes do so for one purpose - they come in to spawn. [...] So it's a huge nursery... it's a unique body of water. All these species do migrate in and go back out again (Dennis 1997 - Int.).

A Mi'kmaq hunter, fisher and traditionalist echoed Dennis' assessment:

The Bras d'Or lakes is unique. This is the largest salt water lake in the whole world that can sustain all this ocean fish that come here to reproduce. This is the only one of its kind. It's a unique body of water that can sustain all this life that comes in seasonally, year-round (Lafford 1997 - Int.).²²

In addition to being important fisheries habitat, the watershed is also the home to one of North America's most viable populations of Bald Eagles, at times serving as a source of breeding pairs for reintroduction programs elsewhere on the continent (UMA Group 1989). One Bras d'Or Stewardship Society member interviewed suggested that the River Denys Basin area at the south-west of the watershed is home to the largest concentration of breeding Bald Eagles other than on the west coast of North America (Sober 2000 - Int.), a contention substantiated by Erskine and Vienneau (1992: 51). Resident mammals in the watershed include Moose, Black Bear, White Tailed Deer, beaver, otter, mink, muskrat, Grey Seal and Harkam Seal (Kenchington 1998; UMA Group 1989). Timber Wolves were found in the area historically, but had been extirpated, along with Woodland Caribou and Moose, from Cape Breton/Unama'kik by the end of the nineteenth century (Moose were successfully reintroduced in the twentieth century).

Ecological Decline in the Bras d'Or

[My grandfather] always believed if the Bras d'Or lakes are polluted so much, if man doesn't stop polluting the Bras d'Or lakes eventually it's gonna kill all the species (M4 1997 - Int.).

The Bras d'Or Lakes watershed²³ is undergoing significant ecological degradation, partially due to a lack of effective co-ordination among government agencies, local community groups, and the Mi'kmaq nation. Specific problems include siltation, faecal contamination, introduction of exotic species, and the decline of fish populations.²⁴ The situation is so perilous that Mi'kmaq fisheries official Charlie Dennis has wondered whether the Bras d'Or Lakes are going to be "another Chesapeake Bay", a reference to the decline experienced in the ecologically similar estuary of the Potomac River (Dennis 1997 - Int.).

While many of these problems can be traced to current resource-use (mis)management, it would be short-sighted to attempt to abstract the present condition of the watershed from the multiplex degradation that has been underway since the arrival of Europeans. Reconstructing the ecology of the Bras d'Or watershed prior to European colonisation is difficult, since no surveys of wildlife or forests were done prior to the beginning of industrial (de)forestry in the late 19th century. Early descriptions by European explorers show that at the time of contact the island was heavily forested by large and very old trees. Similarly, the piecemeal accounts found in Whitehead (1991) or in Prentie 1991, orig. 1780) indicate that "game" or wildlife was plentiful throughout the island at and shortly after initial colonisation. Mi'kmaq folk knowledge as related by numerous interviewees provides similar accounts of earlier ecological fecundity.

Tony Nette, Manager, Wildlife Resources for the NSDNR, suggests that the island was stripped of its original ("virgin") forests not long after full-scale settlement began (Nette 2001 - Int.). This position certainly accords with Hornsby's (1989: 428) observation that the ship-building industry on the island came to an end largely due to the "depletion of Cape Breton's forests". Early casualties, as noted above, were the indigenous Timber Wolf, Woodland Caribou, and Moose populations, all extirpated from Cape Breton/Unama'kik by the end of the nineteenth century.²⁵ Given the massive influx of Scottish settlers, and in light of the above-noted extirpations, it is certain that the ecological balance of Cape Breton/Unama'kik was radically disrupted by proto-Industrian colonisation.

This problem of too many settlers pursuing dwindling resources was compounded by the Nova Scotia government's insistence on treating Cape Breton/Unama'kik like one vast resource protectorate. The forests remaining after widespread depletion for the home and ship-building and general clearing for agriculture were suitable only for pulp, not lumber. Beginning in 1899, the government at Halifax decided to begin the wholesale transfer of "Crown" forests to (de)forestry corporations under generous long-term lease agreements (initially, two cents per acre per year with no stumpage fees) (Sandberg 1991) with little or no guarantee of local employment.²⁶

While the precise ecological impacts of these agreements, which extend to the present day arrangement with Stora Enso Ltd, have not been measured, there is little question that they have been ecologically costly. Evidence cited by Sandberg (1991) shows that for example in the North River area, the forest was completely clear-cut by 1933, with no wood of any value left standing. It is very likely that the problem of a

massive spruce-budworm infestation in the Highlands of Cape Breton/Unama'kik in the mid-late 1970s resulted from previous abuse of the forests, despite insinuations to the contrary.²⁷ As is typical of Industrian resource-use management practices, this infestation provoked yet another industrial response, the 1976-78 spraying of vast areas of forest with the toxic organophosphate fenitrothion, against the strenuous protests of the Mi'kmaq and Cape Bretoner communities (CB1 1997 - Int.; CB2 1997 - Int.; May 1982; May 1998).

Though the spraying program was eventually halted by community pressure, the damage caused by the spruce budworm was then used as a justification for Stora Port Hawkesbury to undertake an aggressive program of (subsidised) road-building in the Highlands in order to do "salvage" logging. An aerial photograph of the Keppoch Plateau in Devall (1993: 168-169) depicts clear-cuts of almost incomprehensible magnitude. A caption to the photograph states that 90% of the 7,770 hectare (19,200 acre) plateau was clear-cut, with cut areas converted to "softwood plantations" through the use of artificial regeneration (so-called "reforestation" -- See Figure 5.5 for Stora's discursive claims in this regard²⁸) and intensive application of chemical herbicides.²⁹ Similarly, 95% of the 49,815 hectare (123,000 acre) Cape Breton Highlands Plateau was clear-cut, mainly between 1976 and 1986 (Devall 1993: 168).

As well as providing an important perspective on ecological problems in the Bras d'Or watershed, these facts render laughable the moral panic evident in public and government reactions to "unregulated" Mi'kmaq logging operations after the Supreme Court's decision in *Marshall v. The Queen*. The tiny Mi'kmaq logging operations underway --there were only an estimated 20 Mi'kmaq people logging in April 1998

These signs are placed strategically alongside the Trans-Canada Highway in southern Cape Breton/Unama'kik. Top: No mention is made of how many planted trees survive to maturity, nor of how many mature trees Stora Enso cut down in the same time period, so the relative importance of the 100 million seedlings planted is unknowable. Bottom: The viewer is asked to accept as fact that Stora's 60 hectare black spruce plantation is a "new forest". Photographs by the author.

Figure 5.5 - Stora Enso's Discursive Construction of "Re-Forestation"

(Coates 2000: 124) -- would require decades or centuries to even approximate the wholesale destruction of forests presided over by the Nova Scotia provincial government over the past 100 years.

Current ecological problems in the Bras d'Or watershed will be discussed in the following few pages.

Siltation

Yeah, development, lack of green belts, roadways that are cut directly to the edge of the lake, lack of siltation barriers. No insights as to proper contours of roads. Siltation will probably have a greater long-term effect upon the actual [lake] bottom than would faecal coliform... So siltation is a very serious concern (Crawford 2000 - Int.).

I have noticed now since the [Georgia-Pacific Big Brook] gypsum mine closed that the River [Denys] has been much cleaner, much less siltation. This has really been great to see. That's been -- I guess it's been about ten years now since they closed it. Every year you can see that there is less silt. Now the last big rain that we had I was kind of shocked to see another run of silt and the river kind of ran chocolate brown, not as bad as it used to when the gypsum mine was operating, but I really didn't know where it came from but I was taken aback by it. It was probably from lumbering but I am not sure (Sober 2000 - Int.).

Siltation is a significant problem in the Bras d'Or Lakes primarily because of its impact on fish reproduction. Silt covers gravely lake-beds, smothering eggs that have already been laid and preventing the deposit of new ones. This has had a particularly severe impact on herring in the Bras d'Or Lakes:

One time our people said if you were going out with the oars you could almost hit the herring with the oars there was so many of them in May and June when they were spawning. But what is happening is because of siltation there is some kind of substance that settles on the bottom over the spawning grounds over the years so when the herring come in they spawn on that substance, and that substance is not solid, is not embedded in the natural habitat, and when the wind picks it up it washes up on the shore, it washes the eggs... We've seen this happen last spring where a strong wind

just took the silt and put it up on the shore and billions of herring eggs just washed up. So this type of thing, because like I said, for example the River Denys Basin after a big rain it is just like tea.... (Dennis 1997 - Int.)

Siltation also impacts negatively on oyster production, by making oysters work harder to filter out the silt:

Well there certainly is a loss in growth when you have siltation because the animal has to spit out all of the particles that it takes in and at some point it uses as much energy clearing itself of the silt particles as the value of the food that it is taking in. At that point the animal can't exist for very long. Before when there was a rainy season that lasted a long time, the silt would probably prevent the oysters from feeding for quite long periods of time (Sober 2000 - Int.).

Silt also damages oyster beds by transforming preferred hard rock beds to muddy ones:

And the same thing has happened with the oysters. The oysters reproduce, and they have to have a substance to cling on to. But when the time comes with all this siltation they just cling to something and the first wind just picks them up and washes them onto shore (Dennis 2000 - Int.).

There are three major sources of siltation in the watershed: (de)forestry, road building and maintenance, and shore-line development (the former two problems are discussed below; on the latter, see MacDonald 2000).

Charlie Dennis, Executive Director of the EFWC, explained the impact of (de)forestry:

Dennis: So [the cause of siltation in the Bras d'Or Lakes] is lack of forest management... For example when a company goes in to cut pulp, or wood for the mills, usually they cut right to the shore. The streams - they don't put any safeguards in taking the machines into the stream. There's not a belt left in the watershed. All the water just goes and takes the mud with it. And the ditches are not properly designed and the machines will go into the ditches.

WH: So this will increase a topsoil wash-off into the streams?

Dennis: Yeah. For example, with any new construction on the Trans-Canada you will see that the machines are not allowed to go in the ditches, there's grass, hay put in to protect any stream, but that is not happening in the forestry, and everything, all the silt and all the mud is washing into the lake. And what happens, it has to settle, and it settles on the bottom. It's a big problem and people don't realize what a serious problem it causes (Dennis 1997 - Int.).

NSDNR personnel confirmed that past and present (de)forestry practices are a source of siltation in the Bras d'Or Lakes (MacSween 2000 - Int.; Stoddart 2000 - Int.). This position is substantiated by Kenchington (1998: 78).

Another important source of siltation is road construction and maintenance, a problem supposedly prevented by existing regulations. Yet Bras d'Or oyster fisherman and Bras d'Or Stewardship Society Board Member James Crawford points out that despite regulations aimed at preventing siltation from road-building, the Nova Scotia Department of Transport is

[c]utting ditches which are so steep that they are unable to seed them properly. Because of continual erosion so that banks continually stay in a raw dirt state, which turns to mud. I'm seeing siltation barriers that have been lifted and excused by saying, "if we don't take those hay-bales out of there the ditches fill with silt" (Crawford 2000 - Int.).

One provincial government employee made it clear that a kind of anarchy reigns in resource-use management around the Bras d'Or, and that siltation is one result:

Wood-cutting operations, subdivisions, development, water-front lots, things of that nature. ...everything's uncontrolled. [...] You can go down into the Baddeck River system or the Middle River system, there's all kinds of silt moving down (G1 2000 - Int.).

The fact that not all Cape Breton/Unama'kik municipalities have even rudimentary regulations controlling development means that in many cases, the construction of residential or vacation properties also contributes to the flow of sediment and, as will be discussed below, sewage, into the lakes.

Sewage

And [my grandfather] said about the people living next to the lakes that they should be more concerned about their raw sewage cause it's gonna affect the Bras d'Or lakes (M4 1997 - Int.).

[Y]ou will never win your voters by demanding that they stop using the Bras d'Or lakes as a sewage tank (M5 1997 - Int.).

The epigraphs to this section make two things clear: first, sewage contamination of the Bras d'Or Lakes is not a new problem, and second what passes for democracy in Industria is one of the reasons that the problem has persisted for so long (see the discussion of greed in Industrian "democracy" in Chapter Three). As Cape Breton/Unama'kik psychiatrist and Bras d'Or Stewardship Society Secretary Dr. James (Jim) V. O'Brien put it:

In a way there has always been this subtle objection to us raising the issue of sewage around Baddeck because it will frighten tourists away. But if something goes wrong and someone gets sick your tourism goes down the tubes. They don't want to hear that. There's almost a sort of a short-term gain which seems to preoccupy them rather than the possibility that there might be long-term disaster. So there's a strong attitude like that (O'Brien 2000 - Int.).

There is no question that faecal contamination is one of the most immediate and correctable problems affecting the Bras d'Or Lakes, though as indicated earlier, and as discussed in the section dealing with the Bras d'Or Stewardship Society in the next chapter, it is by no means the most important one. In very small bodies of water sewage can lead to eutrophication, where the water body is literally choked to death by over-fertilised plant growth. However, in an inland sea such as the Bras d'Or, sewage, being a fertiliser, may in fact enhance productivity (Kenchington 1998: 78). One problem is that sewage contamination renders shellfish inedible to *humans*, and therefore has a major

economic impact on mussel and oyster harvesters. Increasing numbers of closures in recent years (40 areas were closed to harvesting in 2000) raise the concern that at the current rate, the commercial shell-fishery could be completely destroyed within a decade.

Another problem is that faecal contamination can make waters unfit for swimming, and therefore inadequate sewage treatment could put the tourism industry at risk.

The sewage problem in the Bras d'Or arises from two categories of source: first, an estimated 2000 "straight pipes", or direct septic outflow pipes from residences and cottages around the lakes (Environment Canada 1990; Steele 2000 - Int.), or otherwise inadequate septic systems. One Mi'kmaq man wondered,

When you look at today, when you look at the pollution, especially right here in the Bras d'Or Lakes, now they're starting to build cottages all around the lakes. I often wonder what kind of sewage system do they have? Where does the raw sewage go? (M4 1997 - Int.)

Secondly, municipal sewage treatment plants are inadequate to deal with the volume of waste and increases in water flow during storms. According to a Nova Scotia

Department of Environment and Labour (NSDE) employee:

You have sewage treatment plants that are failing and the government not willing to address the sewage contamination of the Bras d'Or Lake from Baddeck. They send out pamphlets that tell one to pump your sewage [from pleasure craft], so they go in to Baddeck and pump put their sewage and the sewage is pumped directly into a sewage treatment plant half a kilometre down the road that malfunctions and puts it right back into the Bras d'Or Lake... Every sewage treatment plant in eastern Nova Scotia malfunctions (Steele 2000 - Int.).

A Bras d'Or resident and Bras d'Or Stewardship Society member explained the problem at Baddeck:

The other thing is that domestic and municipal waste systems are just not properly maintained. For instance, in Baddeck, municipal waste treatment facility which was built back in the 1960s, some brilliant engineer decided to move all the storm drains into the municipal waste system and, of course, you get a five-inch rain fall in late summer here which is quite common, when the hurricanes sort of go by, you actually get 3 or 4 of them before November, everything in the waste treatment facility floods out into the lake (CB1 1997 - Int.).

Similar problems have been experienced at Eskasoni First Nation, the town of Whycocomagh, and at Waycobah First Nation (Googoo 2000 - Int.).

In general, little is being done to correct the problem of faecal contamination of the lakes. Although high profile cases such as a malfunctioning lift station at Waycobah First Nation in 1999-2000 attract attention and get action, no action has been taken on the 2000+ straight pipes pouring untreated sewage into the lakes. The Nova Scotia Department of Environment and Labour (NSDE) appears to be unwilling to enforce existing regulations, leading one employee to accuse the Department of "regulatory negligence" (Steele 2000 - Int.).³⁰ Bill Quinby of the River Denys Basin Association attended the 1998 Water Sampling Project meeting at the UCCB, and asked representatives from Environment Canada, the Nova Scotia Department of Fisheries and Aquaculture, the Nova Scotia Department of the Environment and the Enterprise Cape Breton Corporation where local residents could obtain financial assistance to upgrade their septic systems. Senior Department of Environment officials including Deputy Minister Peter Underwood, Catriona (Kate) Moir (Manager -- Ecosystem & Risk Management Branch), and Lawrence MacDonald (Regional Manager -- Eastern Region) were in attendance, and promised to establish a pilot project in the River Deny Basin. This was the only major commitment by the Department at the meeting, but three years later, the project does not appear to have materialised, and NSDE staff had not, after

several months of requests by the author, provided any information about the pilot project's status.

Exotic Species

We are trying to look at pollution control, cabins leaking out detergents and factories that spill out their chemicals, and any ships that come in with their ballast filled with PCBs or anything like that... Ballast water. They come here just to dump in Nova Scotia. They can't dump anywhere else in the world but they think Nova Scotians are stupid people, and Cape Breton especially, and they can come in here and dump all their ballast water out and we don't know what's going on. But we do, and we're trying to do something to prevent having mercury poison all over the lake here or chemicals or anything that destroys this habitat. There are a lot of species of fish here that we don't even know of yet, that are in here. But [the governments] don't want to do any research because they know it's unique and it [should be] untouchable, eh? (Lafford 1997 - Int.).

Charlie Dennis, Executive Director of the EFWC doesn't mince words when discussing the problem of exotic species arriving in the Lakes via bulk carriers' ballast water:

Also, look at the green crab problem. We should have had a handle on the green crab before the population exploded. Before something else happens we should do something with the bulk carriers coming into the lakes: the gypsum boats. We shouldn't wait until something else like the zebra mussel comes in. I feel bad right now. We won the court case on the Middle Shoal dredging. And I am trying so hard to get Little Narrows Gypsum to come back to the table. We had two meetings with them but this guy, that Bruce Brown, he's an American. He's just in there to mine. He doesn't give a shit about the lake or -- that's the way I read him. I'm usually a good judge of character. This guy is strictly all business and something needs to be done before something explodes in the lake (Dennis 2000 - Int.).³¹

This issue became a major concern when the Little Narrows Gypsum Company (LNG) began dredging the Middle Shoal (see Chapter Seven), increasing the draught in order to allow bigger bulk carriers to pass into the lakes, and to allow ships now in use to be more fully loaded.³² The Atlantic Canada Opportunities Agency (ACOA) played a major rôle in funding this project, at a time when the Enterprise Cape Breton Corporation

(ECBC) -- under the terms of a memorandum of understanding -- was responsible for dispersing ACOA funding in Cape Breton/Unama'kik (MacInnis 1996a; Treasury Board Secretariat of 2000). A Mi'kmaq administrator discussed Mi'kmaq concerns in greater detail:

And then of course we were quite concerned and are still concerned - by increasing the depth you will now have an influx of the bigger ships, which means that they will be carrying much, much more ballast water. And the ballast water will have to be exchanged somewhere in the process, whether just before the entrance or within the lakes. Through traditional knowledge we know that the shellfish in the lakes are free from any form of diseases. And the major disease that we're concerned with is the Malpeque Disease. I don't know exactly where Malpeque Disease originated from but it is quite predominant in and around P.E.I for example. All them oysters have been contaminated with Malpeque Disease. And of course there's other major concerns, like Zebra Mussels. Zebra Mussels as I understand are very adaptable organisms... Zebra Mussels could very well adapt to the environment that the lakes have (A. Marshall 1997 - Int.).

It is unclear why the Coast Guard and the Department of Fisheries and Oceans (DFO) have not taken any concrete action to ensure that no ballast water is discharged in the lakes, though reference to Industrial economic imperatives may shed some light on the issue.

Fisheries Mismanagement

Kenchington (1998: 78) suggests that "the major attack on marine ecosystem function in the lakes... comes from the fisheries." From the perspective of the Mi'kmaq, depletion of the fisheries is by far the most serious cause for concern. Fisheries problems have resulted from a confluence of management failures. For example, the Department of Fisheries and Oceans has permitted a number of destructive fishing practices including the use of industrial trawl gear in the lakes which has damaged habitat; a large-scale

commercial herring fishery in a migration route (sector 4Vn) just outside the Bras d'Or Lakes; and a large-scale herring bait-fishery within the Bras d'Or lakes. More generally, the federal and provincial governments have failed to adequately enforce Sections 35 and 36 of the *Fisheries Act*, resulting in ongoing pollution of the Bras d'Or Lakes and destruction of habitat by development. Miscellaneous other disruptions to habitat and migration routes include the construction of the Canso Causeway connecting Cape Breton/Unama'kik to the Nova Scotia mainland and the more recent dredging of the Middle Shoal just outside the Great Bras d'Or channel. Details of these problems and the Mi'kmaq responses are provided in Chapter Seven below.

Escaping Industrian Captivity

It is clear that the ecological degradation of the Bras d'Or is neither recent nor accidental. It is a direct result of a series of processes which can be traced to the Industrian capture of Cape Breton/Unama'kik, and it is inextricably linked to the political and economic disempowerment of the *Unama'ki* Mi'kmaq and Cape Bretoners. Cape Breton/Unama'kik is, from the perspective of the Industrian system, little more than a supply of cheap raw materials to be processed and consumed by its increasingly urban populace, or a tourist product to be similarly "consumed". Not surprisingly, then, efforts to protect the Bras d'Or which do not address the parasitic nature of Industria and involve some form of long-term, sustainable community economic development will fail. The analysis of Industria in Chapter Three above suggests that Industrian power-brokers (in government and/or industry) will be very resistant to any form of devolution of authority,

or to any proposals which would protect the ecology of the watershed by measures which would raise the cost of resource exploitation.

Concern for the ecology of the Bras d'Or Lakes is anything but new. Problems specific to the Bras d'Or were first identified by Arseneau (1975). The next chapter chronicles the profusion of studies, reports, public consultations and recommendations to various levels of government which followed during the ensuing quarter century, and details local initiatives to implement some form of locally-controlled integrated management structure in order to develop sustainability in the area. Arguably, few of these actions have had any significant effect either on altering the political arrangements in the Bras d'Or or on protecting the watershed from ongoing ecological degradation. It will become apparent that without the assistance of the Mi'kmaq "metamorphosis machine" in breaking Industria's hold on the island, these initiatives were, from the beginning, doomed to failure.

Notes to Chapter Five

¹ Donald Savoie (1986: 165) suggests that the province/region conflation is the result of scholars' very limited ability to pick criteria by which regions may be defined.

² In this case, because of the terms of the *BNA Act* "state" and "provincial" are synonyms.

³ What is meant here is the grassroots democracy as discussed by Esteva and Prakash (1998), and not the illusory, reactionary statist "democracy" characteristic of states at the core of Industria.

⁴ A systematic analysis of the erasure of the Mi'kmaq from representations of Nova Scotia tourism would doubtless provide substance for a separate dissertation.

⁵ See for example Weller's (1977) discussion of the aboriginal population around Thunder Bay, or the more comprehensive account of aboriginal demographics available in the Report of the Royal Commission on Aboriginal Peoples (1996: v.1, c.2).

⁶ Statistics Canada (1997) reports in the 1996 Census that the population of Cape Breton/Unama'kik declined by 1.9% from 120,098 to 117,849 between 1991 and 1996. While comprehensive data on rates of Mi'kmaq out-migration are unavailable, anecdotal evidence suggests that young Mi'kmaq are more likely to stay in their communities or return after leaving for economic or educational objectives. The 1996 Census does indicate that the population of the Eskasoni Reserve, for example, increased by 13.5% from 2,206 to 2,504 during the same time period.

⁷ Today Cape Breton/Unama'kik continues to be the seat of the Grand Council of the Mi'kmaq (McMillan 1996).

⁸ However, the state governments do not recognise the authority of the Grand Council of the Mi'kmaq. All "official" or "legal" political authority in Mi'kmaq communities resides with Band Councils on each Reserve established under the *Indian Act*. Readers interested in the details of the historical and present role of the Grand Council are directed to McMillan's (1996) excellent, comprehensive work. A briefer description of the *Santé Mawioimi* is also provided by the Royal Commission on Aboriginal Peoples (RCAP 1996).

⁹ Colloquial knowledge of many medicinal plants remains strong in many Mi'kmaq families. One Mi'kmaq family interviewed identified numerous herbal remedies, the details of which have been left out of this study out of respect for intellectual property rights.

¹⁰ The negative impact of Residential Schools cannot be overstated. For an overview of the impact on aboriginal communities of the Residential School program, which ran from the mid-19th century until 1986, see Crey and Fournier (1997), Milloy (1999), or the Royal Commission on Aboriginal Peoples (RCAP 1996). The program came very close to accomplishing the extinction of the Mi'kmaq language, cultural tradition, and local/traditional ecological knowledge, which many survivors suspect was its intent.

¹¹ Eskasoni poet Rita Joe speaks powerfully of the impact of the theft of her language by the Shubenacadie priests in her poem "I Lost My Talk", originally published in her *Songs of Eskasoni* collection and reproduced by the NCNS (1997). It was not until 1951 that the *Indian Act* was changed to remove a ban against aboriginal peoples performing traditional ceremonies.

¹² Coercion, according to the Royal Commission on Aboriginal Peoples took several forms: "While some were lured by offers of jobs and improved housing, others were coerced by threats and the actual termination of educational, medical and general welfare services on their reserves (RCAP 1996: v.1, c.11, s.2).

¹³ The only direct road from Eskasoni to Sydney is in pitiful repair, a fact not lost on this researcher during one field season when a motorcycle was the only means of transportation!

¹⁴ The 1996 census shows an unemployment rate of 32.4% (compared to 10% for Canada overall). However, it is also shown that only 46.1% of the Mi'kmaq population over 15 years of age is part of the labour force (compared to 65.5% for Canada), which means that the figures as given are incommensurate. By converting the unemployment rates (the percentage of people in the labour force who are unemployed) to employment population ratios (the percentage of people aged 15 years or older who are employed), a comparison can be made. In this case, the result is that among the Mi'kmaq of Cape Breton/Unama'kik, only 31.1% of the population over 15 years of age is employed, among the Canadian population as a whole, 58.9% of people aged 15 years or older are employed. Although a detailed breakdown for the Mi'kmaq is

not available, it may be safely presumed that Mi'kmaq employment also includes a higher proportion of part-time or seasonal employment than Canadians as a whole. The Assembly of Nova Scotia Mi'kmaq Chiefs (ANSMC 1999) reports an unemployment rate among all Nova Scotia Mi'kmaq of 63%, with an average reported individual income of less than \$10,000/annum, though neither the source of these statistics nor the method of calculating the unemployment rate is provided.

¹⁵ The statement, while inaccurate in terms of time frame, is evidently a reference to the fact that in 1749 the British instituted a ten guinea bounty for the scalps of Mi'kmaq people (NCNS 1997; Whitehead 1991).

Though the practice had stopped long before "eighty, a hundred years ago" it is significant that for many Mi'kmaq, it is still perceived as being recent.

¹⁶ This is another example of why "Industria" is a preferable term to "modernity" since the latter is a temporal term, yet is in Hornborg's and other work ascribed a kind of *agency*.

¹⁷ Given the steady decline in prices, coal, once "the basis of industrial civilization" (Zimmerman 1951: 454-469), may now in Cape Breton/Unama'kik have become an "ex-resource" (Zimmerman's term for materials that exist in too small quantities or are otherwise not economical to extract).

¹⁸ The figure of 22 agencies was reproduced in subsequent reports, including Kenchington's 1998 report to the Mi'kmaq.

¹⁹ Mr. Sober did qualify this comment by saying, "I'm sure that this is not entirely true, you know, there are many good people in the Department of the Environment, and things do change slowly so... I don't like to blame individuals. We're definitely changing our ideas in this province, but it is happening slowly. We're learning that a pristine environment is probably more valuable than the mining jobs, or than saving a few dollars."

²⁰ The Mi'kmaq word for the Bras d'Or Lakes is *pitu'puk*, meaning "water enclosed on all sides" (Pacifique 1934; Murdena Marshall, pers. comm.), though it is not in common use by Mi'kmaq today, who generally refer to the "Bras d'Or Lake(s)".

²¹ According to Kenchington (1998), at least 40 distinct species of fish reside in the Lakes for at least part of the year. Kenchington's report provides an exhaustive accounting of the biotic components of the watershed. This list does not include sturgeon, which were reported by Père Biard in 1611 (quoted in Whitehead 1991: 36).

²² The claim to the Bras d'Or Lakes' uniqueness has also been made by Bras d'Or specialist Dr. Donald Arseneau (1977), and DFO scientist emeritus (and former Bedford Institute of Oceanography biologist) Timothy Lambert (in Lambert 1999).

²³ This term is a trifle confusing, since obviously if there is more than one lake, there must be more than one watershed. The phrase "Bras d'Or watershed" is used to refer to the collective watershed of the lakes. There does not appear to have been any attempt to identify what the various lakes actually are. It would be possible, for example, to speak of the following four bodies of water as separate "lakes" (clockwise from Whycocomagh in the west): 1) Whycocomagh Bay, 2) St. Patrick's Channel (Baddeck Bay), 3) the Great Bras d'Or (including St. Andrew's Channel), and 4) the Bras d'Or Lake (the main body of water south of the Grand Narrows, including West Bay, East Bay, and St. Peter's Inlet). For the purposes of bioregional political organisation, these subdivisions may be appropriate, but the fact that water is exchanged freely among these water bodies, and the collective interest the Mi'kmaq have in the lakes system as a whole, means that the notion of a Bras d'Or "watershed" is a useful one.

²⁴ In general, Kenchington's (1998) *Unama'ki Ewey U'tan* report, commissioned by the Union of Nova Scotia Indians' Unama'ki Environmental Committee, is the most complete and comprehensive treatment of the ecology of the Bras d'Or watershed to date.

²⁵ Attempts to reintroduce Woodland Caribou failed, but Moose were successfully reintroduced from a breeding stock of 18 animals imported from Alberta in 1948-49. Though sensible from a biological standpoint, local antipathy toward Timber Wolves means that it is unlikely that species will be reintroduced anytime in the foreseeable future (Nette 2001 - Int.).

²⁶ The relationship of government members and industry owners was highly incestuous, and further supports the claims made in Chapter Three about the nature of the state-capital alliance which characterises *Industria*.

²⁷ Healthy ecosystems are not usually vulnerable to devastating infestations of one kind of pest. In forests, loss of biodiversity (and mono-species and age-structure) result in the overpopulation of insects such as the

spruce budworm, which in moderate numbers are a healthy component of the forest ecosystem. It is easy when speaking to some government personnel to gain the impression that the infestation was something like an "Act of God" rather than the result of generations of mismanagement. Take for example the following comment by a government employee, who chose to remain anonymous: "It's nobody's fault. Mother Nature put the budworms there, we didn't invent the budworm [or] the bark beetle infestation... (G1 2000 - Int.).

²⁸ The notion that this process of artificial plantation results in "forests again" is highly contestable.

²⁹ DNR staff confirm that the Keppoch Plateau experienced "large clear-cuts in a short time" (Stoddart 2000 - Int.).

³⁰ Senior officials in the Department, despite extensive correspondence, telephone calls and direct contact, declined to provide any information on what the Department is doing to address the problem of faecal contamination in the lakes.

³¹ Dennis' views were shared by a member of the Bras d'Or Stewardship Society, who said that, "Little Narrows Gypsum for example is very hard to deal with -- they have the American 'my way or the highway' attitude" (CB3 - Int.)

³² The shallowness of the Middle Shoal outside the Great Bras d'Or entrance to the lakes had meant that bulk carriers transporting gypsum from the LNG mine could only be loaded to 75% capacity.

Chapter 6 The Long Struggle to Protect the Bras d'Or

Whereas it is of primary importance that the leadership and control of any co-management strategies rest first with the Native and Non-Native communities that are adjacent to the lakes, and that all levels of government as well as the technical resources of the University College of Cape Breton must play a secondary and supportive rôle (Unama'ki Mi'kmaq Chiefs quoted in BOWWG 1995: Foreword).

Growing Awareness of the Problem

There are preliminary indications that what might be termed a “bioregional identity” is slowly emerging among the 18,000 residents of the Bras d'Or Lakes watershed. Like most political identities, this one is borne of decades of frustration and conflict surrounding the mismanagement of the Bras d'Or Lakes and their drainage basin by municipal, provincial and federal authorities. From a human perspective, one of the key symptoms of this mismanagement is the relative impoverishment of local residents in the face of large profits being made by developers of sub-divisions marketed to wealthy Europeans, commercial fishing fleets, aggregate extraction operations, and industrial forestry in the watershed's headwaters.

Yet public awareness of the extent of problems in the watershed is still relatively scant. As Charlie Dennis, Executive Director of the EFWC argued.

I guess the biggest thing to do is to educate people on what's happening. When you are driving out on the Bras d'Or Lakes you look out and the water is so beautiful. You wouldn't think it's a problem. But when you take a look at it through a microscope then you realize it's a problem. When you talk to the fishermen about the herring population going down, about the lobster population going down, about the oyster population then you start developing, "Jeez, there's a problem. I didn't realize." I don't know how many people walk in here and they look at that map and they see all these red marks and you know, "What's this?" "That's contamination." "Oh I didn't realize there was any contamination in the Bras d'Or Lakes." So the awareness is not there. I guess people are just not aware of what's happening, but when you take away something then people start realising what they're doing wrong, what's happening (Dennis 1997 - Int.).

The following pages will provide an overview¹ of the major initiatives for local "management" or "governance" since the 1970s, and efforts toward public education about problems facing the Bras d'Or Lakes watershed.

Historical Concern for the Bras d'Or Watershed

As noted earlier, the early historical record of Cape Breton/Unama'kik is sketchy, and no comprehensive environmental assessment of the island exists. However, Whitehead cites numerous sources through the seventeenth, eighteenth and nineteenth centuries which make reference to the depletion of biodiversity on the island and more generally throughout *Mi'kma'ki*. For example, "the Petitioners [Mi'kmaq] are in a starving Condition, and almost destitute of Clothing, in consequence of the Failure of Game in their Hunting Grounds" (Legislative Assembly of Nova Scotia, 1800, quoted in Whitehead 1991: 184). The cause for this ecological decline is clear from the following passage:

But your people had not land enough, they came and killed many of our tribe and took from us our country. You have taken from us our lands and trees and have destroyed our game. The Moose yards of our fathers, where are they. Whitemen kill the Moose and leave the meat in the woods. You have put ships and steamboats on the waters and they scare away the fish. You have made dams across the rivers so that the Salmon cannot go up, and your laws will not permit us to spear them (1849 letter to the Lieutenant Governor of Nova Scotia by several Chiefs of the Mi'kmaq, quoted in Whitehead 1991: 240).

As late as the mid-twentieth century, Cape Bretoners routinely dumped hundreds of tons of lobsters onto farm fields and ploughed them into the ground as fertiliser (CB4 1997 - Int.). The Mi'kmaq, who have depended for millennia on lobster as a staple food source, must have been horrified. It would probably not be unreasonable to suggest that this systematic destruction of the Mi'kmaq food supply may have been a deliberate strategy as was the extermination of the Plains Bison during the wars against Plains nations such as the Lakota (Weyler 1992).

The first non-Mi'kmaq expression of concern about the ecological health of the Bras d'Or Lakes was aired at the June 1975 Aquaculture Conference held in Sydney, co-sponsored by the Bras d'Or Institute (BDI) of the College of Cape Breton² and the Atlantic Provinces Inter-University Committee on the Sciences (Arseneau 1975). This issue was subsequently the focus of a July 1975 meeting in Halifax between officials of the Department of Indian and Northern Affairs, Environment Canada, the Nova Scotia Departments of Environment, Fisheries, and Public Health, the Maritime Oyster Development Committee, and the Cape Breton Development Corporation (Cook 1975). Participants at that meeting discussed mounting problems faced by the shellfish industry as a result of faecal contamination, and noted the need for co-ordination in "control, planning [and] resource development" (Cook 1975: 2).

The Bras d'Or Institute Proposals

Shortly afterwards, on December 15, 1975, the College of Cape Breton's Bras d'Or Institute submitted a proposal to the Nova Scotia Department of Municipal Affairs for the development of a resource-use management strategy for the Bras d'Or Lakes coastal zone, in response to concerns that unco-ordinated and largely unregulated development in the watershed was having a significant impact on the health of the aquatic ecosystem (Arseneau 1975). The brief (6 page) proposal urged an integration of federal and provincial efforts, policies and programs aimed at solving resource-use management conflicts, under the auspices of a watershed management structure. As a precursor to the establishment of such management structure, the proposal briefly outlined a two-year, \$870,000.00 study to develop an inventory of Bras d'Or resources, determine the sources and extent of pollution -- including examining the current state of sewage treatment; evaluate the potential of aquaculture, tourism, etc.; study and evaluate water management and land resource management programs; study and evaluate land-use and community development options; and prepare "alternate computer models" for the watershed.

This proposal was followed by extensive consultations between government representatives and the Bras d'Or Institute. In 1977, the proposal was re-worked in greater detail and submitted to the Deputy Ministers' Committee on Land-Use Policy (Arseneau 1977). This latter document outlined four rationales for a comprehensive land-use and development strategy for the Bras d'Or, namely, economic necessity (citing unemployment in Cape Breton/Unama'kik as a whole), the need for conflict resolution (in the narrow sense of resolving conflicts between human activity and ecological well-being), the watershed's national (state) and provincial significance (given the Bras d'Or

Lakes' uniqueness as an inland sea), and the need for a co-ordinating focus for the disparate federal and provincial agencies tasked with management of various activities in the watershed (the thrust of this rationale was the need for a socio-ecologically sustainable strategy for Cape Breton/Unama'kik). Like its predecessor, this proposal called for a two-year study of the ecology and the economic potential of the watershed. Overall, this proposal did not challenge existing political structures or propose a bioregional level of governance, but merely argued the need for co-ordination between *existing* agencies.

In 1986 the Bras d'Or Institute received a small grant to host a "Bras d'Or Lakes Coastal Zone Management Program Exploratory Workshop" which was attended by representatives of the federal and provincial governments, the four Cape Breton/Unama'kik municipalities, the UNSI, the UCCB, and a consulting firm. The meeting minutes were published in November 1986 as "An Action Plan for Resource Management of the Bras d'Or Lakes" and distributed to all participants.³

This led to an offer in January 1987 by Environment Canada to fund research into a planning process and structure for an "Integrated Resource Management Plan" for the Bras d'Or watershed. The Enterprise Cape Breton Corporation (then part of the Cape Breton Development Corporation) also added substantial financial support.

The Cressman Report

In 1987, Environment Canada engaged a consultant to develop an integrated management plan for the Bras d'Or Lakes watershed (Cressman 1987). Cressman argued that long-term planning and an integrated management process were necessary to prevent existing socio-economic and ecological problems from worsening. The proposed

planning process would begin with a federal/provincial agreement and steering committee. From there, a local advisory committee would be created to advise the federal/provincial steering committee, and a small planning/management team would then carry out implementation of the plan. Overall, the report urged extensive public participation, yet only one Mi'kmaq person was interviewed by the consultant. Berneshawi (1993) notes that discussion of the importance of the area to the Mi'kmaq nation consisted of a single, brief sentence.

As with the earlier Bras d'Or Institute proposals, the recommended process did not materialise, and the issue of developing some form of integrated watershed management was left to further study.

The UMA Report

The Bras d'Or Institute then contracted the consulting firm Underwood McLellan Associates (UMA) to write a detailed inventory of the watershed as background for a management plan. In 1989, UMA presented their major report on integrated resource management for the Bras d'Or to the Bras d'Or Institute and a recently-formed task force (eventually to be known as the Bras d'Or Watershed Working Group) comprised of government and watershed representatives (UMA Group 1989).

Though sketchy on some details, and marred by completely inadequate attention to the Mi'kmaq nation, the UMA report is nonetheless an impressive accomplishment, providing for the first time a comprehensive overview of the mandates and responsibilities of the federal and provincial agencies responsible for various human activities within the Bras d'Or watershed, an inventory of human and natural resources in the watershed, (including details such as agricultural soil classifications, timber

inventories etc.) and an overview of economic potential, along with recommendations on an integrated resource-use management planning framework.

As with the BDI proposal, the UMA report was careful to make clear that it was not calling for the establishment of an additional layer of “bureaucracy” (UMA Group 1989: 5), nor even the replacement of existing agencies by a local governance structure, but rather merely co-ordination between *existing* agencies. As such, the report can not be seen to be directly advocating an *active* approach to governance, but rather suggesting *reactive* reforms to the Industrian system as it operates in the Bras d’Or watershed.

Significantly, the report shies away from discussing the Mi’kmaq as a single political entity, making reference only to the “Indian [sic] bands”. As the report states:

The constitutional and jurisdictional role of activities on Indian lands does not fall under the same procedures as other lands in the watershed. Because of this situation, the involvement of Indian bands should be established through separate discussions with each band (within the intent and context of the management group) (UMA Group 1989: 140).

Nor does the report in any way acknowledge a Mi’kmaq cultural or historical connection to the ecology of the Bras d’Or, nor any special collective interest the Mi’kmaq might have in helping to manage human activities in the watershed. Given that the Mi’kmaq comprise roughly one-third of the watershed’s population, speak a common language, share close kinship and economic ties, participate as a group in religious and other cultural festivals, etc., it is quite surprising that a supposedly comprehensive study of the Bras d’Or watershed could have ignored the Mi’kmaq to such a significant degree. The entirety of any substantive discussion of the Mi’kmaq (“Micmac” in the report) aside from basic demographic data is reproduced here:

Over 2000 Micmac Indians live in the watershed on Reserves. The watershed has been their home for thousands of years as is borne out by the numerous prehistoric sites found throughout the area. There are five reserves: Whycocomagh, Nyanza, Eskasoni, Chapel Island, and Malagawatch. Eskasoni is the largest Indian Reserve in Nova Scotia with a population of about 1,800 in 1986. Malagawatch is not occupied on a permanent basis but is used seasonally for hunting and fishing. Each July, Chapel Island is the site of a religious festival at the Indian Mission. This gathering is an important annual event for Native People from all over the Province (UMA Group 1989: 51)

As will be seen next, this erasure of a collective Mi'kmaq identity, and a failure to acknowledge the Mi'kmaq's special interest in the watershed, was carried forward into the first draft of the Bras d'Or Watershed Working Group's "Taking Care of the Bras d'Or" report. This was of course wholly unacceptable to the Mi'kmaq, and very nearly proved to be the report's undoing.

The Bras d'Or Lakes (Watershed) Working Group

The Task Force which received the UMA report organised a "Bras d'Or Lakes Conference", held at Iona in December 1993. Of 49 invitees, only one, Morley Googoo of Waycobah First Nation, was Mi'kmaq (this is rather surprising given that the Mi'kmaq constitute almost one-third of the population of the watershed, and may be linked to the discussion in the previous chapter of the invisibility of the Mi'kmaq and generally racist attitudes toward them in Cape Breton/Unama'kik). Mr. Googoo did not attend, and there was thus no Mi'kmaq representation at the conference.⁴ Conference participants repeatedly discussed the need for a governance structure, but lamented the lack of funding for a credible management initiative and the evident unwillingness of any one government department to take on the role of a lead agency (Bras d'Or Institute 1993).

In February 1994, Cape Bretoner Member of Parliament and Minister for Public Works David Dingwall announced a federal ACOA grant of \$50,000 to the UCCB in order to fund a formal study on a governance structure for the Bras d'Or Lakes watershed (Stewart 1994). The UCCB's Sander Taylor was appointed Project Officer in charge of establishing a committee and directing the study. A committee was formed, largely based upon the earlier Task Force, and adopted the name "Bras d'Or Lakes Working Group" (BOLWG), and set about organising public consultations on establishing a centralised management structure for the Bras d'Or watershed. The Mi'kmaq sent Diana Denny of Eskasoni to represent their concerns on the Working Group.⁵ The Group's Terms of Reference read

To develop a community based management structure which will have continuing responsibility for guiding and monitoring sustainable development in the Bras d'Or Lakes Watershed Area (BOLWG 1994a: 1)

The first public consultations were scheduled for June 1994 at Eskasoni, Baddeck, Iona, St. Peters and Little Bras d'Or. In addition, the Group initiated research into other regional management/governance models from elsewhere in Canada.

This first round of consultations was attended by a total of 136 people (BOWWG 1995: 6) and elicited a number of concerns, most notably that the public felt government agencies would be reluctant to give up any of their existing power. It was urged that the management structure "have teeth", and that its members be elected rather than appointed, or at the very least would report to an advisory committee in their local areas (BOLWG 1994b). Though several Mi'kmaq attended a meeting in Eskasoni, in none of the meeting summaries was there any reference to Mi'kmaq concerns or the nature of the Mi'kmaq role in the management structure.

After this round of meetings the Group published notices in the local media soliciting written briefs on the Group's mandate as laid out in its Terms of References. The Group simultaneously released and widely distributed a discussion paper (BOLWG 1994c) to solicit further public input. The document included a map (see Figure 6.1) depicting the proposed watershed boundary and seven geographical sub-areas. The paper outlined the need to replace the existing structure of "22-agency involvement" with a single "Management Structure", and identified the BOLWG's mandate as being to "develop a comprehensive management and governance system" and to "develop a five-year management plan which can be carried out through one unified organisation" (BOLWG 1994c: 5). Also included in the discussion paper were summary descriptions of other community management models including the Fraser Basin Management Program, the Squamish Estuary Management Plan, the Temagami Comprehensive Planning Council, the Atlantic Coastal Action Program, the Geraldton Community Forest, the Wendaban Stewardship Authority, the Niagara Escarpment Commission. In general, these initiatives were criticised for lack of clear regulatory authority, and praised according to the degree to which they had accomplished co-ordination among government agencies and involved local people in decision-making.

The proposed management body would be given responsibility for long-term resource-use planning, management, and enforcement in all areas of development within the watershed. The Commission⁶ would be composed of between 17 and 21 members, of whom four would be Mi'kmaq, one from each of four Reserves (Waycobah, Wagmatcook, Eskasoni and Chapel Island).⁷ The report emphasised that it was not

No explanation was provided about the numbers on this map, nor of how the “watershed sub-areas” would function in a governance structure. This may have caused public confusion and decreased the likelihood of the plan being accepted by government. Source: Bras d'Or Watershed Working Group (1995: 37).

Figure 6.1 - Watershed Boundaries and Geographical Sub-Areas

proposing a new level of government, but rather a “different” form of government which would replace federal, provincial and municipal governments in the watershed.⁸

The Working Group’ Discussion Paper received 135 written responses from the public (BOWWG 1995: 6). In general, people expressed concern about the pollution of the lakes and support for a management authority. However, there was also a clear worry that the proposed Bras d’Or Watershed Commission would be an additional layer of government and increase what some saw as a problem of over-regulation. Some respondents questioned whether there was a coherent political identity among residents of places as disparate and geographically distant as St. Peter’s and Waycobah, and therefore whether political co-operation in the huge watershed was really possible.

Responses from different municipal, provincial and federal departments and agencies almost universally adopted a non-committal “wait and see” attitude. A notable exception was Environment Canada, which responded positively and with a detailed discussion of possible enabling legislation such as the new *Nova Scotia Environment Act*, the Coastal 2000 Integrated Coastal Zone Management Policy, and the Federal-Provincial Framework Agreement for Environmental Co-operation in Atlantic Canada, and emphasising that Mi’kmaq support for the process was absolutely essential (Hildebrand 1994). None of the responding agencies made any concrete offer of financial support for the development of the management structure, nor any commitment to devolve any authority to empower a watershed management Commission.

In January 1995 the Working Group finished the Final Draft (“Not for Public Distribution”) of its report and distributed it internally. The Final Draft formally called

for the creation of a “Bras d’Or Stewardship Commission” to take over ecological management in the watershed. The Mi’kmaq response was immediate:

So when we saw the first draft we realised that we were excluded from this report. And we live in - all the five Mi’kmaq reserves are around the Bras d’Or lakes - so we were quite displeased that we weren’t included in this report... So again through this Unama’ki Environmental Committee, we approached the University and said “No, no. This is not going to work.” [...] So after we got the resolution from the five Chiefs we went to the university and said, “Either we redraft this with our input into it or we are not going to support it.” The university agreed, and again, jointly, we went through that report word for word. And we injected the areas that concern us (A. Marshall 1997 - Int.).

The five Cape Breton/Unama’kik Band Chiefs (between the discussion paper and the Final Draft, the report had been changed to add a Commission member from the Membertou Band), through the UNSI’s Unama’ki Environmental Committee, insisted that nine substantive changes be made before they would be willing to endorse the report.

These changes can be reduced to six points and summarised as follows:

1. Addition of references to historical and present use and occupation of the watershed by the Mi’kmaq.
2. Involvement of the Mi’kmaq in the Secretariat running the commission (the draft report proposed that the Secretariat be housed at and run by the UCCB).
3. Addition of references to the central rôle played by different First Nations in the various community management models discussed in the report.
4. Addition of references to ongoing Mi’kmaq efforts towards stewardship of the watershed, such as their co-management proposal and GIS project (see Chapter Seven below).
5. An increase in Mi’kmaq representation from five to eight members, including the position of Chair.

6. Addition of a training program for the Mi'kmaq to assume a rôle as "Native Guardians" of the watershed, and the deletion of some language felt to be prejudicial to Mi'kmaq legal rights to resources.

These proposals in turn provoked a heated debate within the Working Group. Several members indicated that if the changes were made, they would be unwilling to sign onto the report. Particular concerns included a perception that the Mi'kmaq would be disproportionately represented, fear that a "political" message outside the Working Group's mandate had been tacked on, and questions as to why the Mi'kmaq should have exclusive responsibility for enforcement and receive the only training in guardianship.⁹ Despite these objections, the changes were implemented, and formal endorsement by the five Band Chiefs and the Grand Chief of the Grand Council was provided by the Mi'kmaq. In the end, only one Working Group member, previously known for his strong views about "the Natives", refused to sign the report. The Little Narrows Gypsum Company is on record as indicating that the changes were unacceptable, yet nonetheless the signature of John Fitzgerald, LNG's representative on the Working Group, does appear on the final report (there was no explanation available for this inconsistency).

The final report, *Taking Care of the Bras d'Or: A New Approach to Stewardship of the Bras d'Or Watershed*, was published in April 1995 and distributed to government agencies (Bras d'Or Watershed Working Group 1995). While ambitious and perhaps less than sensitive to the dynamics of Industrian power politics, the report was responding to what has been increasingly acknowledged as a socio-economic and ecological crisis developing in the watershed. It proposed concrete steps to be taken by governments to establish a politically-empowered Bras d'Or Stewardship Commission.

The proposed Commission would be responsible for a) the development of action plans to address “high priority issues” such as sewage contamination, b) drafting a “Charter for the Bras d’Or Lakes watershed to establish the basis for policy (this Charter is identified as “the essential prerequisite to all activities of the Commission”), c) long term planning for development of land and water resources, d) promotion of education, and e) management for sustainable development including overseeing activities such as sewage treatment, docks, logging, boating, aquaculture, aggregate extraction, fisheries, solid waste management and (fresh) water supply development (BOWWG 1995: 19). The report was accompanied by a vastly improved map of the watershed (see Appendix B).

The report was completely ignored by the Nova Scotia government for more than two years. Mounting frustration with government inaction among people close to the report is evident in correspondence to the NSDE Minister Wayne Adams, copies of which have been archived by the UCCB Beaton Institute (e.g. Bates 1997; Fuller 1997; Scott 1997a). Finally, in early May 1997, senior representatives of the Nova Scotia Department of the Environment, including Deputy Minister Peter Underwood, met with the Working Group and other community representatives in Sydney. Minister Adams, who had been scheduled to attend, was absent from the meeting, apparently due to illness (Scott 1997b). The government representatives indicated that the devolution or delegation of authority called for in the report was unlikely to be granted, and that the most that could be hoped for by local residents would be participation in a watershed advisory board without any regulatory power. Four years later, this watershed advisory board had not materialised, though senior Nova Scotia Department of Environment and

Labour bureaucrats continued to promise that one would be established. BSS Board member James Crawford, in a 2000 interview, capsulised the disappointment felt by many involved in the process at that time:

I thought it was well done. I thought that all parties of interest were included. I thought that it was a workable management program. But once again there was no political will (Crawford 2000 - Int.).

In summary, the *Taking Care of the Bras d'Or* report was a remarkable achievement in terms of the extent of public consultation undertaken, the level of local support it received, and the fact that it received formal endorsement by the Chiefs-in-Council of all five Mi'kmaq bands in Cape Breton/Unama'kik, and the Mi'kmaq Grand Council's Grand Chief Ben Sylliboy.¹⁰ It called for the formation of a watershed commission which would oversee all development taking place in the bioregion, involving a significant devolution of power to the local level from both federal and provincial governments, and which would involve equal representation of Mi'kmaq and non-Mi'kmaq watershed residents. The Mi'kmaq would be given special responsibility for conservation, including an enforcement rôle to be carried out by specially-trained "Native Guardians". The report cost several hundred thousand dollars in cash and in-kind contributions from watershed organisations, government agencies, and the UCCB, took two years of primary development and two more of political follow-up, and involved the broadest cross-section of watershed residents ever assembled on a single project.

Yet the level of devolution of democratic power envisaged by the Bras d'Or Watershed Working Group apparently proved unacceptable to Industriean power-brokers. Moreover, in the six years that have elapsed between the report's publication and the

writing of the present work, nothing but further study has taken place. No integrated management structure has been put in place. No watershed (or sub-watershed) advisory board pilot projects have been undertaken. Nor has enforcement of existing laws and regulations been stepped up. Particularly absent from a proactive enforcement rôle has been the Nova Scotia Department of Environment and Labour, which, since it is mandated to regulate septic systems and municipal waste treatment systems, must bear some responsibility for septic contamination of the lakes. Nor has the NSDE shown any willingness to enforce the *Fisheries Act* at the Little Narrows Gypsum mine or other aggregate extraction operations.¹¹ The NSDNR has taken some action to prevent modification of the shoreline by private breakwaters and docks (Hanam 2000), but has largely handed over authority for self-monitoring of industrial logging in the watershed's headwaters to Stora Enso.

This long chain of events highlights the difficulties that will be faced by communities as the struggle to regain local control over development and resource-use management. Chief among these difficulties is the strong resistance of Industrian politicians, bureaucrats, and corporate executives to any devolution of regulatory authority to the community level.

Contemporary Movements for the Protection of the Bras d'Or

After it became clear that the years of effort in developing the *Taking Care of the Bras d'Or* report had come to naught, and that the report had been effectively "killed" by the Nova Scotia government, disheartened residents of Bras d'Or watershed organised themselves to try in some way to move the report's recommendations forward. These

efforts are discussed below, and do not include much broader and more significant initiatives launched by the Mi'kmaq, which are the subject of Chapter Seven.

Bras d'Or Stewardship Society

stewardship...

1 : the office, duties, and obligations of a steward

2 : the conducting, supervising, or managing of something; especially : the careful and responsible management of something entrusted to one's care
<stewardship of our natural resources> (Merriam-Webster 2001)

The problem is so complex, so huge, that no one group can do justice to it by focusing on one area or one cause. Unless we come together as one and try to address all these complex problems on a collective basis then I think any effort that is going to be put forth by a small group is not going to be as effective (A. Marshall 1998 - Int.).

The Bras d'Or Stewardship Society (BSS)¹² is a locally-based environmental non-governmental organisation which claims to have taken the lead on educating the public and lobbying the government to solve the problem of faecal contamination (O'Brien 2000 - Int.; Bates 2000 - Int.). The BSS was formally established in 1997, after the rejection of the *Taking Care of the Bras d'Or* report by the provincial Department of the Environment. The group has since its inception focused almost exclusively on sewage contamination of the lakes. Despite its name, the Bras d'Or Stewardship Society has been engaged in few activities which could be interpreted as furthering the broader "stewardship" objectives of the Bras d'Or Watershed Working Group report.

The BSS had its genesis in 1996. Correspondence between local psychiatrist Dr. James O'Brien, boatyard owner Henry Fuller, and several other watershed residents -- who were concerned that yet another government-funded initiative had failed to achieve tangible results -- had resulted in a 1996 meeting with an existing environmental non-governmental organisation, the Bras d'Or Preservation Foundation (BOPF). At that

meeting, they were advised by lawyer Dene Burchell that a land conservation group such as the BOPF could not be involved in what they “had in mind”, and they were encouraged to start a separate group (O’Brien 2000 - Int.). O’Brien (1997) followed up that meeting with a letter to interested individuals.

What exactly it was that the founders of the Bras d’Or Stewardship Society had in mind in those early days is not entirely clear. In an interview with consultant Trevor Kenchington, founding Treasurer Henry Fuller suggested that the BSS was formed in order to move forward the community ecological management initiatives (including the proposed creation of a central watershed management authority) outlined the “Taking Care of the Bras d’Or” report (Kenchington 1998). In other words, as its name implies, the original aim of the Bras d’Or Stewardship Society was to effect “stewardship” of the Bras d’Or watershed. This contention appears to be substantiated by the minutes of the Society’s first Annual General Meeting, where a list of Society activities “consistent with its mission” included those involving water quality, agriculture practices, working to attain Atlantic Canada Action Project status and other national and international designations, and possible provision of stipends to fund graduate research into the development of a management system for the lake and its watershed (BSS 1998a: 2). Members of the Society had rated numerous other areas as important, including addressing issues such as clear-cutting in forestry, pesticides and herbicides, and “Influencing ‘Power Brokers’” (BSS 1998a: 2). In the Society’s first newsletter, Chairman Pat Bates, formerly the Vice-President and chief operating officer of the Enterprise Cape Breton Corporation (ECBC)¹³, specifically mentions “an ongoing absence of any commitment by the Provincial Government to support any form of

substantial STEWARDSHIP and MANAGEMENT for the watershed” (Bates 1998: 2, *emph. orig.*) When asked about the original purpose of the BSS, Dr. James O’Brien spoke of the need for a “central group” after the Bras d’Or Watershed Working Group’s initiative had “died on the vine” (O’Brien 2000 - Int.). As Dr. O’Brien summed it up, “So that was the idea: protect, conserve and restore the Bras d’Or Lakes.”¹⁴ A pretty broad mandate.” Key to such a group would be financial independence from the government.

Yet a scant three-and-half years later, despite increasing revenues and a growing bank balance¹⁵, the Society appeared to have radically shrunk its mandate. During interviews conducted in the summer of 2000, Executive Board members repeatedly asserted that the nearly exclusive focus of the BSS was on reducing faecal contamination of the lakes through lobbying various levels of government and public education. Although Board members hinted that the BSS was active in addressing issues other than sewage, they did not respond to requests to provide a list of such activities. As Dr. O’Brien put it:

You are right; we have focused largely on sewage because we see this as the prime and most immediate and most correctable threat to water quality... But we are focusing on the sewage because in a way partially because it is necessary to focus on it and partially because if we could get something done we could have in our track record “Look, we got holding tanks on boats and legislation.” It would give us some legitimacy (O’Brien 2000 - Int.).

Pat Bates echoed this sentiment, saying, “our principal purpose as a Society is the [prevention of] discharge of untreated sewage into the lake” (Bates 2000 - Int.). Mr. Bates elaborated on this point, suggesting that the previous discussions of a governance structure could be reduced to concerns about sewage:

For those that have been aboard in this issue for a long time, in our view, the whole drive -- and this is my personal observation -- on the needs for governance was that this might be the only vehicle that would bring some measure of control to the management of sewage. We talk incessantly about over 20 departments and agencies of government that are involved. We felt, or I felt -- and I'll speak from my own point of view on this particular interview -- that there was no other alternative on the horizon. That a number of good things could occur from the incorporation of the UCCB report Taking Care of the Bras d'Or, and in particular, the ability for the first time to deal with the management of sewage (Bates 2000 - Int.).

Yet despite this choice of focus, Dr. O'Brien admitted that "[a]fter four years we haven't stopped a single litre of sewage going into the lakes and we are aware of that" (O'Brien 2000 - Int.). This failure is not terribly surprising, for while there is no question that faecal contamination of the Bras d'Or Lakes is "a significant problem" for human beings (Kenchington 1998: 76), it is equally clear from the work of the Bras d'Or Watershed Working Group and the numerous other studies which preceded and followed it that sewage discharge is merely a symptom of a much larger problem of *governance*.

In fact, sewage is neither the sole nor (since faecal contamination "does not cause any harm to marine life and indeed probably enhances production" -- Kenchington 1998: 78) the most significant ecological symptom of this deeper political problem.¹⁶ As outlined in Chapter Five, scientific studies and local/traditional ecological knowledge repeatedly identify much broader resource-use management issues including siltation due to forestry, transportation infrastructure, and aggregate extraction, introduction of exotic species into the lakes through the ballast water of industrial ships, as well as over-fishing and fishing practices that damage habitat.

The primary recommendation of the "Taking Care of the Bras d'Or" report was an *active* one: the establishment of a Watershed Commission or similar centralised watershed governance structure. In the words of Dr. O'Brien,

It was a central thesis of that report that to get quick, effective action requires some type of central authority with real power. Given the structure of the political system in Canada this is very hard to achieve, even if those in government wish it to be the case. But it seems government does not want such a central authority...

Responding *reactively* to a single environmental problem such as sewage is a far cry from building the local political will for an empowered, central watershed governance body.

Indeed, the notion that existing political structures can cope with the ecological degradation of the Bras d'Or runs counter to the conclusions of every person or group of people that have studied these issues in any depth. As such, the BSS appears to have chosen to forego the opportunity to move forward the primary recommendation of the "Taking Care of the Bras d'Or" report, that of stewardship, and as such might be more aptly named the "Bras d'Or Sewage Society".

In attempting to account for this choice we are presented with two distinct possibilities. The first is that the BSS, due to its voluntary nature and limited funding (the Society is wholly dependent on private donations and membership dues), has pragmatically opted to focus on the one area where it can perhaps bring about some positive change. This explanation is supported in part by interviews with BSS Board members, including Pat Bates, who said,

... with the resources we have -- as you know we are a voluntary organisation, we have no staff -- we have to be quite selective in the things that we do. So that means that we have to pick the fairly urgent things and deal with them as best we can until the day comes -- and I hope it will come -- where a governance system of some kind will be agreed to (Pat Bates 2000 - Int.).

However this statement begs the question of *how* a situation where "a governance system will be agreed to" could come about in the absence of active local efforts in this regard.

Founding Board member Anna Steele, who has since left the BSS, offers this alternate explanation:

You form an organisation and you have all these wonderful ideas and then you sort of find that a lot of people just want to go with the flow, don't want to rock the boat, and they just want to sit and complain and not do anything. And basically the Bras d'Or Stewardship Society, though it wasn't designed for that, fell victim to becoming just a puppet of government. Waiting for government to decide what they wanted to do instead of making government more responsible to the [*Nova Scotia Environment*] Act with respect to watershed issues... So basically what happened is that the Bras d'Or Stewardship Society became a dreamer -- instead of being a doer, it became a dreamer. It wasn't doing anything except sitting and complaining and writing letters, and then getting these responses from government that say "well yes, we'll look at that" or "we'll get back to you on that" and this sort of thing. It became a delaying tactic (Steele 2000 - Int.).

In other words, according to this view the BSS had lapsed into a reactive posture. This is problematic since the BSS has, by emphasising the problem of domestic sewage, shifted public and governmental attention away from deleterious corporate activities around the lakes, and -- perhaps only incidentally -- done these corporations a significant favour.

To a certain degree the BSS focus on sewage may result from a perfectly understandable self-interest on the part of some of its Board members. BSS Treasurer Henry Fuller, owner of the Cape Breton Boat Yards, has a vested interest in keeping the public spotlight on sewage problems caused by unregulated dumping by recreational boat owners, since his business depends on tourists who are attracted by the "unspoiled" nature of the Bras d'Or Lakes. Moreover, his boat yard operates a for-profit pump-out station at which recreational boaters can empty their holding tanks. The problem is that this pump-out station then transfers the sewage to the Baddeck municipal sewage treatment plant, which frequently malfunctions and dumps the sewage directly into the lakes. Finally, founding Board member James Crawford also has a particular interest in

sewage -- since he is a commercial oyster grower, septic contamination poses a direct threat to his family's livelihood. As he put it:

My involvement simply is clean water. My occupation is shellfish - oysters - I raise oysters. With that in mind, if I lose water quality on any one of my leases, that lease where the water quality no longer meets the criteria for Environment Canada is then deemed closed. Then I am out of business. I will have first right of refusal for that shell stock, but the question remains where do you go with that. I do a bottom culture, so the quality of the bottom is the key, so you can't just move anywhere in the lake. There aren't oysters everywhere in the lake. So that's why I am committed (Crawford 2000 - Int.).

Compounding the problems surrounding BSS's narrow focus and limited effectiveness is a history of antagonism between the Society and the Mi'kmaq communities, based on a mutually perceived racism. It is no secret that the attitudes of certain Board members have grated on Mi'kmaq nerves. This is not surprising when one considers the following comments from a BSS Board Member:

Researcher: ...based on the Constitution Act of '82 and the various Supreme Court decisions, there are very distinct aboriginal rights and titles that do not apply to non-Natives... Could you talk about what role you think the Mi'kmaq have, should have, have had...?

James Crawford: Well, personally I find that two laws are wrong. I look at everybody as a human being. The fact that there was a traditional claim is understood. But take that in context to other peoples, other human beings in the world. In my own case, my case specifically. 1600 or so my people were Huguenots that were forcibly driven from France. I lost my property. My people lost their properties. And yet it went on. [...] Human beings inherently can't live by two rules. It creates a state of fascism. One is better than the other. And there have been many wrongs that have been done in the past that have been done to many peoples: Natives, Jews -- imagine! -- the French -- look at the expulsion [of the Acadians]. [...] [W]hen you keep bringing past histories in you are only creating new wars. [...] Understood: the Natives were the original people here from whenever time started or whoever knows. I mean, who knows? How/when/where? But in the end there is an evolution I think, that peoples they do assimilate, which is a term that the Natives certainly don't want to hear, but they are already assimilated, as you are assimilated. My people are. That we all are because we live in a community. If we lived in the mountains somewhere with nothing but our primitive trades and

arts, you'd say fine, there's logic and there's reason behind that idea. But in fact when you look at the satellite TV antennas or the modern electronics then you have to question... Sometimes you have to live what you say. That's the question. So in turn, I think we all play a position and I don't think that we should necessarily divide peoples by race or creed or colour. We should look at it as human beings (Crawford 2000 - Int.).

In one regard, Mr. Crawford has a very good point: any future bioregional polity around the Bras d'Or or on Cape Breton/Unama'kik as a whole must necessarily involve the formation of cultural alliance between Mi'kmaq and later settlers. However, there are two distinct inferences in this statement that would quite likely be repugnant to the Mi'kmaq: a) that the history of colonialism and systematic discrimination against the Mi'kmaq should be ignored or forgotten (always an attractive position to be taken by a member of a group which has achieved dominance and wishes to keep things that way), and b) that since the Mi'kmaq use industrial technologies (satellite dishes etc.) that they are no longer *culturally authentic* and that therefore their claims to special rights based on a relationship to the environment should be dismissed.¹⁷ This sort of attitude has created a serious barrier to co-operation between the BSS and the Mi'kmaq. As Anna Steele explained it:

The Bras d'Or Stewardship Society has actively pursued the participation of the Natives but the Natives -- because of their feelings with certain individuals that they didn't trust -- they did not participate. (Steele 2000 - Int.)

Other BSS members urge greater co-operation with the Mi'kmaq, suggesting that this will be an essential ingredient for the Society's success:

Oh I absolutely think that there is no question at all, at least in my mind, if in no one else's, that this Bras d'Or Stewardship thing is going to fail in its first few years unless it has the complete co-operation of the Mi'kmaq people. There's no question in my mind about that (CB1 1997 - Int.).

Such co-operation will require the reparation of some burned bridges. A particularly sore point was a newspaper article written by Pat Bates and published in the *Cape Breton Post* which called attention to a broken sewage lift-station at Waycobah First Nation (Googoo 2000 - Int.). Waycobah Chief and UNSI Executive Committee member Morley Googoo points out that at the time the article -- which the Mi'kmaq found very embarrassing -- was published, a contractor had already been hired to fix the problem, but that the Bras d'Or Stewardship Society had not bothered contacting him for a "status report" before submitting the article to the *Post*. He suggests that actions like this could harm future relations between the Mi'kmaq and the BSS:

But like I said, when these societies decide that they need our help then we are more than willing to be there, but you know... a simple phone call would have shown them that things were being done here. What's it going to do with future dealings? Whether I am Chief or the next person is Chief we will recall that. We'll say, "Isn't this the group that tried to make our community look very bad? Why should we work with them?" Right? In their own best interests they should have some sort of a protocol in the future because otherwise it'll defeat whatever purpose that they are trying to do and it might be the greatest initiative but because of bridges they burned or damaged they may not be able to get the support... So it is very important that you don't go out and do that kind of stuff (Googoo 2000 - Int.).

The situation seemed subsequently to have improved somewhat. According to Dr. O'Brien (2000 - Int.), "There is no hostility. We seem to be getting along okay."

Charlie Dennis concurs:

Danny [Christmas] and I met with Pat Bates in Sydney and had lunch and explained how [the Bras d'Or Stewardship Society] can complement us and support us in the political arena. So after a while the calm sort of settled and finally we agreed that we would start working together. We've got several projects that we are working on together. It takes time to adjust (Dennis 2000 - Int.).

It would seem that if there is any hope of broader co-operation between the Mi'kmaq and other Cape Bretoners, then the sharing of information and perhaps other collaboration between the BSS and the Mi'kmaq-run Unama'ki Institute of Natural Resources, both of which are explicitly interested in protecting and restoring the Bras d'Or Lake, must also be possible. Though there has been resistance to the idea of formal co-operation with the Mi'kmaq among BSS Board members, a few more recent initiatives, such as a jointly sponsored concert in September 2000, are cause for hope. As Dr. O'Brien put it,

We do not have that much to do with each other though we did organise a concert together and it went off well. [...] The fact is that the Mi'kmaq are not going away but neither are the non-Mi'kmaq either. And those aware of the parlous state of the Lakes on both sides know they have to work together or at least in parallel. One side cannot do it alone... The fact of the matter is that the Native population, the First Nations people, on their own they can't really do it all and we can't do it on our own. If we are going to do anything about it we have no bloody choice but to co-operate really (O'Brien 2000 - Int.).

None of this is to suggest that the BSS has done no good for the Bras d'Or Lakes.

As one member opined:

This is a bright spot, I think. Don't you? Because I think if there is any group that has the chance of educating people and making them aware of what they could lose, and what we have that it is probably the Bras d'Or Stewardship Society. A great leader there. Pat Bates. Able to turn people on. And we don't doubt his integrity (Sober 2000 - Int.).

Certainly initiatives such as the BSS's "Green Craft Challenge" have increased public awareness of the threat to human health and livelihood posed by untreated sewage being emitted into the water. The Society's persistent lobbying of government departments will doubtless increase the political will to enforce existing regulations and perhaps devise new ones. However, if local people are looking for an organisation that will aggressively and proactively bring to fruition the vision of a Bras d'Or watershed governance

structure, then it is unlikely that they will find it in the BSS unless there are some fundamental changes in its mandate and leadership. Dr. O'Brien summed it up,

I mean I would be dishonest to pretend I'm entirely happy with the performance of the Bras d'Or Stewardship Society. We *have* been too conservative. And we have also tended to say we would do things and not done them. But we still exist. We have a reasonable membership. We have a certain respect from government. People listen to us and so on. Maybe that's not a bad start! At least we are still there.

The BSS is indeed still there. And it is not alone.

The Paqtatek-Prism Project

In order to make appropriate decisions which will sustain the Bras d'Or lakes ecosystem, as well as a regional economic base, it is essential to begin to develop a comprehensive understanding of the basic structure of the lakes and their watersheds (Paqtatek - Prism Project 2000).

In response to what successive reports have identified as a lack of detailed information about the ecology of Bras d'Or Lakes, and the need for a centrally-accessible repository for such information as exists, the Paqtatek-Prism project was developed. Paqtatek-Prism partners include Environment Canada (the "lead" agency"), the Department of Fisheries and Oceans, the Bras d'Or Stewardship Society, Enterprise Cape Breton Corporation, the University College of Cape Breton, and the EFWC. The project consists primarily of a web-site, which includes a comprehensive bibliography of virtually every document about the Bras d'Or ever produced (Paqtatek - Prism Project 2000).

The site is still under development; most of the links (for example "Sustainable Forestry") did not yet work as of March 2001. While the project steers clear of political issues, it has the potential to be a tremendous resource for researchers and as such may form a pillar of any future bioregional governance effort in the Bras d'Or watershed.

Bras d'Or Preservation Foundation

The Bras d'Or Preservation Foundation (BOPF) was founded in 1992 in Baddeck, primarily as a land-trust to effect the conservation of ecologically significant pieces of land around the lakes. In 1999 the BOPF began to construct the Bras d'Or Lakes and Watershed Interpretative Centre as a site of public education (see Figure 6.2). The Centre, housed in the old post office building in Baddeck, is an impressive achievement. A large (roughly 3 m²) relief map of the watershed is set into a large table in the centre of the main room and several state-of-the-art video terminals allow visitors to visually and audibly explore the watershed, with commentary available in the English or Mi'kmaq languages. These portable video terminals are also made available to area schools. The BOPF does not engage in any lobbying activities, nor any initiatives to establish a governance structure. However, its rôle in public education is very valuable, and unmatched by any other initiative in accessibility and impact.

From the beginning, the BOPF made an effort to involve the Mi'kmaq in its setting up the Interpretative Centre:

From day one we have always invited and included the Mi'kmaq First Nations people. That has not always been the case with the Bras d'Or Stewardship Society. I guess it is a matter of trust... When the Mi'kmaq were asked to participate [in the Bras d'Or Interpretative Centre Society] they participated (Steele 2000 - Int.).

While it is too early to evaluate the impact of the Centre on the ecological protection of the Bras d'Or or the development of some form of watershed-based governance structure, it is clear that the organisation is making a large contribution to public awareness of the watershed.

Top: The entrance to the Bras d'Or Interpretative Centre Society at the old Post Office in Baddeck. Bottom: Video terminals provide visitors with "guided tours" in English and Mi'kmaq. Photographs by the author.

Figure 6.2 - The Bras d'Or Interpretative Centre in Baddeck

The River Denys Basin Association

Some Bras d'Or residents have evidently concluded that the goal of centralised Bras d'Or Lakes watershed management is, for the reasons outlined above, presently unattainable. One such group has formed a smaller initiative in one of the Bras d'Or's "sub-watersheds": the River Denys Basin Association. The group has mobilised against mining operations and the siting of solid waste dumps (Sober 2000 - Int.). It is this group with which the NSDE promised in 1998 to establish a pilot project to decrease sewage contamination of the watershed. By the time of writing this project does not appear to have materialised. Nonetheless, the group continues to meet, and has maintained fairly close ties with the Mi'kmaq EFWC to raise public awareness of local ecological problems.

Growing Frustration

In general, residents of the Bras d'Or Lakes watershed are growing increasingly frustrated with their apparent inability to force the government to take the problems of their ecological community seriously. Initiatives such as the Bras d'Or Stewardship Society, the Paqtatek-Prism Project, or the Bras d'Or Lakes and Watershed Interpretative Centre or the River Denys Basin Association can be seen as efforts to unilaterally implement some of the BOWWG's proposals. The *Unama'ki* Mi'kmaq have also unilaterally embarked on a wide range of projects to protect the lakes and the entire watershed. These initiatives are detailed in the next chapter.

Notes to Chapter Six

¹ There have been dozens of meetings and minor reports, and this is not intended to be an exhaustive catalogue.

² The College of Cape Breton is now called the University College of Cape Breton (UCCB).

³ This document is presumably a further development of the 1977 report. It is listed in the Paqtatek-Prism Project (2000) bibliography but is no longer publicly available.

⁴ Berneshawi (1993) points out that prior to 1993 there was similarly no Mi'kmaq representation on the Bras d'Or Lake Management Committee, the organisational precursor to the Bras d'Or Lakes Working Group. Numerous Cape Bretoners expressed informally to the author frustration with the difficulty of getting the Mi'kmaq to participate on committees etc. This can not be abstracted from the historical marginalisation of the Mi'kmaq and their impression that there persists an atmosphere of racism. In general, based on observations and personal research experiences, it appears that it takes a great deal of time and effort to establish a rapport and atmosphere of trust with the Mi'kmaq, and that these two things are pre-conditions of Mi'kmaq participation in activities with the Cape Bretoner community.

⁵ Despite Ms. Denny's participation, there existed a perception among Mi'kmaq leaders that their concerns were not being heard.

⁶ The word "Commission" was not actually used until the Final Draft of the report, but is adopted here for clarity and consistency.

⁷ This overlooked the interest of the Membertou First Nation in the Malagawatch Reserve, which has no permanent population but is shared by the other five Reserves as a hunting/gathering and recreational area.

⁸ This was not actually true, since under the terms of the proposal, these three pre-existing layers of government would retain their jurisdictional authority for all activities outside of development and resource-use management. Public objections to a new level of government dogged the Working Group through all drafts of its report. As will be seen in the next chapter, a "bioregional" approach would be different from what the Working Group proposed, since bioregional governance is inclusive of all sectors, thus actually *replacing* existing forms of government and altering jurisdictional authority.

⁹ Possible answers to this question may be found in Chapter Seven below. It should be noted here that the Native Guardian program has trained non-aboriginal students as well.

¹⁰ As discussed in the previous chapter, although the Grand Council is not presently formally recognized by the federal or provincial governments, it is the traditional government of the entire Mi'kmaq nation throughout Mi'kma'ki, and was the signatory to all major treaties concluded between the Mi'kmaq and European governments. The *Indian Act* (Parliament of Canada 1985b), in what many First Nations view as a deliberate effort to undermine their traditional political structures (Hipwell 1997b), recognises only individual Band Councils elected under Act provisions. The continuing importance of the Grand Council of the Mi'kmaq is underscored by the fact that during the recent dispute over a share of the lobster fishery, Grand Chief Ben Sylliboy was able to achieve consensus among more than 30 Mi'kmaq Band Chiefs. Without the intervention of the Grand Council, the conflict at Esgenoôpetitj (Burnt Church), which is discussed in more detail in Chapter Seven, would have been played out across *Mi'kma'ki*.

¹¹ There is no doubt that LNG operations are resulting in sedimentation of the Bras d'Or Lakes, and there is similarly no doubt that sedimentation has a negative impact on fish habitat. Therefore the Section 36.3 prohibition on releasing "deleterious substances" into fisheries water should apply.

¹² The group's original and slightly more accurate acronym "BOSS" was, due to its paternalistic implications, considered offensive by the Mi'kmaq and was subsequently abbreviated to "BSS".

¹³ It is worth noting that the ECBC administers the programs of the Atlantic Canada Opportunities Agency (ACOA) in Cape Breton/Unama'kik. ACOA has provided financial assistance to Little Narrows Gypsum Company, viewed by the Mi'kmaq as one of the chief threats to the ecological health of the Bras d'Or (see the discussion in Chapter Seven of the Middle Shoal dredging case).

¹⁴ This is almost a verbatim reiteration of the description of the BSS provided in the inaugural issue of the BSS newsletter *The Blue Heron* (BSS 1998b). Similarly the Society's website (<http://www.baddeck.com/bss>) identifies its goal as being "to promote an appropriate strategy to conserve, restore and protect the Bras d'Or Lake for ourselves and future generations."

¹⁵ This information was provided orally to the membership by the Board at the BSS annual General Meeting in August 2000.

¹⁶ Kenchington is speaking specifically about the Bras d'Or Lakes (hence, "marine" life). It is likely, however, that sewage contributes to eutrophication in fresh water lakes and ponds in the watershed.

¹⁷ Keen (1993) shows the fallacies inherent to this position.

Chapter 7 Mi'kmaq Politics and Stewardship

For hundreds of years, Mi'kmaq input into resource and environmental management has been ignored. That will no longer be tolerated by our Nation (Denny 1994).

I always envisioned, before the Aboriginal Fisheries Strategy program, I always envisioned that some day [the Mi'kmaq] would control the management of the total watershed. As the years go by I am noticing that we are getting there (Dennis 2000 - Int.).

The majority of [non-Mi'kmaq] people in the Bras d'Or Lake watershed are probably ignorant of the type of activities being undertaken by the Mi'kmaq people in the watershed. They're probably -- a lot of them are probably scared at the implications of Mi'kmaq control over resources (Taylor 2000 - Int.).

Guardians of the Bras d'Or

While increasingly frustrated Cape Bretoners worked tirelessly, and ultimately vainly, to build the popular support and bureaucratic will for a watershed-based governance structure in the Bras d'Or Lakes watershed, the Mi'kmaq were busy creating one of their own. While Industriean politicians and bureaucrats evaded and obfuscated, and Bras d'Or Lakes activists "worked the watershed", the Mi'kmaq were winning or helping to win a string of significant environmental victories. The Mi'kmaq are now a

hair's breadth away from achieving the local authority over the watershed long dreamt of by Cape Bretoners, and advocated by a twenty-five year long string of local residents, consultants and other "experts".

As will be seen in the pages to follow, there is no one more central to Mi'kmaq environmental stewardship in Cape Breton/Unama'kik than Charlie Dennis of the EFWC and the Unama'ki Institute of Natural Resources. Dennis is almost universally acknowledged among Mi'kmaq, Cape Bretoners, and government officials to be a "key player" in environmental issues in Cape Breton/Unama'kik (see Figure 7.1), and though he is not a democratically elected official, he wields significant leadership powers within the Mi'kmaq community. There is little question that he knows more about the Bras d'Or Lakes watershed than any other living person. Charlie Dennis' tireless work has led to the establishment of numerous Mi'kmaq environmental institutions including the EFWC and the Unama'ki Institute of Natural Resources (UINR), whose existence represents a crystallisation of decades of Mi'kmaq effort.

Not long after the first Bras d'Or Institute proposal for integrated management was submitted to the Nova Scotia government 1977, the Mi'kmaq began mobilising to confront a serious ecological threat to the watershed: chemical spraying of the highlands above Waycobah/Whycocomagh. The media carried footage of Mi'kmaq people uprooting monoculture tree seedlings in a bid to prevent toxic pesticides, and then later, herbicides, from being sprayed by the industrial (de)forestry giant Stora in the source of their community's fresh water supply. Their efforts, combined with those of determined Cape Bretoner activists, succeeded in forcing the industry and government to halt the spraying program. A decade later, just before the release of the UMA report on

Charlie Dennis, Executive Director of the Eskasoni Fish and Wildlife Commission, indicates areas of the Bras d'Or Lakes which have been contaminated by sewage. This and a vast volume of other ecological information has been recorded by the EFWC in geographical information system (GIS) format.

Figure 7.1 - Charlie Dennis, Eskasoni Fish and Wildlife Commission

integrated management, the Mi'kmaq again mobilised, this time fighting alongside Cape Bretoners from St. Ann's Bay to prevent the development of a granite "super-quarry" on Kluscap/Kelly's Mountain. Mi'kmaq Warriors in military clothing attended public consultation meetings, threatening to sacrifice their lives in order to prevent the quarry from being developed (Dalby and Mackenzie 1997; Hornborg 1994). Eventually the proponent abandoned the scheme. Around the same time, Mi'kmaq fisheries officials were gathering the knowledge of Elders and fishers in order to convince the DFO to halt a destructive "dragger" fishery within the Bras d'Or Lakes. Once more, the Mi'kmaq eventually succeeded, as they did again later when they warned the DFO that the herring fishery in the Lakes was collapsing as a result of overfishing and sedimentation from resource extraction and development. This time it took five years and untold ecological damage before DFO was forced to admit the Mi'kmaq were correct, and closed the herring fishery in the lakes (though little or nothing has been done about the sedimentation). This latest success by the Mi'kmaq in getting their environmental concerns addressed came on the heels of a string of others, including what became known as the Middle Shoal dredging case and a major environmental monitoring agreement with Georgia-Pacific concerning their gypsum mine at Melford.

How had this come about? Why were the Mi'kmaq succeeding where so many Cape Bretoners had failed? Why were the Mi'kmaq able to generate the political will in their communities to take on this expensive (and largely thankless) job at a time when their unemployment rates are, as noted earlier, significantly higher than the Canadian population as a whole, and when they struggle with a host of complex social problems on their Reserves? In order to answer these questions, several factors must be considered:

1. The intense cultural connection all Mi'kmaq people feel to the land. It would be safe to say that every person on every Mi'kmaq Reserve either has a friend or a relative who hunts, fishes, or gathers for part of their subsistence, or does so his/herself.
2. The spiritual importance of the non-human world in Mi'kmaq culture. This is evident in language, myth, song and poetry, and may be productively thought of as constituting a deep ecological or ecocentric ethic, which necessitates an individual and collective sense of caring and responsibility for Gaia (MacDonald 1998).
3. The past, present and future dependence of the Mi'kmaq nation on the careful stewardship of natural resources. Since their cultures and economies remain closely linked to ecosystemic processes and outcomes, the depletion of forests and wildlife and other forms of ecological degradation have had severe negative socio-economic consequences on aboriginal peoples throughout Canada (Notzke 1994; RCAP 1996). The Mi'kmaq recognise that they would not likely be an exception.
4. The jurisprudence of aboriginal title in Canada, which means that the Mi'kmaq have both the legal and the moral power ("political capital") to take over ecological management. Successive Supreme Court decisions have repeatedly affirmed aboriginal rights to land and resources, and to participation in resource-use management. Moreover, the question of unsettled title to land and resources can be a powerful bargaining chip with risk averse corporations.

5. The fact that the effective Mi'kmaq leadership in the realm of natural resource-use management is not the "democratically" elected Band Council Chiefs (whose powers are largely restricted to "municipal" affairs), but rather Elders, the Grand Council of the Mi'kmaq, and other leaders designated by these latter two groups (such as Charlie Dennis, Dan Christmas, Joe B. Marshall, and others). This means that popular opinion (which as noted in Chapter Three tends to favour short-term greed over long-term sustainability) does not take precedence over the long-term well-being of the Mi'kmaq nation.

As argued in Chapter Four, the Mi'kmaq suffer from severe socio-cultural dislocations as a result of their encounter with European colonialism and Canadian neo-colonial practices. However, these dislocations -- far from rendering their nation incapable of acting in a stewardship rôle -- have reinforced for the Mi'kmaq the fact that land and life are inextricably intertwined, and that their survival as a people depends upon their taking responsibility for the well-being of the broader ecological community of the Bras d'Or watershed and Cape Breton/Unama'kik as a whole. This is a powerful motivation, and as will be seen, it has resulted in an array of innovative and passionate efforts to reassert an historical rôle as ecological stewards. This is not a romantic vision of some sort of pre-colonial aboriginal "nobility",¹ but rather a pragmatic assessment of both the historical evidence and contemporary practices. The Mi'kmaq have always *used* the natural world, harvesting its wild species and developing complex cultural practices (and language) to reflect their interdependence with the biotic community of which humans are a part.

Yet there exist widespread perceptions among members of the public and government officials that aboriginal peoples in general, and the Mi'kmaq in particular, do not possess the capability to effectively manage human interactions with the rest of the natural world. As such, aboriginal nations' victories in major court cases which affirm their rights over land and resources are seen as posing a threat to sustainability. This chapter will show that in *Mi'kma'ki* as elsewhere in Canada, these perceptions are largely unfounded. The Mi'kmaq have developed throughout their history attitudes toward nature and approaches to resource-use management which are consistent with the goals of long-term sustainability, and by extension, bioregional governance.

In the pages to follow, a discussion of Mi'kmaq culture and the voices of interview respondents will help to reveal a pervasive ecocentric ethic and communal attitude towards resource use. Case studies of Mi'kmaq "ecological micro-management" will demonstrate the viability of local control over resource-use without centralised Industrian regulation. Next, a brief history of major Mi'kmaq environmental interventions will establish the fact that the Mi'kmaq are passionately committed to ensuring long term ecological *and* socio-economic sustainability. Finally, a brief history of emerging Mi'kmaq environmental institutions will confirm that they have the institutional capacity to become full stewards of the watershed. First, though, it is necessary to describe the current political and legal context of Mi'kmaq claims rights over resource-use management, starting with an overview of contemporary Mi'kmaq politics, and followed by a discussion of the recent conflict over lobster fishing near Esgenoôpetitj (Burnt Church) in the wake of the Supreme Court's *Marshall* decision.

Mi'kmaq Politics: Active Democracy

An analysis of Mi'kmaq governance could be the subject matter of another dissertation, and no claim is made here for the comprehensiveness of the following description of Mi'kmaq politics and political institutions. Nonetheless, a few words are necessary to provide the necessary context for the discussion to follow, and to illustrate why the *Unama'ki* Mi'kmaq polity can, despite the colonial imposition of the *Indian Act* (Parliament of Canada 1985b) be described in Deleuzean terms as “active”, or as Esteva and Prakash (1998) would put it, as an example of grassroots democracy.

As discussed in Chapter Five, the true government of the Mi'kmaq is not the Band Councils which were set up by the federal government under the terms of the *Indian Act* (Parliament of Canada 1985b) on each Reserve, but rather the *Sante' Mawio'mi*, or Grand Council of the Mi'kmaq. In her history of the Grand Council, Leslie McMillan emphasises the democratic nature of this institution in the pre-*Indian Act* era.² By democratic she means that the will of the people was expressed through the Council, though not through an electoral process. The authority of the Chiefs “was secured by means of example, customs, kinship, and family alliance, rather than by coerced obedience” (McMillan 1996: 33). This point is also made by Davis (1997: 61), who described the Mi'kmaq leadership as being at “the will of the people”. In their comprehensive ethnographic history of the Mi'kmaq, Wallis and Wallis (1955: 15) explain that not all political power was held by the Chiefs, but rather that certain decisions, such as penal sentencing, were decided by “group opinion”.

Rather than being based on a reactive ideal of human equality, traditional Mi'kmaq democracy sees the formal leadership chosen by cultural elites: Elders; clan and

village heads etc.³ on the basis of ability. The description of the Grand Council provided by the Royal Commission on Aboriginal Peoples similarly emphasises that the Grand Council of the Mi'kmaq is a meritocracy:

The *Mawíomi*, which continues into the present time, recognizes one or more *kep'tinaq* (captains; singular: *kep'tin*) to show the people the good path, to help them with gifts of knowledge and goods, and to sit with the whole *Mawíomi* as the government of all the Mi'kmaq. From among themselves, the *kep'tinaq* recognize a *jisaqamow* (grand chief) and *jikeptin* (grand captain), both to guide them and one to speak for them. From others of good spirit they choose advisers and speakers, including the *putu*'s, and the leader of the warriors, or *smaknis*. When the birds begin their migration south, *lnapskuk*, the symbolic wampum laws of the Mi'kmaq alliances, are read and explained to the people (RCAP 1996: v.1, c.4, s.1)

The qualities by which *kep'tinaq* (Captains) and *jisaqamow* (Grand Chiefs) were selected included "leadership ability, superior intelligence, generosity, courage and aggressiveness in war, and superior hunting ability" (McMillan 1996: 33). As will be recalled from Chapter Two, these are almost precisely what Nietzsche describes as the "noble virtues". They stand in stark contrast to qualities that now determine who is elected to the highest positions of political power in Industria: marketability, charisma, ability to attract support of the wealthiest individuals and organisations, making beguiling but mendacious promises to the masses via the media, etc..⁴

Today the Grand Council continues to play a major, though frequently invisible rôle in guiding Mi'kmaq politics. Major Mi'kmaq institutions such as the UNSI and the UINR were established at the direction of the Grand Council. It was the Grand Council which instructed Donald Marshall to fish for eels in full view of DFO officials until he was arrested so that the Mi'kmaq could challenge the government in court (the result of that episode, which will be discussed below, was the landmark *Marshall* decision).

Similarly, when the federal government failed repeatedly to get Mi'kmaq Band Councils to sign a fishing agreement in 1999 and 2000, it was Grand Chief Ben Sylliboy who succeeded in getting more than thirty bands to sign.

Band Council Chiefs sit formally on the Board of Directors of Mi'kmaq institutions such as the UNSI, but the first signatory of any resolution is always the Grand Chief of the Grand Council. Though the Grand Council has no legal authority whatsoever, its informal authority is incalculable, especially in Cape Breton/Unama'kik, where the Grand Chief presently resides. Waycobah First Nation Chief and UNSI Executive Committee member Morley Googoo intimates that institutional leaders appointed by the Grand Council are not second-guessed by the elected Chiefs:

You know we have Dan Christmas and Charlie Dennis giving us reports on various meetings and activities. We have totally a lot of confidence in them because they are totally committed and their credibility and respect amongst the Chiefs is very high and respected. So what recommendations they put in when they brief us during Chiefs' meetings we have discussions at that time and whatever inputs and they get their blessings from our support and follow through with their work. And that's why we agreed to sign on in support of what Charlie and Dan are working on (Googoo 2000 - Int.).

Even Band Council elections are markedly different from general elections in Canada, most notably due to high voter turnout: In 1996, voter turnout at Eskasoni Band Council elections was 95%, in 1994 it was 96% and in 1992, an astonishing 99% of eligible Mi'kmaq voters cast their ballots (Hayes 1996). In addition, the ratio of elected officials to voters is very high. The *Indian Act* stipulates that there should be one Councillor elected for every 100 Band members, though the maximum number of Councillors is 12 (Burrell and Sanders 1984; Parliament of Canada 1985b: S74.2) which means that on the large Reserve of Eskasoni the ratio is actually closer to one Councillor

for every 300 Band members. This is remarkably close to "direct democracy" as envisaged in the Athenian ideal. This high electoral participation stands in a paradoxical relationship to the cynicism many Mi'kmaq commonly express in informal conversations about their Band Councils.

It may be that the Mi'kmaq people recognise that truly important decisions as regards resource-use management, land claims, treaty rights, etc. are in the hands of the Grand Council, while the elected Councils' powers are largely restricted to the day-to-day affairs of the Reserves. This means that the elected Council's actions are *visible* and that the electorate recognises their own power to directly influence immediate political outcomes that can be seen and fairly easily understood. Activities and issues that are beyond the ability of the average citizen to comprehend are, in the Mi'kmaq polity, comfortably removed from the electoral process and in the hands of the trusted Grand Council and their chosen officials. It may be speculated that this system of governance ensures that the nepotism, corruption and vote-buying that is commonly associated with formal "representative democracy" in Industria is for the Mi'kmaq restricted to relatively unimportant municipal politics. For Band Councillors accused of corruption, the worst that is likely to happen is being defeated in the next election. For representatives of the Grand Council, which is backed up by enormous community support and the Warrior Society, the consequences of being perceived to betray the trust of the people would likely be infinitely more severe.⁵ While no definitive data is available, it can be stated that over the course of four years of research, though many Mi'kmaq spoke of suspecting their Band Councils of misuse of funds or other forms of minor corruption, not one person ever intimated anything but the highest regard and trust in the Grand Council and

their chosen officials such as Charlie Dennis. This faith would appear to be justified by the principled stance adopted by the Grand Council and its designated community leadership in every situation documented in this research project.

Context: Conflict at Esgenoôpetitj/Burnt Church

Few Canadians will soon forget the media images of August 2000, when DFO patrol boats ran down and sank tiny wooden dories manned by Mi'kmaq fishermen from Esgenoôpetitj (Burnt Church) in north-west *Mi'kma'ki* (New Brunswick). At issue was the insistence of the Mi'kmaq on engaging in a commercial lobster fishery, a right which had just been affirmed by the Supreme Court of Canada in *Marshall v. The Queen*. The conflict prompted racist outbursts from the public⁶ and threats of violence from non-aboriginal fishers. Though framed by the government and statist media as simply being about the "rule of law" versus "chaos", the Esgenoôpetitj lobster dispute was in fact about the failure of federalism in Canada.⁷ Since the Canadian government chose to ignore the Supreme Court's ruling and proceeded to arrest Mi'kmaq under existing fisheries regulations, without first either identifying a conservation objective or engaging in consultation with the Mi'kmaq of Esgenoôpetitj, its actions can at best be considered contempt of court, and at worst, treasonous. From the standpoint of conservation, it must be noted that the Mi'kmaq were fishing under the terms of their own "Esgenoôpetitj (Burnt Church) Fishery Act and Management Plan" (EFAMP) (Ward and Augustine 2000) which was as sound as any existing DFO regulations. The actions of the federal government were quite typical of the behaviour of Industrian state governments towards Fourth World nations (Howitt et. al 1996).

Esgenoôpetitj was not an isolated or exceptional incident. It represented but the latest in a series of escalating legal and political conflicts between aboriginal nations in Canada and various levels of state government.⁸ More specifically, it represented a crystallisation of tensions between the Canadian state and the Mi'kmaq nation, whose efforts to achieve legal recognition of treaty rights had resulted in several landmark court rulings. The Esgenoôpetitj conflict made it abundantly clear that the vision of federalism as expressed in the *Constitution Acts* of 1867 and 1982 was insufficient to accommodate developments in Canadian jurisprudence regarding the nature and extent of aboriginal rights as established by historic treaties.

The crux of the problem today turns on what amounts to a constitutional error. The *British North America Act* -- now called the *Constitution Act, 1867* -- in outlining the architecture of federalism in Canada, failed to adequately take into account the treaties which had been signed with the nations which already occupied the land prior to colonisation. The *Act* purported to grant the provinces exclusive legislative control over all natural resources except the fisheries, responsibility for which was by default vested with the federal government. Yet in the case of the Mi'kmaq, the Treaties of 1760-1 -- signed, as the Supreme Court of Canada (1999a) put it, in the spirit of "honour and integrity" between the Mi'kmaq Nation and the British Crown -- had granted a certain measure of control over the management and use of natural resources, both land-based and marine, to the Mi'kmaq nation.

The Jurisprudence of Aboriginal Title in Canada

The Esgenoôpetitj conflict and the issues it raised are precisely the sorts of things that Patton (2000a) has in mind when he argues that the jurisprudence of aboriginal title

constitutes a “metamorphosis machine” which can de-territorialise sedentary state structures, counter-actualising “the legal forms of internal colonisation to which indigenous peoples are subject in common-law states such as Australia, Canada, and Aotearoa/New Zealand.”⁹ He argues that “the capture of colonial territory by European states is a paradigm of lawful state violence” (114). Just as state legal systems once “rendered illegitimate” local institutions and knowledge (Wallace and Knight 1996: 84), now so too have the Canadian Supreme Court decisions in cases such as *Sparrow v. The Queen* (Supreme Court of Canada 1990), *Delgamuukw v. British Columbia* (Supreme Court of Canada 1997) and *Marshall v. The Queen* (Supreme Court of Canada 1999a) rendered illegitimate the continued denial of aboriginal nations’ land and resource rights. This in turn radically undermines presumptions of absolute sovereignty which have for so long under-girded the very notion of state territoriality central to the Industrian power system.

Even where state sovereignty is not directly destabilised, aboriginal rights can be a powerful lever for the protection of environmental values. In the United States aboriginal treaty rights to fish have been interpreted in *U.S. vs. Washington* as including the right to protect fish habitat from degradation (Pinkerton 1989b). In his discussion of the implications of the *Sparrow* decision (Supreme Court of Canada 1990), Peter Usher poses a simple, but powerful question: “Can fisheries authorities impose restrictions on aboriginal fishing if at the same time, through insufficient application or enforcement of the law, fisheries stocks are being diminished or polluted by forestry, mining, or other industrial activities?” (Usher 1991 20). This question might equally be posed to provincial natural resource managers who have presided over the widespread devastation

of wilderness, most notably the conversion of wild forests to monoculture plantations or otherwise "managed forests".

The legal position of aboriginal peoples in Canada with regard to land title is predicated on the fact that aboriginal peoples, organised in communities, societies, nations, and confederacies, occupied, used, and governed the lands, waters and resources of North America before European colonisation. This fact is variously expressed as "aboriginal title", "Indian title", "aboriginal land rights", or "Indian interest". It is the position of aboriginal peoples and the Canadian judicial system that aboriginal land rights are unique, or *sui generis*, and cannot be compared with Canadian property or real estate law. They include specific land rights such as the use of natural resources (including, but not restricted to, hunting and fishing) both on- and off-Reserve, collective ownership of Reserve lands and other lands to which title is transferred under modern treaties and land claims settlements, language, culture, and self-government (Aronson 1997). In general, aboriginal rights are set out and defined either in the *Constitution Act, 1982* (Parliament of Canada 2001), the *Indian Act* (Parliament of Canada 1985b) or, most significantly, in case law.

This description of applicable Canadian legislation is not meant to ignore the existence of legal opinion that the Canadian Parliament and judiciary are not entitled to make *any* determinations regarding aboriginal peoples, and that until all aboriginal territorial claims have been resolved by either a British or international court, any corporate or governmental activity in disputed lands without the express permission of resident aboriginal nations is a violation of the principle of sovereignty upheld by international conventions. Lawyer Bruce Clark has gone as far as to characterise the

Canadian state's assumption of sovereignty as "treasonous, fraudulent, and genocidal" (McFarlane and Haimila 1995). Clark's claim is based upon the existence of a permanent court established by Queen Anne in 1704 to adjudicate on the purchase issue (i.e. ownership) anytime it arose between aboriginal peoples and European settlers.¹⁰ Queen Anne had ruled that the General Court of Connecticut was jurisdictionally extraterritorial until the purchase question had been resolved. She rejected the absurd contention that colonial courts could assume jurisdiction for the purpose of deciding the very question of fact upon which their jurisdiction depends, since one of the most basic tenets of jurisprudence is *nemo potest esse simul actor et judex* ("no one can be both suitor and judge") (Clark 1995). This precedent, while consistently ignored or suppressed by the courts, has never been explicitly overturned.

One of the most comprehensive and accessible treatments of case law prior to 1999 on aboriginal land and natural resource rights is provided by Meyers (2000). Space does not allow a very detailed discussion here, but in summary, there are a number of specific Supreme Court decisions in recent years which have recognised aboriginal rights much more broadly than was previously the case. Most significant among these cases is *Delgamuukw*, which provides a jurisprudential definition of the content of aboriginal title, specifically that aboriginal use and occupancy of the land prior to assertions of British (and later, Canadian) sovereignty confers a present right to the land itself (Supreme Court of Canada 1997). Secondly, the decision affirms the legal validity of oral histories in establishing past occupancy (Meyers 2000: 15-20). It also determined that the Canadian and provincial governments have only a very limited right to infringe on aboriginal rights that exist on Crown lands.

The 1999 *Marshall* decision elaborates on *Delgamuukw* and acknowledges the right of Mi'kmaq people to harvest and sell fishery resources located on their traditional territories, and that since this right exempts the Mi'kmaq from compliance with federal or provincial regulations except in very specific circumstances, that the federal arrest and prosecution of Mi'kmaq fishers such as Donald Marshall was illegal (Supreme Court of Canada 1999a).¹¹ This is a significant advancement of a sovereignty argument, for it limits the ability of federal and provincial governments to subject the Mi'kmaq to the rule of Canadian law. Furthermore, while conceding a federal right to infringe on the Mi'kmaq treaty right for an overarching policy objective such as conservation, the *Marshall* decision required that any such regulation must be undertaken only after fair negotiations with the Mi'kmaq, and must represent the least intrusive way of infringing on the Mi'kmaq treaty right in pursuit of an overarching policy objective such as conservation (Supreme Court of Canada 1999b). Although some commentators such as Coates (2000) do not appear to have fully understood the extent of the limits on the federal right to regulate contained in the ruling, the Supreme Court's meaning is clear:

The Minister has available for regulatory purposes the full range of resource management tools and techniques, *provided their use to limit the exercise of a treaty right can be justified*. If the Crown establishes that the limitations on the treaty right are imposed for a *pressing and substantial* public purpose, *after appropriate consultation* with the aboriginal community, and *go no further than is required*, the same techniques of resource conservation and management as are used to control the non-native fishery may be held to be justified. Equally, however, *the concerns and proposals of the native communities must be taken into account, and this might lead to different techniques of conservation and management* in respect of the exercise of the treaty right (Supreme Court of Canada 1999b: 44-e, *emph. added*).

There are reasons to suppose that the *Marshall* decision's impacts will not be restricted to the fisheries, but may eventually have bearing on all areas of Mi'kmaq natural resource use, including the harvesting of forests on "Crown" lands.

Prior to *Delgamuukw*, the most significant modern case to articulate aboriginal resource rights was the decision in *Sparrow v. The Queen* (Supreme Court of Canada 1990). Usher (1991) argues that the *Sparrow* decision calls for the involvement of aboriginal peoples in regulation of natural resource management. The court ruled that aboriginal people have an inherent right to harvest resources for subsistence, and that Section 35(1) of the Constitution Act of 1982 must be read broadly and in favour of aboriginal peoples (Meyers 2000). Other important cases include *Calder v Attorney-General of British Columbia*, which showed that the source of aboriginal title is not the Royal Proclamation of 1763, as had been assumed in *St. Catherine's Milling and Lumber Company v The Queen*, but rather the simple fact of occupancy prior to colonisation. Finally, *Guerin v. The Queen* spelled out the federal government's trust-like relationship to aboriginal peoples and established that aboriginal peoples are entitled to compensation if their title is extinguished. More recent decisions such as *Simon v. The Queen*, handed down in 1985, confirmed the Mi'kmaq right to hunt Moose for subsistence purposes (Meyers 2000).

Mi'kmaq Resource-Use: Differential Management in Practice

Maybe the next step is highlighting the Mi'kmaq activities. Bringing forward what they contribute, showing the public the management they've undertaken already and its benefits (Taylor 2000 - Int.).

The Mi'kmaq have harvested natural resources in Cape Breton/Unama'kik for several thousand years. Over that time they have developed a set of cultural attitudes and practices which today form the cornerstone of Mi'kmaq resource-use management policy. At the cultural level, two characteristics of the Mi'kmaq use of natural resources distinguish it from conventional Industrian practice. The first is communal sharing, and the second is ecocentrism.

Communal Sharing

Jesuit coloniser¹² Père Biard reported in 1611 that

[The Mi'kmaq] are in no wise ungrateful to one another, and share everything. No one would dare refuse the request of another, nor to eat without giving him a part of what he has... (quoted in Whitehead 1991: 37).

This cultural practice continues today, as is made clear by the statements of a Mi'kmaq family interviewed for this study:

M8: When a Moose is caught, it's not just shared between a few people, it's shared through the community. So everyone benefits. If you hear of a Moose shot, guaranteed you'll get a few roasts from that Moose.

M9: Even that deer I shot last year, we split it up between the hunters that got it, and then our family, and J got some, and F got some, even S and J got some.

Researcher: Is this a standard practice in your community, to share the meat of the hunt?

M10: Yes.

M11: And when J goes fishing he'll bring us eels, salmon.

M8: When B goes hunting Moose he'll bring us Moose.

M9: It's a mutual thing.

R: A community sharing of the harvest...

M11: It's not discussed.

M8: It's automatic.

R: Are you unique in this way?

M10: Everybody does it (Focus Group 1997 - Int.).

This discussion helps to contextualise discussions of aboriginal communal resource rights, and illustrates the cultural connection Mi'kmaq have to the land. The degree of sharing which typifies Mi'kmaq community practice means that everyone has at least an indirect experience of subsistence resource harvesting, and a vested interest in long-term sustainability. This vested interest is expressed through informal community regulation, where individuals suspected of unsustainable practices are usually subjected to harsh censure.¹³

Mi'kmaq Environmental Ethics

The Mi'kmaqs' understanding of their natural context establishes the vantage point from which they construct their worldview, language, knowledge, and order (Henderson 2000a: 257).

As noted in Chapter One, numerous scholars have argued that the aboriginal worldview includes an explicitly or implicitly ecocentric ethic. This is also true for the Mi'kmaq, as is suggested by the following statement:

So this is what we truly believe. This is what reinforces our spiritualities: that no being is greater than the next, that we are part and parcel, we are equal, and that each one of us has a responsibility to the balance of the system (A. Marshall 1997 - Int.).

This ecocentric ethic is passed down through the generations in legends and traditional teachings (RCAP 1996: v.1, c.15, s.6) and in the structure of the language itself. Marie Battiste (quoted in MacDonald 1998) points out that the Mi'kmaq language is imbued with a sense of interconnection and relationships among humans and the other members of the biotic community. She is also quoted in the RCAP report to the effect that

[t]he [Mi'kmaq] language is built around relationships, and the relationships of people to each other are more important than anything else...[The Mi'kmaq language] is not a noun-based language like English, in which it is very easy to connect two nouns or to turn a thing that is happening into a noun by adding 't-i-o-n'. In Mi'kmaq everything operates from the basis of verbs, and verbs are complicated [because they show] relationships [to] all the other elements around them (Marie Battiste quoted in RCAP 1996: v.1, c.15, s.3).

A Mi'kmaq Elder with expertise in linguistics contrasts the position of the environment in the English and Mi'kmaq languages.

When you use English and you talk about the environment you sort of separate yourself as "it" and "me", when in our language it's "us" and "we". It's the same thing. There's no differentiation between the environment and humanity (quoted in Dalby 2000).

The importance of verbs in Mi'kmaq was noted in the early nineteenth century by a Nova Scotia journalist:

If a highly polished language be a mark of no ordinary mental qualities, then well may the Mickmac boast of his... If we consider the variety of their verbs -- the regularity of their various shades of difference -- the number of moods and tenses -- the utmost [sic] infinite number of terminations -- the beautiful manner of forming complex ideas by compounding different words -- the melody of the language -- all shew that they were minds of no common cast who framed it, or who now use it (Thomas Irwin quoted in Whitehead 1991: 208).

As discussed in Chapter Two, the notion of an ontological continuity with the rest of the world is a prerequisite for an ecocentric ethic, and it is clear that the structure of the Mi'kmaq language promotes such a differential ontology.

Naturally, a feeling of ontological continuity with the rest of nature leads rather directly to a perception that humans and non-humans are all members of a "community".

As another Mi'kmaq Elder put it,

...the term "community" is much more encompassing as far as the Mi'kmaq are concerned. First of all, we don't just consider ourselves as being a part of the human members of our natural world. And the word

that we use quite often, which I think fits, is *no 'kmaq* which literally translates into English to mean "all my kin"... ["kin" includes] all living beings, be it rock, be it animals, plant life, and of course the human kind...

So everything that is in our natural world to us is part of this whole scheme of things. So I have difficulty [identifying] myself with just the human kind and excluding every other being... [T]here is this underlying issue that being part and parcel of the whole universe, then I have an inherent responsibility, and then I have to put myself in the forefront in some cases to represent the species that can not represent themselves in human form (A. Marshall 1997 - Int.).

While it is clear that an ecocentric ethic is common in Mi'kmaq communities, it would be an unreasonable generalisation to suggest that it is universal. As a community competing for advantage in the global economy, instrumental approaches to nature are obviously tempting. But despite these temptations, key Mi'kmaq decision makers are constantly reminded by their Elders and even by their own staff of their responsibility to the larger community of beings. For example, Charlie Dennis reported on a meeting held by the EFWC on possible strategies to respond to the *Marshall* decision:

We were talking about buying out all the non-Native [lobster] licences in the Bras d'Or Lakes and [EFWC fisheries biologist Shelly Denny] commented: "Okay, you guys are talking about money here." There's the possibility the Band can make -- if we can save the population of lobsters - - some day we can make money. We'll control the Bras d'Or Lakes as far as lobster is concerned anyway, right? And her comment was "All I am interested in guys, is saving the animal." And that stuck to me. That was my way of thinking before *Marshall* came out: make money for the Band... But she put me back in my place when she said, "No, guys, I don't care about the money I just care about the animal" (Dennis 2000 - Int.).

The Mi'kmaq traditionalist perspective is even more explicitly ecocentric, as is made clear by this man, a hunter and fisherman who actively participates in sweat lodges and other traditional spiritual practices:

We care about Mother Earth, we care about other people, we care about evolving, and we care about all walks of life, eh? The winged, four-legged, two-legged, the ones that swim in the water (Lafford 1997 -Int.).

This ethic of ecological stewardship is passed down from generation to generation:

Like what my grandfather would say, always leave something for somebody that's coming behind you... It's like, leave something behind, somebody else is gonna need it more than you do. So he was always concerned especially when we were fishing or hunting or trapping or getting wood or, you know, we would go to one area, next day we would go to another area. We would never go back to the same area because he was very concerned with the balance of nature. A man can use the environment, but he can only use it in a certain way (M4 1997 - Int.).

This Mi'kmaq worldview refuses to make an absolute distinction (i.e., rejects ontological identity) between animate and inanimate components of the world, acknowledging, as does Lovelock, that everything is in a certain sense a part of the living global system.¹⁴

This recognition is tied closely to traditional spiritual practices:

Let's just take these two terms animate and inanimate. The rock would be animate *and* inanimate. And where it becomes animate is when you use it in ceremonial purposes like in a sweat lodge. Once the rocks have been selected to be used in that ceremony then they become alive. So therefore, a place like a quarry, which plays a part of a role in the whole scheme of things, then they are not less important than an animal or a plant or a human being. So we take that to mean that we also have inherent responsibilities to protect all of nature. And of course the rock is just as much part of nature as any living being (A. Marshall 1997 - Int.).

There has been heated debate over whether an ecological ethic really is a part of traditional aboriginal culture, and whether aboriginal peoples would have historically caused just as much ecological damage as Europeans had they possessed more powerful technology (Conklin and Graham 1995). The evidence shown above supports Callicott's (1989) position that such an ethic has always existed. However, this debate is, in the larger scheme of things, irrelevant.¹⁵ What is important is that *at present*, aboriginal peoples such as the Mi'kmaq clearly do embrace such an ethic of responsibility and stewardship, and that this ethic is actualised in the practices of their governments and institutions. When talking about protection of the Bras d'Or watershed, Mi'kmaq

decision-makers -- be they EFWC or UNSI staff, Band Chiefs, Elders, or individual Mi'kmaq citizens -- consistently refer to their responsibilities to other species. As Charlie Dennis put it:

[T]he law states right now... that the DFO and the federal government have a fiduciary responsibility to First Nations. Now if First Nations can take that fiduciary responsibility and protect the resource, I don't think anybody would say "You can't." As First Nations we have a "fiduciary responsibility" to the natural resource, too, to protect it (Dennis 2000 - Int.).

This ethic of "fiduciary" responsibility is evident in the day to day resource use of increasing numbers of Mi'kmaq people.

While there does not exist sufficient space in this study to provide anything approaching an exhaustive account of Mi'kmaq resource-use practices, two case studies (see below) should suffice to show that Mi'kmaq resource-use frequently takes on a form that would be described as ecological micro-management (this concept was explained in Chapter Four) and is imbued with an ethic of responsibility to other species and future generations.

Local/Traditional Ecological Knowledge

It was shown in Chapter Two that since reality is characterised by ontological difference, an epistemological strategy of "wisdom of the body" is required to fully apprehend ecological interactions. It was further shown that the knowledge systems employed by aboriginal cultures and local resource users -- "Local/Traditional Ecological Knowledge" (Lo/TEK) -- qualify as such an epistemological strategy. Then in Chapter Four, the importance of applying Lo/TEK to differential resource-use management in bioregional political regimes was demonstrated. There are strong reasons to believe that

Mi'kmaq resource-use management is guided by both conventional (pointillist) science and Lo/TEK, and as such may be an example of precisely the kind of integration between the two knowledge systems called for by Johannes (1993), contributors to Inglis' (1993) edited collection, and many others (for a detailed discussion of this point see Hipwell 1998). Consider the following anecdote:

For example, I fished oyster for several years and I listened to my Elders around the campfire telling stories, and they would tell me "You have a good 20 horsepower boat. Go out into these areas." I used to fish good, hard-bottom oysters. I'd go out into that site and there would be two-three feet of mud. That's how much it changed. And I used to ask them, and they were seventy, eighty years old, and I used to ask them, "How much has it changed?" And they said, "It's unreal. We have seen the decline." And I sort of inherited that where I still see that decline, where the rivers are not full of salmon anymore, and the coves are not loaded with herring. It's a decline. The lobster are declining. And to me, right now I feel, "Are we already too late? Have we lost the battle already? (Dennis 1997 - Int.).

In virtually all areas of resource-use management, the Mi'kmaq emphasise the importance of gathering Lo/TEK to establish environmental base-lines and for ongoing monitoring. This is the case in the Netukulimk GIS Project which has begun a comprehensive ecological mapping of the watershed (UNSI n.d. - probably 1999), the agreement with Georgia-Pacific over the Melford Gypsum Mine (see below), and other endeavours. Lo/TEK is also used by individual resource users to determine sustainable levels of harvest and identify the need for habitat modification, and forms an integral part of what was described in Chapter Four as "ecological micro-management".

Mi'kmaq Ecological Micro-Management

Gaspereau

The gaspereau (alewyfe) is one of the many commercial fish species which come in to the Bras d'Or Lakes to spawn. However, the spawning fish do not stay in the lakes proper, but rather make their way (or in the view of some Mi'kmaq fishers, are "herded" by codfish - Lafford 1997 - Int.) into small, slightly brackish "barrachois ponds" at the mouths of freshwater streams feeding into the lakes. These ponds, being a mix of cool freshwater and the semi-saline water of the lake (brought in by tidal action) provide a unique estuarine habitat for the breeding fish. Andrew Hanam, an NSDNR Crown Forester for the Eastern Region, has pointed out that habitat in these ponds is the richest in the watershed -- in the sense that they contain a disproportionate number of rare or endangered species (Hanam 2000).

This fact is powerful evidence for the contributory rôle humans can have in an ecosystem, given the following information: In 1593 the British ship *Marigold* put to shore on Mi'kmaq territory near Cape Breton/Unama'kik, and the Captain reported that he and his crew had

founde certain rounde pondes artificially made by the savages to keep fish in, with certain weares in them to take fish (quoted in Whitehead 1991: 17).

This anecdote seems to confirm what is suggested by field observations during this study: that Barrachois ponds are a Mi'kmaq construction, an example of how the Mi'kmaq modify the landscape for their own benefit and thereby benefit the broader ecological community as well. Today, Mi'kmaq gaspereau harvesters actively maintain and repair "their" ponds against the effects of erosion and siltation.

During gaspereau spawning season in June and early July, fishers set up weirs at the entrances of the Barrachois ponds, after waiting for the ponds to fill up with breeding fish. In the words of Mi'kmaq gaspereau fisher:

They've been running for a couple of weeks. We gotta let a lot go through before we catch any. That way they'll be back, eh? I don't know where the hell they go out there [points out at Bras d'Or Lake], but I know what they do in here. It's one big orgy. Every year there's millions of eggs in this pond (Lafford 1997 - Int.).

The first thing the gaspereau do when they enter the pond is begin to stir up leaves and other debris from the pond bottom so that it washes out of the pond at low tide (when the water flows out to the Bras d'Or Lakes). The Mi'kmaq fishers attempt to aid the fish in this task, using rakes and poles to keep the channel clear of debris:

Givin' Mother Nature a hand. Gaspereau won't spawn where there's lots of silt and dead leaves in the channel. The little gaspereau, the yearlings, come in first and clean out the pond. That's where all this stuff is coming from (Lafford 1997 - Int.).

Depending on micro-level (i.e. pond to pond) variations in stock levels and empirically-derived information on reproductive rates, Mi'kmaq fishers adjust harvest levels accordingly. They leave their weir open until the pond is full of breeding fish, then close it to capture any additional fish trying to swim into the pond, which the fisher in charge of the weir deems to be a surplus. Determining when the pond is full is accomplished by "wisdom of the body": through day to day and hour to hour observations of the pond's surface (which as the pond fills becomes increasingly turbulent) and the behaviour of incoming fish (the gaspereau begin to behave a little more hesitantly about entering the pond as it approaches "capacity"). A Mi'kmaq fisher explained his approach:

The importance there is to have enough fish to reproduce, and not to annihilate the whole species. The way I was brought up, my father was a traditional person, real traditional, and he was a fisherman, a hunter, and a woodsman. The thing he taught me how to fish was to fish just enough for you to survive on and never take more than what you need. And with the gaspereau it's a non-endangered species of fish that come from the south to come into the lakes here to reproduce. They come up here to spawn, and we just take the excess and leave enough fish to reproduce for the next year's harvest or for more harvests yet to come... The pond is pretty well full now. These fish we are catching, this is the excess. That's all we take is the excess (Lafford 1997 - Int.).

This management approach was not unique to Mr. Lafford. At another barrachois pond a different Mi'kmaq fisher remarked that

We let some of them go through to spawn. That way there will be more next year. We can't wipe them out! We need there to be more next year! (M6 1997 - Int.).

As discussed in Chapters Three and Four, this form of resource-use management is sharply different from that of the industrial fishing fleets, which are assigned quotas based on models developed by DFO scientists, and catch the gaspereau off-shore. This Industrian method makes it impossible to effect the micro-level adjustments in harvest employed by the Mi'kmaq which ensure that *every* Barrachois pond contributes fully to the reproduction of the gaspereau.

Oysters

The most illuminating description of Mi'kmaq ecological micro-management of oysters is provided by Charlie Dennis. He relates the story of the late Gabriel Sylliboy, a Mi'kmaq Elder who fished oysters for fifty years in the Malagawatch area:

[H]e fished oysters in that particular spot. It's not very big, it's just a little pond, but he managed that area for fifty years. I can remember I... would watch him as he fished oysters. [...] for years I watched him and watched him [and wondered] how he was doing it. One day he'd be over here, another day in this part of the pond, here, and here, and here... Nobody else would bother him, because he's an Elder. At one point I finally figured it out. [...] I remember seeing him parked here and there on the shore. So he has this little pile of oysters and he'd go to these certain spots. And he'd grade all his oysters. He'd only take the nice choice ones for market. The undersize he threw there, and the crooked ones he throw over there.

So he had the whole area mapped out in his mind. [...] And each year, he knew where to go. He knew what year he planted certain oysters, what year he planted here... so every year he knew what he had planted. He managed the whole area. And one day I said, "I figured it out. How you been doing it." [...] He'd take the oysters from here, the muddy oysters, and he'd put them in a hard-bottom here. He would plant them. He was planting the whole area. I told him, "I figured it out." And he laughed, he always had chewing tobacco in his mouth. "Hmmp hmp hmp, took you long enough to figure it out. Took you about five years to figure it out." (Dennis 1997 - Int.).

Although Gabriel Sylliboy is no longer with the Mi'kmaq, his spirit lives on in the way the EFWC manages oysters. Though Mr. Sylliboy's wooden rowboat has been replaced by aluminium craft, and the worn fish net he used to gather oysters has been replaced by vexar spat gatherers and mesh bags, his principle of stewardship imbues contemporary practice.

In 1994, the EFWC established an Oyster Research Station at Gillis Cove near Orangedale. During spawning season, in a technique developed by Shelly Dennis and other Mi'kmaq researchers, sheets of vexar are suspended under water to collect oyster spat (larvae that drift through the water looking for a hard, clean surface to which they can cling). When the strips are full, the baby oysters are moved by hand to vexar bags which are put in large trays suspended by floats just below the surface of the twelve-foot deep cove. After the first year, the trays are moved out into the bay, where the current and temperatures are more conducive to their growth. In 1997 the station was growing

four million baby oysters. Two million of these were to be “planted” in the Denys Basin near Malagawatch for Mi’kmaq commercial use and further production. Another million were sold to commercial beds. Finally, in an act that demonstrates Mi’kmaq generosity and sense of communal obligation, the other million were used to seed public beds where they could be harvested by Mi’kmaq and Cape Bretoners alike.

As a footnote, two workers were informally interviewed at the oyster station, and their comments further reinforced a Mi’kmaq ecological ethic and awareness of ontological continuity among species. One Mi’kmaq man, who identified himself as Bob, said, “If you take one species out of the food chain you destroy everything.” His co-worker Dean added, “Yeah. Everything is connected.” As will be seen next, this awareness of connection to the rest of the biotic community, this refusal of an ontological separation between humanity and nature, fills the Mi’kmaq with a sense of responsibility that, when the chips are down, translates into powerful political action.

Mi’kmaq Environmental Interventions

It has to come out, and maybe in your document when you release it, it has to come out that we don’t just wait for the worst scenario before we react (Dennis 2000 - Int.).

Mi’kmaq response to environmental threats in Cape Breton/Unama’kik over the past twenty years has been anything but reactive. Despite their cultural and political marginalisation, the Mi’kmaq have made their voices heard loudly and clearly in a number of situations, and their opposition to environmentally destructive practices has in many cases been the decisive factor in ending those practices. To illustrate this point, the

next few pages present five of the most significant Mi'kmaq environmental interventions over the past 25 years.

The Chemical Spraying of Highland Forests

The discussion in Chapter Five showed how Industrian control of Cape Breton/Unama'kik has resulted in the replacement of most wild forests by tame monoculture plantations maintained through the application of chemical pesticides and herbicides. When pesticide spraying against the spruce budworm was proposed by industry in the late 1970s, the Mi'kmaq quickly joined forces with local Cape Bretoners who were almost universally opposed to the plan (CB2 1997 -Int.; May 1982; May 1998). Several years later, industry proposed another spraying program. This time the highly toxic chemical compounds 2,4-D and 2,4,5-T (the phenoxy herbicide mixture known as "Agent Orange" used as a defoliant used by the U.S. military in the Vietnam war) was to be used in order to prevent other plants from competing with tree seedlings in monoculture plantations:

Already banned in Sweden, the United States, and the Canadian provinces of Saskatchewan, Quebec and Ontario, 2,4,5-T had never before been used on Nova Scotia's forests. The rationale for its use was that following clear-cutting, herbaceous shrubs... were competing with coniferous growth. Over-cutting softwoods could be approved by the Forest Department, as long as "intensive" silviculture methods offered the possibility of accelerated growth in the future (May 1998: 88).

Once again, Mi'kmaq opposition was immediate and decisive, with instruction coming from the traditional leadership. As one Mi'kmaq man described it,

...everybody was concerned. They were concerned more of nature and you know, the habitat, they were concerned of the water, they were concerned of the people... It was a big concern, you know. It was a big issue at the time. ...we made sure that the company knew that the people were up in the mountains. There was people out there that wanted to use guns to shoot the planes down. You know you get people like that everywhere else, it's not only Native communities. People were pretty upset because the water system, the main water system comes from the mountain up in Whycocomagh. It's in a little valley, and on the side of the mountain that's where you got Whycocomagh. The word came from our Elders. They told the Chief, "Make sure they don't spray the herbicide" (M4 1997 - Int.).

A Cape Bretoner provides this account:

[T]he herbicide issue... began in 1981 when Stora Forest Industries -- then Nova Scotia Forest Industries or Nova Scotia Pulp, they've changed their name about five times in the last fifteen years, they're now known as Stora Port Hawkesbury -- proposed to use 2,4,5-T and to spray it aerially and one of the first spray targets was adjacent to the Waycobah... So, the Waycobah group had a spray site right behind their area. Their chief's name was Ryan Googoo at the time, and he was very adamant about not allowing this to take place. Probably the most dramatic moment of the entire debate up until the court case took place was the incident in which he and a group of band members went up to a plantation adjacent to the where the spraying was going to take place and started ripping up seedlings. Mostly, I mean, I don't think they ripped up the whole plantation, but [showed] -- this made quite a stir in the media of course -- that this was going to be the fate of the plantation if anybody decided to spray. So, it really cemented the impression that everybody had in regards to what [the Mi'kmaq] position was and how adamant they were opposed to the spray. And from a public relations point of view and as far as presenting the issue to the broader Canadian public, they were instrumental... (CB2 1997 - Int.).

The Mi'kmaq were concerned not just about the human impacts of the chemicals, but, consistent with an ecocentric worldview, they worried about the impacts of the chemicals on non-human species:

At that moment [the spraying of forests] was very important. Because they were also concerned of the wildlife. Lots of people were concerned because there was deer out there, there was bear, fox, coyote, bobcats, there was even mountain lions up in Whycocomagh (M4 1997 - Int.).

Space does not permit a more detailed discussion of the history of the highland spraying programs, but readers interested in the issue are encouraged to consult May (1982) or May (1998).

The Kluscap Mountain Quarry Proposal

Well I guess when that announcement first came, the first thought occurred to us was "here we go again." The so-called "government" or the multi-nationals have no respect. And they will go any length so that they can maximise their profits and they'd even be willing to desecrate a place like Kluscap Mountain. Kluscap Mountain to us is a very sacred place. I guess an analogy to that would be if we went to any country and started desecrating the seven wonders or the eight wonders of the world. Or went to a Catholic Church and start desecrating that institution or a synagogue or whatever. We have just as much reference to that place as Christians have to their churches (A. Marshall 1997 - Int.).

One of the first experiences the rejuvenated *Unama'ki* Mi'kmaq had with the mining sector was a proposal in 1988 by Kelly Rock Aggregates Ltd. (KRA), a division of Municipal Ready Mix, to build a granite "super-quarry" on the St. Ann's Bay (west) side of Kluscap Mountain (Kelly's Mountain).¹⁶ The granite quarry, if it had gone ahead, would have been the largest anywhere on earth. Kluscap Mountain is a site of great cultural significance to the Mi'kmaq, held to be the final resting place of the Mi'kmaq deity Kluscap, and the site of spiritual pilgrimages throughout Mi'kmaq history.¹⁷ The proposal for the quarry was tabled by KRA with only minimal consultation with the Mi'kmaq. As Dalby describes it:

The...Mi'kmaq population on the island were nearly entirely opposed to the quarry understanding it as one more in a series of appropriations of land and resources by the white population with little consideration of either native tradition, rights or opinion (Dalby 2000: 6).

The initial Environmental Assessment Report on the project was reviewed by the Nova Scotia Museum. The Museum concluded that archaeological investigations by

consultants, which had been conducted to ascertain whether the cave had -- as the "Nova Scotian Native Community" had claimed -- any cultural significance, were "not as thorough as they could have been" and that the Environmental Assessment Report was "incomplete" (Ogilvie 1990). It is typical of colonial attitudes that Mi'kmaq assertions that the Cave had spiritual significance were subjected to evaluation by non-Mi'kmaq "experts" in the first place. It is unlikely that claims by a non-Native community that a local church had cultural importance would be subjected to a similar investigation, but would instead be accepted at face-value.

When it became clear that the project was slated to go ahead despite Mi'kmaq concerns about the cave, the Grand Chief of the Grand Council of the Mi'kmaq appointed Mi'kmaq Warrior Sulien Herney to defend Mi'kmaq interests and protect the mountain from exploitation. After militant confrontations including Mi'kmaq Warriors in camouflage attending public hearings and threatening armed resistance, the project proponent failed to submit a revised EIA before a federally-imposed deadline in 1994, and the project was shelved indefinitely (Dalby and Mackenzie 1997; Dalby 2000; Hornborg 1994).

It is possible that had Mi'kmaq assertions about the spiritual importance of the site been accepted from the outset, and had KRA demonstrated a willingness to enter into meaningful consultations and negotiations with the Mi'kmaq leadership in order to ensure that the cave would not be damaged, an accommodation might have been reached which would have addressed both cultural and ecological concerns while allowing some form of aggregate extraction to take place and stimulate the local economy.

The Bras d'Or Lakes Mobile Ground-Fishery (The Draggers)

Until 1993, the DFO permitted a commercial mobile ground-fishery to operate in the Bras d'Or Lakes. Target species included Black-Backed Flounder, and the gear used included Danish trawls. The trawls, which are dragged along the seabed by fishing vessels, act much like ploughs and cause extensive damage to the flora and structure of the bottom (Cdn. Seabed Research Ltd. 1993). *Jikeptin* (Grand Captain) Alex Denny, then also President of the UNSI, has noted that the Mi'kmaq felt the draggers were implicated in the collapse of the Bras d'Or Lakes lobster population (Denny 1994). Acting on advice from Elders and Mi'kmaq fishermen, the *Unama'ki* Mi'kmaq began in 1992 to lobby the DFO to ban the "draggers" from the Bras d'Or Lakes. DFO responded to Mi'kmaq concerns by contracting the firm Canadian Seabed Research Ltd. to undertake a side-scan sonar survey of the lakes' bottom to assess damage. That survey revealed extensive trawl damage, especially in East Bay. The Mi'kmaq eventually succeeded in pressuring the DFO to ban draggers from the Bras d'Or Lakes by mid-1993 (MFWC 1993; Dennis 1997 - Int.; Dennis 2000 - Int.).

Middle Shoal Dredging Project

Three years after draggers had been banned from the Bras d'Or Lakes, another threat to the delicate ecosystem loomed. The Little Narrows Gypsum Company commenced dredging of the Middle Shoal just outside the entrance to the Bras d'Or Lakes in order to increase shipping capacity. Yet again a project was being undertaken without prior consultation with the Mi'kmaq. When they became aware of the project, the Mi'kmaq had numerous ecological and political concerns:

For example, dredging would increase the colder temperatures in the lake [by changing in-flow regimes], which might disrupt fish spawning. Is it going to increase the salinity? Is it going to bring in foreign matter? Is there disruption in the bottom sediments because of ship traffic? These questions were legitimate, and we felt we didn't have those answers. That's why we went to the court. Plus, during the process they never consulted with us. And I believe nobody even considered First Nations would have a disagreement with them, because it was sort of close to the outside. But we always said that although it might be the outside, what's gonna happen? (Dennis 1997 - Int.).

Albert Marshall adds,

...the Middle Shoal is on the seaward side of the Bras d'Or Lakes. Initially again the reason we got involved is because when the companies say that they've got to dredge that area so that would accommodate the greater bigger vessels to maximise their ships' capacity, the first concern that we had was - which were later substantiated by the scientists... By increasing the depth of the channel that will of course change the velocity of the water. The water levels within the lakes could increase, the salinity of the lakes could very well change. And of course being the entrance to the Bras d'Or Lakes, how will it affect the fish habitat? Because it is a proven fact that the Bras d'Or Lakes is the spawning ground for twenty-two species of fish (A. Marshall 1997 - Int.).

The *Unama'ki* Mi'kmaq umbrella organisation, the UNSI, filed suit with the Federal Court of Canada, arguing that the dredging posed unknown environmental risks to the delicate ecology of the Bras d'Or Lakes ecosystem, and thereby posed a potential threat to Mi'kmaq subsistence fishing. Mi'kmaq opposition was linked to negative experiences in the past. A UNSI Resolution opposing the project read:

Whereas development projects approved in the past by various levels of government, expected to provide a net benefit, have had a devastating impact upon the natural resources of the Lakes and have led to a dramatic decrease in shellfish and finfish populations upon which our People have depended for the maintenance of their well-being... (UNSI 1996).

There were also concerns that the project might be secretly linked to the KRA quarry proposal. This concern stemmed in part from the fact that the agreement-in-principle between KRA and the NSDNR included the use of a tract of Crown Land on

Kluscap Mountain. Maps of the Crown Land allocated to KRA showed a tiny triangle of land extending down the east side of the mountain all the way to the shore of the Great Bras d'Or, even though the KRA proposal had indicated that the granite quarry was to be located on the west side of the mountain, and loading of aggregate into bulk carriers was to have been done at docking facilities on St. Ann's Bay. The Mi'kmaq began to suspect that a secret agenda existed that would eventually see the aggregate quarry proposal revived, and loading of aggregate done on the Great Bras d'Or, within the Bras d'Or watershed, and far from the community of Englishtown on St. Ann's Bay where opposition had been the strongest.

And we always had been suspicious that they went beyond what they have asked because again, I guess to be a Mi'kmaq you have to be very, very suspicious. Because we realised that to expend something like six or seven million dollars, given the [mineral] reserves that the company projected it had, just did not make sense. So that really reinforced our suspicion that this dredging was not only meant for Little Narrows Gypsum, but that the government also had a hidden agenda in conjunction with the Municipal Ready Mix, that this was in fact a joint venture. And we have yet to be proven that we were wrong on this assumption (A. Marshall 1997 - Int.).

Little Narrows Gypsum offered the Mi'kmaq an undisclosed amount of money to end their opposition to the project, but the offer was firmly refused (Dennis 1997 - Int.; Dennis 2000 - Int.).

In 1996, the Federal Court ruled that the government -- in allowing the dredging to go ahead -- had breached its fiduciary responsibility to safeguard Mi'kmaq resources, and ordered the dredging halted (Federal Court of Canada Trial Division 1996; MacInnis 1996b). Although the dredging had already been 90% completed, the decision is viewed by the Mi'kmaq as a significant legal precedent. The failure of the proponent to engage

in meaningful consultation with the Mi'kmaq guaranteed the failure of the undertaking, and decreased the likelihood of a co-operative relationship on future projects.

The Herring Collapse

The 4Vn Fishery

In the mid-1980s, the DFO decided to allow commercial seiners to harvest herring in the DFO management units 4Vn1 and 4Vn2 (see Figure 7.2) off the north-east coast of Cape Breton/Unama'kik, which they did without prior consultation with the Mi'kmaq communities around the shores of the nearby Bras d'Or Lakes (Dennis 1997 - Int.).¹⁸ As noted earlier, the Bras d'Or Lakes are, according to Mi'kmaq Lo/TEK, an extremely important hatchery and nursery for numerous North Atlantic fish species. Mi'kmaq Lo/TEK identifies the north-east coast of Cape Breton/Unama'kik as the migration path used by herring and other species travelling into the Bras d'Or Lakes to spawn.¹⁹ The Mi'kmaq brought their concerns to the attention of DFO managers, but seiner activity in 4Vn has been allowed to continue and quotas have actually been increased (Claytor 1997; Dennis 1997 - Int.; Dennis 2000 - Int.). Mi'kmaq Elders have subsequently noticed a precipitous decline in the number of spawning herring in the Bras d'Or Lake, which they attribute to the continued presence of the seiners in 4Vn. As Charlie Dennis tells it:

All these years I have been asking the question: "What is happening with the herring?" The Elders say that all the waters in Crane Cove used to be milky [with herring spawn]. How come we haven't seen that in ten years? These are the questions [the Elders] are asking us... That's why we did the GIS project is to find out what is out there right now compared to fifty years ago. Elders are respected in the community (Dennis 2000 - Int.).

Figure 7.2 - DFO Small Fish and By-Catch Fishing Areas

The Mi'kmaq are continuing research into the ecological dynamics of the Bras d'Or Lakes herring population, and Mi'kmaq pressure on DFO to change the regulations in order to halt the killing of herring spawners in 4Vn continues today.

The Bait Fishery

As noted in Chapter Five, siltation from (de)forestry, road-building and shoreline development has also negatively impacted herring reproduction. Another significant impact on the herring was from commercial fishing within the Lakes, particularly by lobster fishermen who use herring as bait:

They didn't want to buy bait because bait was expensive and they didn't have enough money to buy bait for the lobsters.. So all the herring were being pounded by all these lobster fishermen. [Boats] were coming in by the thirties, by the forties. I would say 80% more vessels were coming in to catch bait because they didn't want to buy bait because they weren't making enough money on the lobster. If they could get the bait for free, that would increase their profits. So seeing all these herring coming in they came in with their gillnets, blocked coves, and they would take the herring back to their headquarters, put them in their freezer... (Dennis 2000 - Int.).

Unfortunately, when the Mi'kmaq brought their concerns to the DFO, Cape Bretoner commercial fishermen attempted to contradict the Mi'kmaq contention that the herring stocks were in decline:

Charlie Dennis: Two years ago they sat around the table. I couldn't believe them. There was about forty fishermen sitting around the table and here I was sitting there. And DFO asked each individual, "What do you think about the herring in the Bras d'Or Lakes. And 95% of them were saying, "Oh, the herring fishery is just as healthy as it was from day one. And I just couldn't believe it.

Researcher: Do you think they were lying or did they believe that?

CD: Oh they were lying. It was clear. They were trying to convince DFO not to listen to First Nations, and to keep it open. I couldn't believe it. I said to one of them, "It's not as healthy as you think. You can't tell me this. Your father used to say he caught 40 tons a night." And that was in the 1960s and 1970s. They used to catch 40 or 50 tons a night easy. And this guy's head bowed down... But all of them were lying around the table. Only three or four of them supported us (Dennis 2000 - Int.).

Finally, after five years of the DFO "dragging their feet", in 2000, Mi'kmaq lobbying of DFO succeeded:

Finally this year they said, "Charlie, you guys were right. The fishery has collapsed." Yeah, we told them five years ago there was something wrong because of our Elders telling us no more spawning in Crave Cove, no more milky water. That tells you something. For years and years the Elders see this happening and all of a sudden you don't see it. So this year the federal government finally said, "Okay, no more commercial herring fishing in the lake." (Dennis 2000 - Int.).

In summary, Mi'kmaq accomplishments in altering resource-use management in the Bras d'Or watershed have been extensive. Mi'kmaq involvement has had a major, and in many cases a decisive impact on the following issues:

1. Helping to prevent the spraying of Cape Breton/Unama'kik highland forests with toxic pesticides and herbicides in the 1970s and 1980s.
2. Opposing the development of a granite "super-quarry" on Kluscap Mountain in the late 1980s and early 1990s.
3. Having mobile gear (draggers) banned from the entire Bras d'Or Lakes system in 1993.
4. Halting the dredging of the Middle Shoal in 1997, and ensuring that any further development in the watershed be subjected to strict environmental impact assessment.
5. Ending the commercial herring fishery in the Bras d'Or Lakes in 2000.

As will be seen next, the Mi'kmaq have now moved forward from these successes to take a more proactive role in resource-use management in the Bras d'Or watershed.

Re-Asserting Stewardship

There are no Mi'kmaq working at the Nova Scotia Department of the Environment. I would probably say that there are very few Mi'kmaq working for the Nova Scotia government at all (Steele 2000 - Int.).

Netukulimk you could translate into English to mean "You are only to take what you need from Mother - from the natural world." [...] And that is again inherent to the culture... [E]verything is looked upon from a holistic point of view, so your responsibilities and duties have to be intertwined with everything that's around you (A. Marshall 1997 - Int.).

The *Unama'ki* Mi'kmaq have proceeded unilaterally with implementation of several of the recommendations made in the Bras d'Or Watershed Working Group report, including a Native Guardian training program undertaken in co-operation with the UCCB, ecosystem studies of the Bras d'Or Lakes and their watershed in GIS format, and the development of co-operative initiatives with the forest and mining industries and local conservation groups including the Bras d'Or Stewardship Society. Albert Marshall emphasises that:

The [*Taking Care of the Bras d'Or*] report itself might be dead in the eyes of the governments, but it is not dead as far as we're concerned... So rather than trying to get this report endorsed we are just sitting back now and doing what is doable at the moment. I know here in Eskasoni for example, through this Eskasoni Fish and Wildlife, we are in the process of instituting a Bras d'Or Lakes research centre.²⁰ Since this report we also have formulated and instituted in the University a Natural Resources Technician program in which these people that will be working or are working in their respective communities, are trying to deal with issues like conservation, lake and stream enhancements, and try to maintain some kind of a link in terms of monitoring the ongoing pollution that are presently subjected to the lakes. So this Natural Resources Technician program is a multi-disciplinary program designed to enhance the skill of

these Guardians... the Native Guardians. We've already decided that this report was not going to be endorsed by any levels of government. So we are just going on the premise that if we do not go in the direction we're going, that nothing will ever be done about the lakes (A. Marshall 1997 - Int.).

The Mi'kmaq experience with the resource sector in Cape Breton/Unama'kik over the past 15 years has run the gamut from militant confrontation, to legal battles, to precedent-setting agreements. As noted in Chapter Five, like most aboriginal nations in Canada, the Mi'kmaq have been tirelessly re-building community and political structures after several generations of Residential Schooling, forced relocations, and territorial alienation. Central to the long-term Mi'kmaq strategy is the establishment of formal institutions to oversee resource-use and environmental management in Unama'ki. The development of these institutions is examined in the pages to follow.

Mi'kmaq Environmental Institutions

G1: I sort of have a sense that there is a weakness there [in the Mi'kmaq nation] that has to be addressed...

R: What would that weakness be?

G1: Lack of proper training. I'm not saying anything absolute. I am just giving you my impression here. I am not aware of an environmental agency where [the Mi'kmaq] would actually have staff that could actually go out and work with a logger, or work with someone who is developing a quarry or a pit, or that would be out there looking at on-site septic systems going in, or that would be looking at the way they handled any other waste stream that would be developed from processes that they are dealing with. And I just sort of sense that there is so much work to be done in those areas. And there is so much sharing of information that could take place (G1 2000 - Int.).

As suggested by the above statement, and by numerous off-the-record conversations with other government officials, there exists a widespread but -- as should be clear from the discussion in this chapter -- completely false perception in the Nova Scotia government that the Mi'kmaq do not have the capacity to manage resource-use in

the Bras d'Or watershed or beyond. The government employee quoted above, despite a position in a department which requires detailed knowledge of Cape Breton/Unama'kik, even seemed to be unaware of the existence of training programs such as the UCCB Natural Resources Technician program:

Why isn't there a lot of Mi'kmaq individuals going through and receiving the training to be able to work -- I guess working together on environmental protection? [...] Why isn't there Mi'kmaq being trained, working with non-Native staff in order to gain an appreciation of techniques that have taken years to develop? (G1 2000 - Int.)

Like most government personnel who are highly critical of the Mi'kmaq, this official declined to be identified,²¹ perhaps because an evaluation of Mi'kmaq environmental and resource-use management institutions and personnel makes it obvious that this perception is false. The past decade has been a period of intensive capacity building for the Mi'kmaq, and today the fruits of that labour are abundant.

The Eskasoni Fish and Wildlife Commission

In 1992, using funds provided as part of the DFO/Department of Indian Affairs and Northern Development "Aboriginal Fisheries Strategy" (AFS)²², the Mi'kmaq established the Aboriginal Fisheries Service at Eskasoni to oversee Mi'kmaq fisheries throughout Nova Scotia (Dennis 1997 - Int.), under the leadership of Charlie Dennis, a Mi'kmaq from Eskasoni.

The following year at a meeting of the Nova Scotia Chiefs, the name was changed by consensus to the Mi'kmaq Fisheries Service (MFWC 1993). Subsequent political dissent among the 13 Nova Scotia Band Chiefs led to some bands withdrawing from participation in the organisation, mainly because some Bands felt that the DIAND Aboriginal Fisheries Strategy might compromise Mi'kmaq treaty rights.²³ In 1995 the

name was changed again, this time to its present name, the "Eskasoni Fish and Wildlife Commission" (Dennis 1997 - Int.) (see Figure 7.3).²⁴

In 1996, the EFWC proposed to the federal government that responsibility for monitoring and enforcement of fisheries in the Bras d'Or Lakes watershed be transferred from the DFO to the EFWC under a "co-management" program, to begin with management of salmon (EFWC 1996).

The Unama'ki Institute of Natural Resources

The five Chiefs decided that Eskasoni will locate the Unama'ki Institute of Natural Resources because of previous work that we have been doing. We have the capacity. We have the Mi'kmaq science people. Shelley Denny, our lead biologist, she's from Chapel Island, but she lives in Eskasoni now. And Lisa Paul, she is another biologist, she's from Membertou. And Kara Paul is the other one. She's from Eskasoni. So we are utilising the other bands and we are working close together with all the bands (Dennis 2000 - Int.).

Using part of the multi-million funding package given by DFO to the Eskasoni Band Council in exchange for their signing an agreement on a one-year moratorium on lobster fishing in the summer of 2000, the UNSI's Unama'ki Environmental Committee, in co-operation with the EFWC, has established the Unama'ki Institute of Natural Resources. Agreements with the commercial resource sector are being actively negotiated in order to ensure a stream of long-term funding for the UINR, which is taking on what will likely one day be the rôle of a "Mi'kmaq Department of Environment and Natural Resources". Again, the existence of the UINR seems to have escaped the notice of at least one key Nova Scotia government official:

If there was an environmental agency for First Nations then we could basically say that they could come and ask our assistance as far as advice or as far as what codes of practices or best management practices existed for non-Native activities... (G1 2000 - Int.)

Top: EFWC sign lists activities of the Commission. Bottom: EFWC patrol boat; floating oyster cultivation trays are visible at top left. Photographs by the author.

Figure 7.3 - The Eskasoni Fish and Wildlife Commission

The need for a central environmental agency to oversee all aspects of natural resource-use management in Cape Breton/Unama'kik has long been recognised by the Mi'kmaq. However, contrary to the government employee G1's suggestion above, it is unlikely that the Mi'kmaq will approach his department for "advice". Although that department cannot be identified in order to protect the respondent's anonymity, it can be stated with assurance that the Mi'kmaq have demonstrated over and over that their own codes of practice and "best practices" are of a higher standard than the ones that department ostensibly enforces.

As of February 2001, the UINR employed 130 people (Charlie Dennis 2001 - pers. comm.), an increase of several times over the previous year:

We are also building capacity. We have three Native biologists on staff right now, but when we started we didn't have any. We've been planning this management of the Bras d'Or Lakes for a number of years because of the Aboriginal Fisheries Strategy. They gave us the tools, well, a few thousand dollars, to start our own capacity. Then the *Marshall* decision expanded what goes on. They are now talking about expanding the AFS strategy. Increasing and improving the program. And because of what we have been doing out in the Bras d'Or Lakes -- the GIS, the herring study, the lobster study -- I think we have been preparing to manage the Bras d'Or Lakes. We have the capacity now, if the Institute is built (Dennis 2000 - Int.).

A memorandum of understanding was signed in 1999 between the Canadian DFO and the UINR. The agreement provided the UINR with use of the DFO sentinel fishery boat, the *Navicula*, to be used in the study of the Bras d'Or Lakes ecosystem for a period of five years. The UINR, as will be detailed later, has also taken the lead on negotiating long-term agreements with the natural resource sector.

Mi'kmaq-Initiated Management Agreements

We're not opposed to any development, we want to change the mindset of the government, or the multinationals, that wouldn't it be much more practical to undertake these projects by crossing all our t's and dotting all our i's so that we wouldn't have to come back tomorrow and repair the damage that has been done by all this development (A. Marshall 1997 - Int.).

The Middle Shoal case, along with developments elsewhere in Canada, set the stage for more serious corporate attention to the rights of the Mi'kmaq beyond the boundaries of their five Cape Breton/Unama'kik Reserves. Armed with numerous court decisions which conclusively establish the Mi'kmaq rights and interests in stewardship of natural resources, the Mi'kmaq have initiated comprehensive management agreements with private industry, one of which will be described below. These agreements address failures in federal and provincial regulatory regimes, implement a level of ecological protection beyond that required in any existing legislation, and ensure that resource-extraction operations provide a high level of local employment. Moreover these agreements provide the Mi'kmaq with a share of royalty-like revenues from resource extraction, a move significantly beyond anything contemplated by federal or provincial governments, trades training for Mi'kmaq citizens, and separate financial contributions to cover the cost of Mi'kmaq-run ecological monitoring. The revenue stream generated by these agreements is being invested in increasing capacity, including training young Mi'kmaq in stewardship skills. Only the Melford Gypsum Mine Agreement with Georgia-Pacific will be described here, since other agreements are still under negotiation and have been "embargoed" by the UINR pending their closure.

Melford Gypsum Mine Agreement

Georgia-Pacific Corporation (GP), based in Augusta, Georgia, has operations in 13 countries, employs 85,000 people world-wide (Georgia-Pacific 2001), and recorded sales in 2000 of almost \$33 billion. On November 2, 1998, the *Unama'ki* Mi'kmaq and the GP subsidiary Georgia-Pacific Canada, Inc. signed the Melford Gypsum Mine Agreement (Georgia-Pacific Canada and the *Unama'ki* Mi'kmaq 1998). Georgia-Pacific had contacted the UNSI, widely acknowledged to be the body representing the interests of the five Cape Breton/Unama'kik Bands, to ask for any concerns the Mi'kmaq might have about a gypsum mine development near the Malagawatch Reserve. The EFWC was contracted by GP to undertake a traditional knowledge study of the proposed mine site and surrounding area to identify potential conflicts with Mi'kmaq resource-use. Elders, hunters and fishers were interviewed, and historical archives were utilised in order to build a picture of past and present use of the area, and identify its biotic composition. That study was completed and submitted to GP in June 1999 (EFWC 1999).

The Melford Gypsum Mine Agreement, which was concluded without the involvement of federal or provincial government agencies, includes the following provisions:

Employment: 25% of the workforce is to be Mi'kmaq, and training and apprenticeships will be provided by the company whenever required for employment objectives.

Unama'ki Marine Institute: The company has agreed to contribute \$0.05/tonne (projected to be approximately \$100,000.00 annually) to the Unama'ki Marine Research Institute, a Mi'kmaq-run not-for profit organisation established as part of the agreement to conduct environmental research and monitoring.

Sub-contracting: Trucking contracts are to be awarded preferentially to the Mi'kmaq.

Ecological Monitoring: Mine-site monitoring is being conducted by Mi'kmaq Native Guardians (roughly equivalent to Conservation Officers), funded by a \$10,000.00/annum contribution from the company, and a further \$5000.00/annum contribution toward wider watershed monitoring by the EFWC and the Unama'ki Institute of Natural Resources.

Scholarships: One \$5000.00 scholarship for a Mi'kmaq student engaged in environmental or technical studies will be provided by the company annually for the life of the project.

Charlie Dennis discussed the agreement, expressing general Mi'kmaq satisfaction with the process and its outcomes:

Charlie Dennis: [indicating a map] The Melford site is right here. We are lucky because there is quite a bit of marsh that will protect it. But there is a brook. I think it's Glen Brook, that is pretty close by. And we finally -- when they originally decided to mine they were going to put it too close to Glen Brook and we convinced them to move it way back.

Researcher: So are you satisfied with their environmental statement?

CD: Yeah. We worked on it from day one.

R: And you are going to be involved in monitoring?

CD: Yeah. For the duration of the mine. Our habitat people are there almost every day (Dennis 2000 - Int.).

It can be expected that this agreement will serve as a precedent for future resource development in Cape Breton/Unama'kik.

Building for the Future

The preceding discussion has shown that the Mi'kmaq have both the will and the capacity to take on a progressively greater rôle in managing human interactions with the rest of the natural world in Cape Breton/Unama'kik. Based on a deeply ingrained cultural connection with the non-human world which has given rise to an ecocentric

ethic, the Mi'kmaq take a consistently active stance in defending the environment against degradation. Lo/TEK practices have translated into effective ecological micro-management techniques at the small scale, while larger scale initiatives have consistently adopted a watershed-based approach to environmental protection. The active nature of Mi'kmaq politics has meant that there is a broad base of community support for all of their ecological initiatives, and this has translated into a number of significant successes.

Charlie Dennis is proud to report a tremendous upsurge in interest among Mi'kmaq youth in developing careers in natural resource-use management (Dennis 2000 - Int.), an interest that has the potential to improve the local economy while at the same time positioning the Mi'kmaq uniquely to re-assert their traditional rôle as guardians of the Bras d'Or. As will be seen in the next chapter, these facts, when coupled with the jurisprudence of Mi'kmaq title, means that the Mi'kmaq have an indispensable rôle to play in winning Cape Breton/Unama'kik's practical independence from an exploitative web of Industrian power/knowledge.

Notes to Chapter Seven

¹ This said, Nietzsche would almost certainly have assessed the active morality of the Mi'kmaq as a noble one.

² In some of the description to follow, the past tense is used, since the sources referred to are describing the Sante' Mawio'mi prior to its supplantment by *Indian Act* Band Councils. It must be emphasised, however, that the Grand Council still thrives today, and in many senses is undergoing a renaissance and return to power.

³ There has not been any in-depth investigation into the ways power in Mi'kmaq politics was gendered; Berneshawi (1993) notes that there is no available evidence that females have held Grand Council positions. Research undertaken for this study over a four year period suggested that women currently play an important and influential rôle in all aspects of Mi'kmaq politics, through formal political positions (there have been several women Chiefs of Mi'kmaq Band Councils and many more Councillors), administrative rôles, or informal (but powerful) community influence as Elders. However, one interview respondent (E. Marshall 1997) suggested that men continue to wield a disproportionate share of political power through the Band Council system.

⁴ This is why Nietzsche recoiled in horror from the political implications of reactive morality that he saw as an imminent result of state "democracy" (Nietzsche 1967a, orig. 1886; Nietzsche 1989, orig. 1887).

⁵ See Note 13 below.

⁶ An egregious example is a letter to the *Globe and Mail* by A.J. Brent Tierney (2000), who contrasted "the Natives" who want laws enforced "only when it suits them" with his "Caucasian friends" whom he argued would have faced a more violent police response to illegal activities than had the Mi'kmaq. Tierney, incidentally, is completely wrong about this; members of aboriginal nations are far more likely to be killed or injured by police than non-aboriginal people in similar situations. See for example John F. Kearney's (1989) account of non-aboriginal lobster fishers in south-western Nova Scotia who set fire to DFO patrol vessels yet were not prosecuted. Columnists and commentators including Rex Murphy suggested that it was time we revisit the "aboriginal question" in Canada, and extremist politicians such as Stockwell Day even dared talk of abrogating the treaties which recognise the rights of aboriginal nations to the use of land and resources.

⁷ For a more detailed discussion of the particularities of the Esgenoôpetitj lobster dispute, see Hipwell (2000a) and Hipwell (2000b).

⁸ "State" is used here to refer to either the Canadian federal government or the ten provincial governments in the Canadian state.

⁹ There are many reasons to suppose that the Mi'kmaq can be regarded as a war/metamorphosis machine, and these will be explored in Chapter Eight.

¹⁰ Dr. Clarke received his Ph.D. in Constitutional Law from the University of Edinburgh for the work supporting this assertion.

¹¹ It must be pointed out here that the Supreme Court of Canada's *Marshall* decision was the result of a deliberate strategy implemented by the Mi'kmaq Grand Council. The Grand Council instructed Donald Marshall to fish for eels and sell them commercially until he was arrested. They wished him to do this because Mi'kmaq had been routinely harassed and prosecuted by federal and provincial officials when exercising what they felt was their treaty right to use natural resources as they saw fit, and their lawyers had finally been able to prepare a case to that effect.

¹² This word is used deliberately to emphasise that "missionary" work to Christianise aboriginal peoples was an essential part of colonisation, not least because it infected strong and free peoples with reactive Christian morality, rendering them more passive in the face of oppression. See Chapter Two.

¹³ "Harsh" is, if anything, an understatement. In an incident not directly related to resource use, but nonetheless relevant to understanding community enforcement, one Mi'kmaq family home was burned to the ground twice by other members of the community who objected to certain activities in which they believed the family was engaged. None of this is to say that Mi'kmaq enforcement capabilities are unproblematic. There exist significant legal and political barriers to Mi'kmaq enforcement of regulations, which are discussed further below.

¹⁴ Lovelock compares Gaia with an old tree, which we recognise as being "alive" because its outer layers are living, though the centre of the trunk is composed of inanimate material.

¹⁵ That said, it should be stated for the record that expressions of responsibility to the non-human world recorded during this study seemed to be deeply held and honest, and not a cynical mobilisation of discourse for political ends. See also Chapter One, Note 19.

¹⁶ Many Mi'kmaq, especially Elders, object to the mountain's "official" name: "Kelly's Mountain". Kelly was a moonshiner who resisted the construction of the Trans-Canada Highway earlier this century. In the words of one Elder, "It's ironic. There are stereotypes about Mi'kmaq people..., yet now they name our sacred site after a moonshiner" (quoted in Marshall and Hipwell 2000; and Dalby 2000). For this reason, many Mi'kmaq prefer to call the mountain "Kluscap Mountain" instead.

¹⁷ Ruth Holmes Whitehead (1988: 220-222) points out that Mi'kmaq mythology was progressively Christianised, and that the story of Kluscap, who was originally but one of many Persons (deities) in the Mi'kmaq world, "devolved" between 1850 and 1930, by which time Kluscap had taken on a central position as *the* Mi'kmaq spirit-helper, with some of the attributes of Christ.

¹⁸ The DFO Small Fish and By-Catch Zones are also a stark instance of the imposition of striated space on a (literally) fluid reality.

¹⁹ This makes sense, as 4Vn covers entirely the area of the ocean into which both the Great Bras d'Or and St. Andrew's Channel empty. These channels are the only access to the Bras d'Or Lakes aside from the tiny St. Peter's Channel on the south coast of Unama'ki, which is blocked to fish migration by a boat lock.

²⁰ The Unama'ki Marine Research Institute has since been established.

²¹ Other officials (including those actively involved in high level political negotiations with the Mi'kmaq), while happy to speak "off-the-record" about the supposed ecological disasters they thought would result from Mi'kmaq legal victories, would not go on record with any of these statements. By contrast, government staff whose perceptions of Mi'kmaq resource-use practices accorded with available evidence and the positions of Mi'kmaq administrators, were comfortable with being identified by name and position. This is disturbing, for it would suggest that some government negotiators have un-stated biases and prejudices which, being secret, cannot be refuted but which undoubtedly harden the government's negotiating position toward the Mi'kmaq.

²² The Aboriginal Fisheries Strategy is an attempt by the federal government to accommodate aboriginal treaty rights to fisheries resources without having to deal head on with the sovereignty question, and therefore may be read as an Industrian attempt to maintain the "capture" of aboriginal territories in the face of the metamorphosis machine of the jurisprudence of aboriginal title. That said, the program brought welcome funding into many aboriginal communities which, like the Mi'kmaq of Unama'ki, were attempting to protect their local ecosystems and re-establish healthy resource-based economies.

²³ Data on the reasons for this were not available at the time of writing.

²⁴ The Eskasoni Fish and Wildlife Commission web-site may be visited at <http://www.tec.ednet.ns.ca/~wildlife/>.

Chapter 8 Taking Charge of the Bras d'Or

Can we now put our differences aside, and come together as one in assisting Mother Earth to deal with these devastations that are being imposed upon her on a day to day basis? [...] That brings us then to the prophecy: The Lighting of the Seventh Fire. To me this is the beginning of the prophecy. Under the prophecy it says that all nations of the Earth will come together as one (A. Marshall 1997 - Int.).

But it seemed to me that the stumbling block was the [Canso] Causeway. We still have a linkage with the mainland. Like maybe we should take sticks of dynamite under the causeway and split away from the mainland! (Dennis 2000 - Int.).

Moving Forward: Creating an Eco-Political Future

The preceding chapters have shown the difference that a "Gaiagraphic" approach -- based upon Deleuzean philosophy, Gaian ecology and ethics, Fourth World political theory, the critique of "Industria"; and geographical bioregionalism -- makes in understanding why things have gone so badly wrong in the Bras d'Or watershed. The history of the Industrian capture of Cape Breton/Unama'kik provided in Chapter Five showed that Industria's imperatives have had a catastrophic impact on the Mi'kmaq nation, and have resulted in steady ecological decline throughout the island, and most

significantly for the present discussion, in the Bras d'Or Lakes watershed. Chapter Six discussed how in response to this ecological decline, in a twenty-five year long series of community-sponsored initiatives that may be unparalleled in Canadian history, Bras d'Or residents have repeatedly tried to convince Industria power brokers to devolve decision-making power to the watershed level, and to implement some form of locally-centralised management or governance structure in order to halt the lakes' "death by a thousand cuts". Given Industria's imperative of centralisation of power and its insatiable appetite for natural resources extracted and exported as quickly and cheaply as possible from its resource hinterlands, these initiatives -- in which can be found the seeds of bioregional thinking -- have been spurned by government decision-makers. Chapter Seven provided a detailed examination of the historical and present resource-use management practices of the Mi'kmaq nation, showing how they exemplify Deleuzian philosophy in practice, and are compatible with the observations and recommendations of a broad range of scholars working on bioregional theory. What remains is to investigate how the Industrian capture of Cape Breton/Unama'kik might be counter-actualised in order to create the political "space" required for the development of bioregional governance in the Bras d'Or.

Resisting Industria: Micropolitics in Action

Deleuze and Guattari call for a new, "nomadic politics" to destabilise sedentary, arboreal State (Industrian) structures. As argued in Chapter Three, state sovereignty is a necessary if not a sufficient condition for the growth and spread of Industria, since state territorial claims at once enable the penetration of peripheral areas by the Industrian web of power/knowledge and physical infrastructure, and simultaneously make physical

resources available (through allocation regimes) to whichever corporations can wield the most influence in state capitals. The discussion of the Industrian capture and looting of Cape Breton/Unama'kik, its cultural and ecological consequences, and the intransigence of Industrian power-brokers in the face of local calls for bioregional political empowerment illustrates how extremely difficult breaking Industria's hold will be. There does exist, however, one area of potential for attaining this objective.

The jurisprudence of aboriginal title is, as Patton (2000a) shows, a "metamorphosis machine" which can disrupt the Industrian capture of territory and resources. As such it may be the only thing capable of catalysing a political move to local bioregional empowerment. The validity of aboriginal claims is so firmly established in Canadian and international law as to be irreversible and undeniable, and must eventually force constitutional changes. This is what Patton (2000a: 131) means when he suggests that the aboriginal title jurisprudence is "a machine of constitutional metamorphosis."

However, when governments are forced by the courts to allow aboriginal subsistence or commercial resource use as provided under treaty or necessitated by title, the most significant political problem is the perception of unfairness by non-aboriginal citizens and communities ("back-room" pressure by resource corporations is another important difficulty). This is what has led BSS Board member James Crawford, in an echo of statements by neo-conservative politicians such as Stockwell Day, non-aboriginal fishermen and other resource-users, to remark, "two laws is wrong" (Crawford 2000 - Int.). BSS member Steve Sober puts it this way:

I think it's unhealthy to have different -- not to have different cultures -- but to have people looked at differently by the government because of their ethnic origin. I think that who your father is should not be the major thing that determines how people look at you. When we talk like this what we are really talking is racism. It's ugly and the potential for ugliness is always there no matter how we view it (Sober 2000 - Int.).

This sentiment would suggest that if the government wishes to avoid creating potentially violent situations resulting from perceived unfairness when aboriginal people assert their legitimate *national* rights to local, community control over resource use (such as that witnessed at Esgenoôpetitj/Burnt Church), it will need to give up some degree of territorial authority and devolve resource-use management power to local non-aboriginal communities to match that already enjoyed as a legal right by aboriginal peoples. This is almost precisely the opposite of the approach presently taken by Industrian resource-use managers in Canada, who rather than contemplating decentralisation of management authority to *all* communities (thereby simultaneously meeting constitutional obligations to aboriginal peoples *and* the demands of non-aboriginal peoples for *equal* rights), they instead attempt to *recapture* aboriginal peoples through buy-outs (such as the one-year moratorium on lobster fishing purchased from most Mi'kmaq Bands by DFO negotiator Jim Mackenzie on behalf of the government in 1999), or by spurious appeal to "conservation concerns" (Hipwell 2000b). While Nova Scotia Department of Natural Resources negotiators continually advance the position that "unregulated" Mi'kmaq resource-harvesting poses a threat to sustainability, their Department's own Manager of Wildlife Resources contradicts these claims by pointing out that after 15 years of Moose-hunting by the Mi'kmaq under community management regimes, the Moose populations are not only healthy, but in fact over-populated and could sustain an even higher level of non-Native harvest than is currently permitted by provincial authorities (Nette 2001 -

Int.). It is becoming increasingly clear that these spurious conservation concerns are nothing more than a cynical Industrian political strategy to retain control over resources. The irony of the governments which have presided over the decimation of most resources (cod, wild forests, etc. etc.) over the past two centuries suddenly donning the cloak of conservation is not lost on aboriginal peoples or environmentalists. Again, reference to lobbying by corporations can help to account for this. Especially in places like Nova Scotia, where “sweetheart deals” with resource corporations such as Irving or Stora typify resource-use management, finding the “political will” for devolution of power among bureaucrats and politicians is exceedingly difficult even where that will exists in the electorate.

The Mi'kmaq Metamorphosis Machine

“Cry ‘havoc’, and let slip the dogs of war.” - Shakespeare

When I speak to [Mi'kmaq people] I realise that there is great intelligence there and that they are every bit as capable as I am in every way. In fact we look toward them to give us leadership at this time because they seem to have more ability to pressure government than we do. Partly because of our own failing to realise our own power (Sober 2000 - Int.).

As is clear from the words of Bras d'Or resident Steve Sober, there exists the perception that the Mi'kmaq possess greater political resources than do Cape Bretoner communities to mobilise in negotiations with the government. Turning back to earlier arguments in Chapter Two above, one way of describing this unique political power is through the use of the Deleuzean term “war-machine”, which Pattoni (2000) has, as indicated earlier, suggested might also be rendered “metamorphosis machine”. Either term draws attention to the ontological capabilities of nomadic peoples to act as

disrupters of Industrian territoriality and claims of sovereignty. Patton has also demonstrated that this power is multiplied in common-law countries such as Canada by the jurisprudence of aboriginal title. The “war-machine” attributes of the Mi’kmaq were starkly evident during the protests against the chemical spraying of Highland forests described in the previous chapter.

A Mi’kmaq photographer and guide described the tactics he and other Mi’kmaq activists employed to oppose the spraying of chemical herbicides on the highlands above Whycocomagh in the early 1980s. Numerous Mi’kmaq had planned to go up into the highland tree plantations targeted for spraying, pull up seedlings in an act of symbolic protest, and refuse to leave, in the hope that the company would not spray where there were people (CB2 1997 - Int.). The police had other ideas. The guide’s account is a dramatic example of an encounter between a war-machine and the sedentary state apparatus:

So from there on there was a strong tension from the RCMP, they were trying to make sure we don’t go up there. But how do you stop somebody that’s -- it’s like a guerrilla warfare. He’s there one minute and you lose him the second minute. He’s not gonna use the Trans-Canada [Highway] to go up on the mountain. He’s gonna go use the woods. So what they did, the RCMP blocked the entrance to the mountain. But nobody’s gonna use the entrance. They’re gonna walk up from their doorstep, they’re gonna walk in the woods and just walk up to the mountain. So that’s what we did (M4 1997 - Int.).

The use of forest paths instead of roads emphasises the “unpoliceability” of smooth space such as that of the Highlands when a war-machine is mobilised which declines the offer of roads and other policeable striated space. Paul Patton notes that

[i]n contrast to the roads and highways that connect the regions of sedentary social space, the paths of nomadic existence serve to distribute individuals and groups across an open and indeterminate space (Patton 2000a: 117).

It could be argued that in another sense, in developing resource-use management agreements with corporations such as Georgia-Pacific, the Mi'kmaq are again "using the woods" to circumvent state claims to exclusive jurisdiction. These agreements can be seen as a kind of "guerrilla warfare", waged in the discursive and legal realms against Industria. And if those legal and discursive battles are lost, other guerrillas ("Warriors") wait in the background, ever-present and ever-ready to take up arms and *physically* defend the integrity of "Mother Earth" (Hornborg 1994). As such, it is clear that the Mi'kmaq are indeed not only a "metamorphosis machine" in Patton's formulation, but also a "war-machine" in its fullest sense (Deleuze and Guattari 1987).

This has a two-fold implication. First of all, the Mi'kmaq war/metamorphosis-machine can be seen as a force of de-colonisation or liberation for the Mi'kmaq people themselves. Secondly, it can provide a model, a precedent, and a source of aid for the growing number of vocal Cape Bretoners who wish to see greater authority devolved to the local level.

***Unama'ki* Mi'kmaq Unity?**

The Nova Scotia Mi'kmaq Bands are organised through three institutions: the Assembly of Nova Scotia Indian Chiefs, which is primarily a forum for policy discussions, the Confederacy of Mainland Mi'kmaq (CMM), and the Union of Nova Scotia Indians (see Figure 8.1). The CMM split away from the UNSI in 1986, since some Chiefs felt that there might be some political advantage in having a separate organisation for Mi'kmaq Reserves on mainland Nova Scotia, and that perhaps the UNSI was too dominated by the *Unama'ki* Mi'kmaq (Kim Paul, pers. comm.). Today, the CMM member Bands are Afton, Annapolis Valley, Bear River, Horton, Millbrook and

Mi'kmaq Organizations in Nova Scotia

Source: Assembly of Nova Scotia Mi'kmaq Chiefs (1999)

Figure 8.1 - Mi'kmaq Political Organisations in Nova Scotia, 1999

Pictou Landing. The UNSI is larger, comprised of all five Cape Breton/Unama'kik Bands plus the Acadia and Shubenacadie Bands, which collectively account for almost 80% of the Mi'kmaq in Nova Scotia. Although it has proven exceedingly difficult to achieve consensus on all issues among the 13 members of the Assembly of Nova Scotia Mi'kmaq Chiefs, let alone among all the Bands of *Mi'kma'ki*, where there has been remarkable solidarity and unity of purpose is in the UNSI. The UNSI motto is quite aptly "United We Stand, Divided We Fall". According to Waycobah Chief and UNSI Executive Committee member Morley Googoo,

the Cape Breton Chiefs ourselves, we sometimes feel like "We should make our own Tribal Council and start playing the lead role." I think if the other organisations realised what kind of unity and how focused the Cape Breton Chiefs are working together, they would realise that they could get a lot of leaps and bounds and do a lot of really good positive things (Googoo 2000 - Int.).

Googoo agrees that the UNSI is already beginning to function like an Unama'ki Tribal Council. The problem is that with two mainland bands participating in the UNSI,

...when we were talking about issues as a group, this is where we have a conflict because the two other bands have been standing by us in our organisation for the last twenty-some years, and when we want to take steps that involve Cape Breton alone we are sort of caught in a bind because where do the other two bands fit in? Where does their support lead them? They don't want to be a part of the Confederacy [of Mainland Mi'kmaq], but if we go on our own, then where do they stand? But they also respect that any kind of management things that we want to do for Cape Breton Island, they clearly say, "Hey that is your guys' business and we support your guys' initiatives" (Googoo 2000 - Int.).

There are no provisions under the *Indian Act* for the establishment of tribal councils, which means that except under the specific terms of a modern treaty a tribal council has no independent power to make or enforce laws. Ultimate legal and political authority rests with individual Band Councils, and therefore their unanimous agreement is a

prerequisite in any nation-to-nation negotiations with the government. This is a perfect situation from the perspective of Industrian colonisation, for it allows aboriginal peoples to be easily divided and conquered.¹

The Mi'kmaq have the power to deterritorialise the state and force devolution of authority to their own communities, but if they wish to avoid generating *ressentiment*, potential violence and subsequent denial of their rights through the government's invoking the Peace, Order, and Good Government clause of the *Constitution Act, 1867*, they must develop unilaterally with local non-aboriginal resource user groups (and not just large resource corporations) management regimes which are fair and perceived to be fair.²

Research in British Columbia suggests that the strategy of Industrian elites fearful of any community solidarity, which might preface calls for a change in control over natural resources, is to attempt to drive a wedge between aboriginal groups and non-aboriginal people (Hipwell 1997b).³ Land claims, depending on how they are negotiated, provide a unique opportunity for establishing functional nodes of resistance to the Industrian network of power. Non-aboriginal communities might consider attempting to negotiate "side-agreements" with the aboriginal nations making Land Claims, promising, for instance, not to oppose the specific territorial claim in exchange for some form of future "citizenship" rights including share of resources, perhaps in the context of a bioregional charter.⁴ In this sort of effort might be found the seeds of bioregional governance.

Building a Bioregional Politics in Cape Breton/Unama'kik

My idea always has been that the framework of governance is wrong... At the pinnacle everything is at the federal level. I see that it is important to turn that around so that it's more community-based. Community management, and community input. So people can directly see the results of what they put in. Which is, simply, tax dollars. When it is filtered from the top down, often times it never gets to where its needed (Crawford 2000 - Int.).

I have always had the feeling that most people feel that the government is really not quite theirs, that it belongs to someone else. Which is probably the major problem why we feel that we can't change things. We have so long felt that government was someone else's. When we begin to feel that it is ours then it will be ours, because the mechanism for us to control things is there. Through elections and through speaking out (Sober 2000 - Int.).

Cape Breton/Unama'kik does not face any of the three barriers to the development of a community-based political identity identified by Harris and Alexander (1991: 35): close integration with an increasingly globalized economy, sufficient ecological degradation to render restoration difficult, or, given the diversity on the island, the homogenisation of world cultures. At the same time, Harris' three identified opportunities: the partial collapse of the formal economy, the potential of ecological crises to underscore fundamental problems with existing economic structures, and an increasing dissatisfaction with life under capitalism, are almost perfectly fulfilled on the island by the Federal DEVCO pullout, the collapse of the fisheries, and the island's history of radical labour action.

However, in addition to Industrian resistance to devolution of power, there also exist internal barriers to the development of a bioregional politics on the island. The difficulty in cultivating the appropriate attitudes toward governance and the environment

in the Bras d'Or can be linked to two things. The first is fatigue after twenty-five years of fruitless efforts:

I'm scared. Not that something won't be done, but I'm scared that it's going to be hard to keep the enthusiasm of the public high and keep people involved. Public opinion seems to be that this issue has been studied to death. It's time to get something done (Taylor 2000 - Int.).

A deeper problem is what might be termed an ingrained "reactive" ethic in the populace:

Researcher: What do you see as being the main obstacles to that kind of local governance?

J. Crawford: Apathy. People not wanting to be assertive, not wanting to take control of their own destinies, allowing someone else to look after it (Crawford 2000 - Int.).

In the second regard, it was suggested in Chapters Two and Three that an essential feature of the development of state-thought in Industria is the generations-long inculcation of a reactive "herd instinct" in Europeans and their descendants. This herd instinct also contributes to a general lack of awareness of impacts, or a lack of concern:

I realise that probably the large proportion are not very concerned. They still will put in houses as near to the water as they can, and they will still put in the most rudimentary septic system that they can. So one has to doubt that the necessary knowledge is there to develop that type of caring (Sober 2000 - Int.).

Economic hardship also forces people to make short-term decisions. BSS Secretary Dr.

James O'Brien suggests that

The problem in Cape Breton is that if you could offer 300 truck-driving jobs for the next twenty years pouring concrete into the Bras d'Or Lake, my god, you would be totally shot down if you went against it (O'Brien 2000 - Int.).

This failure of democracy can only be rectified through the nurturing of grassroots democratic institutions (Esteva and Prakash 1998). Also essential would be an active program of cross-cultural education:

I still think to this day that a lot of people outside the Native communities find it hard to understand Native communities, Native governance. They really don't have a grasp of what the interaction is between the guy who runs the store and the guy that fishes and the Chief and the Band Council - the politics. And they're scared to visit the communities, in the same way that people from the Native communities feel overwhelmed or threatened in the non-Native communities. There's been a lot of history. Education promoting all the communities will help (Taylor 2000 - Int.).

Education must be accompanied by communication, sustainable economic development and building positive examples of successful cross-cultural co-operation, along with the design of a local structure for democratic participation in watershed management:

I think that one, a structure has to be developed, and whether that takes a year, five years or whatever... Certainly I think more local control is needed rather than politicians provincially... So if there is jurisdiction to be passed the objectives from everybody have to be the same. Any other personal interests or economic interests or benefits have to be put on the wayside to meet and clearly define what the protection of the Bras d'Or Lakes is really there for, what the organisations are there for. And only at that time can we come up with a structure (Googoo 2000 - Int.).

Another hurdle to bioregional governance in the Bras d'Or is that although at smaller scales community spirit is strong, there is a lack of a clearly defined Bras d'Or community of interest, in part because of the sheer geographical size of the watershed:

Researcher: Do you think there is a Bras d'Or community?

J. Crawford: I can't say generally there is, no. I see oftentimes that the communities that surround the lake -- be it St. Peter's, Whycocomagh, Baddeck, Eskasoni, East Bay, Ben Eoin, all those areas around the lake -- if there really was a community there would be a lot more outcry. I would have to say the proof is in the pudding, and the fact is that there is not a public outcry to the point of where it's a real community effort to try and right the wrongs. I would say there are certain individuals or peoples who are seriously concerned, but I couldn't say it'll come down to community necessarily. Not at this point in time (Crawford 2000 - Int.).

Designing the Bioregion: Bras d'Or or Cape Breton/Unama'kik?

Researcher: So you feel that what needs to happen is that the decision-making and the planning and the implementation of these things has to happen at a local level...

CB1: Absolutely. At the local level. [...] At the municipal level. There has got to be a change in terms of the municipalities being able to handle funds and financing, and the whole legal structure which right now essentially leaves municipalities completely emasculated in terms of the political process. They are more - just figureheads to distribute provincial funds. [...] [E]verybody here feels that Halifax is there to impose solutions on everybody. So there is not very much trust and receptive vibes for solutions coming from Halifax (CB1 1997 - Int.).

In pondering the question first proposed for this study, "How and why could a bioregional geopolitics help to attain ecological and socio-economic sustainability in the Bras d'Or watershed?" it becomes clear that the question itself may be geographically misleading, for it suggests that a bioregional political solution will be *of* the Bras d'Or watershed. Critics of bioregionalism have suggested that in many cases the delineation of bioregions reflects arbitrary decisions rather than "hard and fast" geophysical factors. Bioregional theorists for their part emphasise that bioregions must be defined to take into account cultural and socio-economic as well as bio-physical factors.

In this light it will be evident to any Cape Breton/Unama'kik resident studying the proposed watershed boundary in the "Taking Care of the Bras d'Or" report that while it does delineate accurately the drainage basin of the Bras d'Or Lakes (and therefore does in fact identify the "watershed"), that it does not reflect in human terms the communities which have developed over time on Cape Breton/Unama'kik (see Appendix B). For example, the neighbouring villages of West Bay and West Bay Centre find themselves on opposite sides of the dividing line. Clearly, while the Bras d'Or watershed may make

sense for certain aspects of environmental protection, it will not suffice as proposed as a *political* unit.

To tackle this difficulty, it should be recalled from Chapter Four that there is an important category of exceptions to the problem of arbitrary bio-physical boundaries: *islands*. There is nothing arbitrary about the boundaries of an island; even its "coastal zone" projecting out into the ocean may be established with reasonable precision (see for example the shallower waters clearly visible surrounding Cape Breton/Unama'kik in the map in the Frontispiece to this work. Furthermore, the issue of "governance from afar" which is a central part of the problems facing the Bras d'Or Lakes watershed is primarily a problem with "solutions coming from Halifax", whereas governance on-island would likely be a great deal more palatable to residents:

The general feeling in all of these communities and in all of the sectors -- industry, agriculture and other players -- it was time that they wanted a voice. Although some of the regulations in the provincial and federal departments concerning the area were good, at the same time those regulations were made up not here in Cape Breton, not in the Bras d'Or Lakes watershed, but off-island and out-of-province (Taylor 2000 - Int.).

This comment raises an issue which has probably been at the back of many people's minds throughout discussions of devolution of authority from the province to the local level: Cape Breton/Unama'kik independence from Nova Scotia.

One Cape Bretoner was asked whether there was a connection between the efforts for Bras d'Or stewardship and the broader Cape Breton/Unama'kik independence movement⁵ which has been active since the annexation of the island by Nova Scotia in 1820. She responded affirmatively:

Yes, I do. And I think if the non-Natives and Natives get together with respect to the Bras d'Or issue, then I think that the whole island will get together with respect to other issues that are important. Cape Breton Island as a *colony* has certainly been isolated from the rest of Nova Scotia. You've probably met lots of Cape Bretoners who say they are Cape Bretoner first. Not often will they refer to themselves as Nova Scotians... Every municipality on Cape Breton Island has a piece of the Bras d'Or Lakes within its boundaries. [...] If you can get unity on this issue you can get unity on any issue in Cape Breton Island (Steele 2000 - Int.).

She also suggested that provincial hostility to the idea of a Stewardship Commission might be linked to a fear of fanning the flames of Cape Breton/Unama'kik independence:

I think we recognised that fear when Albert [Marshall] and I were going around peddling our influence as a non-Native and a Native with respect to the Bras d'Or Lake. It was palpable. You could actually see the fear in the politicians' faces like, "Oh my God. They're working together? Oh my goodness!" [...] So yeah, that's probably a real big fear with them (Steele 2000 - Int.).

However, other observers including the Bras d'Or Watershed Working Group Project Officer Sander Taylor were sceptical of the idea that there is any explicit connection between the Bras d'Or stewardship and Cape Breton/Unama'kik independence movements (Taylor 2000 -Int.). If Taylor is correct, then the architects of the "Taking Care of the Bras d'Or" report may have missed an important prerequisite for stewardship of the watershed.

From a bioregional perspective there is no question that Cape Breton/Unama'kik is a much more sensible political unit than is Nova Scotia. However, if, as suggested above, the Bras d'Or watershed is too large for the development of a community of interest, how would Cape Breton/Unama'kik be better? The answer is that while Cape Breton/Unama'kik would make sense as a single political unit, it would not be the smallest level of government. For the purposes of stimulating further discussion, Marshall's bioregional taxonomy (Figure 4.2) has been completely revised to show how a

bioregional politics in Cape Breton/Unama'kik might look (see Figure 8.2). The smallest level of governance would be the Town Council, which would be responsible for town/village sewage treatment facilities and other small-scale issues. Very small villages would participate in the Councils of nearby towns. The next level would be the Sub-Regional Council, analogous to present-day regional municipalities, which would be responsible for the *allocation* of fixed resources (e.g. timber, aggregates) within its area to individuals and companies, as well as zoning regulations. From there, a Regional Council, made up of representatives from Sub-Regional Councils (or, in the case of the Mi'kmaq, by Band Council Chiefs from the Bras d'Or Reserves), would develop regional environmental standards designed to ensure sustainability of economic and cultural activities. The highest level of governance in Cape Breton/Unama'kik would be a Bioregional Legislature divided into two houses, a Parliament of elected members from ridings identical to Towns, and a Senate made up of representatives chosen by Regional Councils. This is, it must be emphasised, a very tentative sketch, and the nature of larger scales of governance will be left other thinkers, though certainly the European Union might serve as a good model.

Although a few hypothetical examples of Towns, Sub-Regions, and Regions within Cape Breton/Unama'kik are provided in Figure 8.2, it would be premature to attempt define comprehensively the "boundaries" that would best suit the confluence of physical geography and human communities in different parts of the island. Nor is it assumed that resolving the complex issues of competing claims to territorial sovereignty would be an immediate or inevitable result.

A Bioregional Taxonomy for Cape Breton/Unama'kik		
Bioregional Categories	Geographical Area Examples	Level of Governance
Town	"Indian Brook Watershed" (Eskasoni); "Chéticamp River Watershed" (Chéticamp)	Town (Band) Council
Sub-Region	"East Bay Watershed"; "Acadian Coast"	Sub-Regional Council
Region	"Bras d'Or Lakes Watershed"; "Gulf of St. Lawrence Coastal Zone"	Regional Council
Bioregion	"Cape Breton/Unama'kik"	Bioregional ("Provincial") Legislature
Biome	"The Maritimes"	Biome Congress
Continent	"North America"	Continental Congress
Maritime Watershed	"North Atlantic Ocean Watershed"	International Congress
Planet	"Gaia"	Global Congress

Figure 8.2 - A Bioregional Taxonomy for Cape Breton/Unama'kik

Before any headway can be made on the perhaps very sensible idea of Cape Breton/Unama'kik independence from Nova Scotia, more substantial co-operation and unity between the Mi'kmaq and Cape Bretoners must be developed. The protection of the Bras d'Or Lakes may well serve as an ideal focus for such an evolution.

Mi'kmaq/Cape Bretoner Co-operation

And everybody's going to have to put their egos a little bit aside...
Whoever protects it I don't care, as long as it is done properly (Googoo 2000 - Int.).

Mitchell (1995a) argues that new approaches to resource-use management must focus on resolving conflict. He identifies four types of conflict: cognitive (stemming from different understandings of a given problem), values (differing perspectives on what matters), interest-based (who should pay for or benefit from a given policy decision), and behavioural (based on historical interactions between parties). It is clear from this description that each of these types of conflict has arisen in Cape Breton/Unama'kik, and that it is essential that new and improved forms of communication be found. As Chief Morley Googoo put it:

I think there is a Bras d'Or Lakes community but I think there is a big communication gap between the Native and non-Native communities -- what their roles and what their activities and work plans for the future are to be (Googoo 2000 - Int.).

Ashton et al. (1994) of Mount Allison University's Rural and Small Town Programme argue that co-operation between aboriginal and non-aboriginal groups is an area of central importance for community economic development. Similarly, Jacobs and Mulvihill counsel rejecting what Blaut (1993) calls the Eurocentric doctrine of "geographical diffusionism", or in their terms, "the paradigm of a march of progress and

civilization emanating from a single point in space and time.” Instead, what is needed is “a rich mosaic of spirits, laws and actions whose interactions would inform the new and hopefully shared perspectives that we might bring to ancient lands...” (Jacobs and Mulvihill 1995: 8).

However, the Mi’kmaq remain suspicious that Cape Bretoners treat them instrumentally, developing close relationships only when it is useful:

I think they’ve got to be brought in together and blended in together to be united to be able to go in a good future direction. And I don’t think that’s going to happen until all of them feel there is a crisis that they all need to work together, and somebody comes, you know, we are approached by a non-Native community saying “Hey, we need help, your support, on this.” That seems unfortunately like the only time the other communities, the other groups, try to get help when they feel that “Hey, the Native issues and Native rights are going to help” (Googoo 2000 - Int.).

Sander Taylor, a Cape Bretoner with a long history of involvement in efforts to protect the Bras d’Or Lakes watershed suggested that what is needed to bring the Mi’kmaq and Cape Bretoner communities together is education, communication, and shared activities:

You know, in order to have a cohesive Bras d’Or watershed community they have to be brought together by more than a threat. And you know, to a certain extent those people are being brought together by fear, not by enjoyment. You’ve got to know the community next to you. You’ve got to enjoy going there. You’ve got to want to participate in an activity (Taylor 2000 - Int.).

A useful focus for the development of cross-cultural sharing might be the notion of *place* as a commonalty. A place-based, pragmatic identity transcending more problematic ethnic identities, can help bring about community solidarity, increase local political and economic empowerment, and enhance ecological values. To invert a term coined by Relph (1976), what is required is the nurturing of “place-fullness” in the populace. Whereas Industrian identity claims based on citizenship, race, or class are

arbitrary and contestable, *place* is a relatively unproblematic basis for the construction of identity. Everybody lives *somewhere*.

One Step at a Time: A Regional Charter for the Bras d'Or Watershed

I think that a Charter there kind of binds everybody to be focused on what role everybody should play in protecting the Bras d'Or Lakes and whether Native issues or Bras d'Or Stewardship Society, if everybody pisses each other off, well they have a Charter to keep them focused whether they like it or not. And that is one of the starts of building the proper organisational structure to be in place when you have some solid foundation. But right now, little pieces of a foundation are here, here, here, and you are trying to build a house on top of that. It's not going to be very solid (Googoo 2000 -Int.).

For the residents of the Bras d'Or watershed, it is clear from the work of the Bras d'Or Watershed Working Group, and from interviews conducted for this study that a fundamental starting point for bioregional stewardship must take the form of a Regional Charter for the Bras d'Or watershed. In January 2000 the BSS revived the idea of developing such a Charter in an article by Board Secretary Dr. O'Brien (2000). His article does not go into any detail regarding what precise form such a Charter would take, but rather focuses on the problems inherent to viewing the Bras d'Or Lakes watershed as a "resource" to be "developed". While making a number of excellent points concerning the dangers of an anthropocentric approach to stewardship, O'Brien's piece concludes with a misanthropic observation that would doubtless be rejected by the Mi'kmaq: "It is a sobering thought that if we, as a species, disappeared off the face of the earth, almost all other forms of life would benefit greatly. We alone it seems, are poison irrespective of our race creed or colour" (O'Brien 2000). This assertion is predicated on an argument earlier in the article that

As for the questions of “managing” our natural resources, this is part of the monotone mumbo jumbo chanted by the corporate sector and the gurus of the business and finance. One might, for example, recall that the stocks of Atlantic ground-fish were super-abundant when left solely to the biodiverse processes of the natural order, processes we still know little about (O’Brien 2000).

The point here is that as the discussion in Chapters Four and Seven made clear, the idea of a “pristine” natural environment left solely to the “processes of the [non-human?] natural order” is contestable. There is a great deal of evidence that shows that in most areas of the world humans have always played a participatory rôle in ecosystems and as such have played *a part* in their creation and regulation.⁶ What O’Brien is evidently thinking of is the difference between the differential ecological micro-management that has characterised aboriginal uses of resources (part of “the natural order”) and the large-scale, identity-based management characteristic of Industria.

Mi’kmaq leaders have expressed willingness to participate in the development of a Bras d’Or Charter. Chief Morley Googoo offers the following *caveat*:

Absolutely, we have people who would take part. And like I said, put all egos aside, and put everything aside about who came up with the Charter. Who gives a damn? We’d have to agree that it is not the Mi’kmaq’s Charter, it’s not the Stewardship Society’s Charter. Those issues have to be cleared away first before the foundation is built properly (Googoo 2000 - Int.).

A Bras d’Or Charter would outline the principles of caring, concern, and respect that must underlie any collective effort to manage human activities in this magnificent and fragile ecosystem. For the purpose of further discussion, the following components of a Charter are suggested:

1. A statement of ecocentric principles based on a recognition of the inextricable relationship between humans and the rest of the biotic community.

2. An acknowledgement of the special historical and present interest of the Mi'kmaq nation in the watershed and its long term ecological well-being.
3. An acknowledgement of the special historical and present interest Cape Bretoners residing in the watershed have in the sustainable management of human resource use.
4. An assertion of local "sovereignty" or rights to control decisions over what sorts of activity take place in the watershed, and how the human uses of natural resources are managed. As M'Gonigle (1996: 13) notes, "if community-based alternatives are ever to have a chance, the dominant issue is tenure".
5. An affirmation of a cross-cultural, place-based identity which supersedes pre-existing cultural or political identities with regard to resource-use management.
6. An assertion of the need for a bioregional re-structuring of present jurisdictional boundaries and distribution of authority.

Residents of the Bras d'Or will doubtless suggest other points which should be part of such a bioregional mission statement. In general, it should be emphasised that a Charter must be *active* rather than *reactive* in orientation.

Perhaps a Bras d'Or watershed Charter will serve as an epilogue to this work, a clear statement of the vision of sustainability that will carry the residents of the Bras d'Or, and eventually Cape Breton/Unama'kik as a whole, forward to face the challenges and opportunities of the 21st century. Such a statement could begin simply, in a way that expresses the essential unity and interdependence of all people who have for diverse reasons chosen to live together in a specific place, with the words:

"We, the people of the Bras d'Or..."

Notes to Chapter Eight

¹ From this perspective, it would seem that a focus in land claims negotiations for the Mi'kmaq should be the establishment of a legally-empowered central *Unama'ki* Tribal Council, with each of the Bands given voting authority. The "catch-22" is of course that prior to the establishment of such a Tribal Council the consent of all the Mi'kmaq Band Chiefs would likely be required. The other difficulty is that the development of centralised hierarchical institutions could in some ways facilitate the capture of the Mi'kmaq by decreasing their "nomadic" political attributes.

² A statement similar to this was deleted at the request of the Mi'kmaq from the *Taking Care of the Bras d'Or* report. On the basis of the above arguments, this may have been a mistake.

³ This was starkly evident in the federal government's handling of the Esgenoôpetitj (Burnt Church) lobster dispute. See Hipwell (2000a) and Hipwell (2000b).

⁴ Typically, Land Claims are eroded in the courts by counterclaims from individuals and corporations, so such a promise would be of considerable value to aboriginal negotiators.

⁵ It should be pointed out that this independence movement has never made reference to "Unama'ki"; it is referred to in this way here for consistency with the rest of the discussion.

⁶ It is emphasised that it is only "a part" in order to make it clear that this is not meant as a contribution to the idealist arguments about the so-called "social construction of nature".

Chapter 9 A Gaiagraphic Conclusion

Geographers... seek also the subjective *meaning* of an area... [they] not only objectively measure the location and areal configuration of happenings on the earth's surface, but also know what man experienced and believed about his environs (Lukermann 1964: 169, emphasis in original).

It has been shown in the foregoing discussion that the “fog-light” of a Gaiagraphic approach is able, with its triple, convergent, rotating beams, to at least partially illuminate the complex and murky eco-politics of the Bras d’Or. Since the Bras d’Or watershed is not a discrete identity, but rather, like all of us, part of an interconnected *whole*, it should not be surprising that through the fog, eventually the entire island of Cape Breton/Unama’kik came into view. This concluding chapter will begin with a re-capitulation of the conclusions reached about the Bras d’Or watershed and Cape Breton/Unama’kik, with particular attention to eco-political resistance and ecological stewardship. From there, the three converging beams of the Gaiagraphic fog-light will be re-described to show why their confluence creates a whole which is more illuminating than the sum of its parts, and why a Gaiagraphic approach can help people to understand and thus halt the colonisation of Gaia by Industria. Finally, a discussion of some of the current debates in geography and in development theory as a whole, specifically regarding the nature of “nature”, and the problems inherent to modernist theories of development and democracy, will show how the Gaiagraphic fog-light might in the future be shone productively in other directions.

The “Land of Fog” Illuminated

Taking as a starting point philosopher Gilles Deleuze’s post-structuralist critique of ontological “identity” and his alternative philosophy of difference, the Gaiagraphic approach taken in this work has combined insights from Gaia, Fourth World, and bioregional theories to create a blueprint for an activist, “eco-political” geography of difference. This Gaiagraphic approach was applied to the study of recent events in Cape Breton/Unama’kik.

Three Errors

The illumination provided by a Gaiagraphic study of Cape Breton/Unama’kik exposed three errors underlying ecological decline in its central Bras d’Or watershed. First, government agencies charged with managing human use of natural resources and other activities with likely ecological impacts in and near the watershed have consistently failed to recognise the region as an inter-dependent ecological system, itself part of larger ecosystems all the way up to the planetary level. The result of this failure has been two-fold: a) management decisions in one sector or one part of the watershed have had negative impacts in other sectors or areas; and b) managers have not adequately investigated the rôle of the Bras d’Or ecosystem in larger systems, meaning that its ability to affect and be affected by events in areas outside the watershed has not been taken into account in decision-making. The second error is linked to the first: administrative and sectoral boundaries intersect the watershed and its ecological components in ways that do not begin to reflect its ecological unity¹, which has led to the jurisdictional *mêlée* mentioned above. The third error has been a failure adequately to

take into account the rights, needs, and abilities of the aboriginal Mi'kmaq nation with regard to resource-use management in the watershed. This is important not only ethically and legally, but also ecologically. Mi'kmaq cultural knowledge of the watershed and its ecological functions exceeds in many important areas that of government managers and scientists, and Mi'kmaq management techniques not only avoid the first two errors discussed above, but also *enhance* ecological functions in important ways. Moreover, the Mi'kmaq culture includes a deeply embedded ecocentric ethic and a differential ontology, which recognises the fact that their communities are not separate from the natural world, but rather a part of it.

Yet describing the problem as being the result of *errors* understates the deliberateness that has characterised the Industrian assault on Cape Breton/Unama'kik. Understanding the contemporary situation is not possible without considering the history of the island. In Chapters Five and Six, it was shown that for both the Mi'kmaq nation and the non-human communities on the island, the encounter with European imperialism was catastrophic. The proto-Industrian European powers at first regarded the rich resources of the seas off the coast of the island as an opportunity to escape the Malthusian crisis of too many people, too little food in Europe, and subsequently regarded the purportedly "empty" lands of the "new world" as a "population sink" for their most impoverished citizens.

The Mi'kmaq

As shown in Chapter 5, within three centuries of contact, the Mi'kmaq, despite an attitude of hospitality and friendship, were driven from their territory by waves of settlers and suffered an astonishing 80%-90% depopulation by disease. In the eighteenth

century, Mi'kmaq men, women and children were hunted like animals by British settlers encouraged by an official policy of scalping and bounties. The few surviving Mi'kmaq were rounded up and forcibly settled on meagre Reserves while the Europeans continued to spread like a plague through the lands of Mi'kma'ki. But even this was not enough to satisfy the colonial powers and their citizens. By the turn of the twentieth century Cape Bretoners had turned greedy eyes onto even the Reserve lands that had been guaranteed by treaty; in Sydney, for example, the City Council successfully petitioned the federal government to remove the Mi'kmaq from King's Road and re-settle their community on poisoned lands at Membertou Reserve.

Next, Residential Schools were set up to continue the process of deterritorialisation on a *cultural* level, and generations of Mi'kmaq were taken from their families and subjected to a program of deliberate cultural genocide. Yet somehow, the Mi'kmaq survived, and managed, by wit and stealth, to preserve their language, cultural traditions, and fundamental connection to the land.

The Non-Human World

Chapters Five and Six also showed that for the non-human components of the natural world in Cape Breton/Unama'kik, the impact of colonisation was scarcely less devastating. The rich hardwood forests of the island were almost completely eradicated, to be eventually replaced by sterile, monoculture softwood plantations -- under effective ownership by wealthy off-island interests -- that required intensive application of toxic chemicals. The industrial harvesting methods employed in these tree-farms in turn contributed to massive erosion, much of which poured unfiltered into the Bras d'Or Lakes, hatchery and nursery for many North Atlantic fish species. The Timber Wolf, the

Woodland Caribou, and probably many other species and sub-species that escaped the attention of biologists were exterminated; and the seas were quickly emptied of their former abundance. Around the shores of the Bras d'Or the impacts of settlement and industry resulted in decreasing biodiversity and increasing problems with water quality.

Cape Bretoner Eco-Political Resistance

Slowly and belatedly residents of the watershed began to respond by raising an increasingly urgent cry calling on the government to act quickly and decisively. Yet as Chapter Six explained, bureaucratic inefficiency, scientific scepticism, and vested economic interests conspired to limit government response to twenty-five years of feet-dragging. Consultants were enriched by study after study, and the Bras d'Or Lakes continued to die. The Mi'kmaq, who had been preoccupied with the gritty reality of trying to survive as a people on an island rife with systemic and personal racism, had finally found the strength by the late 1970s to stand up and say "No!" to some of the more egregious forms of ecological damage being contemplated by the government and their colleagues in the (de)forestry industry. At the same time social movements among Cape Bretoners in the watershed slowly began to take form.

Mi'kmaq Environmental Stewardship

Chapter Seven showed that while these seminal movements engaged in processes of negotiation, consultation, and coalition building, the Mi'kmaq systematically established, using paltry hand-outs² from the federal government, a set of institutions, including the Eskasoni Fish and Wildlife Commission and the Unama'ki Institute of Natural Resources, which are today positioned to take over many aspects of resource-use

management in the watershed. As a result of an inherently active politics and a deeply-felt connection to the land, the Mi'kmaq have been able to use these institutions to force policy changes on the government where the polite tactics of other Cape Bretoners had failed.

A "Terran" Future for the Island?

The future of the Bras d'Or watershed and Cape Breton/Unama'kik will, for reasons articulated in Chapter Eight, depend very much upon the creation of cross-cultural political and social alliances among the Mi'kmaq and Cape Bretoners. It will also require a substantial re-visioning of what territorial politics will look like if the island is to secure ecological and socio-economic sustainability. The precise nature of such alliances and territoriality is, of course, something that can only be determined by the people who live there. What can be offered here is that a probable pre-requisite for success is that these alliances and geo-political arrangements be flexible and relational, and that they be predicated upon a recognition that Cape Breton/Unama'kik is but one piece in a much larger, global ecological puzzle. Such a recognition is, as outlined in the first chapter and strongly implied by the name, central to a "Gaiagraphic" approach.

The Gaiagraphic Approach: A Review

The causes of the ecological crisis in the Bras d'Or were explained through a tripartite theoretical perspective which acknowledges: 1) the ontological continuity of all life, and the interdependence of all species and ecological communities (Gaia theory); 2) the existence of geographical regions -- intensities in the Gaian continuum -- and the importance of defining them differentially and according to a combination of eco-

geographical and cultural factors with their rôles in the global ecosystem kept in mind (bioregional theory); and 3) the illegitimacy of reifying the state system and its historical and present colonial relationship with the Earth's nations, most notably its capture of aboriginal peoples' territories (Fourth World theory). The intersection of these three bodies of theory, constitutes a Gaiagraphic approach -- illustrated in Figure 1.2 -- and all of them find support in the work of Gilles Deleuze.

Deleuze Re-Visited

The three theoretical tenets of Gaiagraphy are implicitly underlain by a philosophy of difference. In the European academic tradition, one of the most cogent and coherent expressions of this philosophical perspective is found in the writings of Deleuze. Gaia theory, Fourth World theory, and bioregionalism all stress the ontological continuity, fluidity, and dynamism of Being, and reject an epistemology of little boxes in ecology and politics alike. This may help to explain why the philosophical premises of difference led Deleuze quite directly to a critique of the "striating" practices of the state apparatus, a critique shared by the nomadic cultures of the Fourth World and the activists embracing Gaia theory and bioregionalism. Certainly for Gaiagraphy, an acceptance of philosophical difference has made almost inevitable the hypothesis that there exists a global force of sedentarisation (Industria), and that the ontological error at the heart of its worldview lies behind most of the problems with which geographers have been concerned.

Gaia theory can be read as a scientific metaphor which expresses the notion that the entire world is a single, interdependent community of life, and perhaps even a single organism. This idea is implicit in the discourse of the Fourth World movement, activists

of which frequently make reference to "Mother Earth". The "Gaia" metaphor (though it may be much more than a metaphor) is also used explicitly by bioregional theorists and radical ecology activists embracing a bioregional approach to geopolitics. Fourth World theory gives voice to the opinion of aboriginal peoples that they have a responsibility to look after their non-human neighbours and the integrity of Gaia as a whole. It shares this perspective with bioregionalists, along with a fundamental critique of the way that the Earth's surface has been arbitrarily divided up into 189 exclusive states, the borders of which seldom reflect either ecological continuities and intensities, or the traditional territories of aboriginal peoples. Moreover, bioregional theorists point out that the aboriginal territories of the Fourth World do in fact usually correspond closely to eco-geographical features, and would make a very sensible basis for bioregional territoriality. Fourth World and bioregional theories also both emphasise the importance of local control over resource-use management, and similarly how essential it is that the knowledge of local people -- dubbed here Lo/TEK -- be afforded respect by decision-makers and play an integral rôle in understanding ecological interactions. Finally, Fourth World and bioregional theorists frequently express the opinion that their struggles are against a common enemy. That enemy has been given here the name "Industria".

Industria Unmasked

State is the name of the coldest of all cold monsters. Coldly it tells lies too; and this lie crawls out of its mouth: "I, the state, am the people." [...] It is annihilators who set traps for the many and call them "state": they hang a sword and a hundred appetites over them (Nietzsche 1954, orig. 1892: 160-1).³

The cultural trappings and systemic imperatives of Industria -- which are constantly promoted and reinforced through every medium imaginable -- have created a

growing class of Industrian urbanites whose consumerism plays neatly into the hands of global state and corporate elites. This must be recognised as the root cause of Industria's ecological footprint and a source of misery for the majority of the Earth's non-human and human population. Detailed, nuanced, and painstaking work is needed to expose the particular ways of thinking that strangle the dynamism of life in Gaia, tame it, and force it into neat little boxes of thought and space where, after being drained of its vitality and usefulness for a small proportion of humanity, it begins to sicken and die. Industrian affiliations such as the WTO, the G-8, etc. which subvert the will of communities and individuals, draped cynically and smirkingly in the banner of "democracy" and "economic growth", must be uncloaked, unmasked, so that the helmeted, body-armoured, heavily-armed repressive force behind them is revealed to everyone's view. The preceding chapters have attempted to begin this task.

Similarly, solutions to the "problem of Industria" can not be uni-linear nor simple in formulation or execution. It is far too late to return to some "primitive" Arcadia. Though key parts of Industria's infrastructure -- for example hydro-electric dams or oil pipelines -- could in theory be crippled by a sufficiently wide-spread and determined guerrilla resistance, Industrian knowledge and technique -- the stuff of modernity -- are far more resilient. In any case, mistaking Industria for its infrastructure or even its technologies would be a grave error, and one that snatched from communities the very tools that they will require to build a post-Industrian, Terran future.⁴ What is urgently needed is a shift away from Industrian imperatives of growth, centralisation, and homogenisation, toward Terran imperatives of sustainability and diversity.

Enemy of Gaia

The reason for the urgency of this call for a post-Industrian future is stark and simple: Industria -- the global web or network of power and knowledge that has captured much of the Earth's territory -- is killing Gaia, the singular expression of life on Earth. Industria's intrinsic imperatives are hostile to life, and therefore Industria is inherently ecologically unsustainable.

It was shown in Chapters One and Three that scholarly investigations have rendered undeniable the conclusion that the most fundamental aspects of the Gaian system are being rapidly degraded. Species which have co-evolved over a billion years are being driven extinct at an unprecedented rate, and with the exception of a handful -- such as crows, cockroaches, rats and domesticated animals -- those that still survive have been almost immeasurably diminished in number. Vegetative cover is being stripped from the Earth's surface, and the fecund habitat of the oceans' bottoms is being ploughed flat by industrial technology. As a result of these Industrian impacts, the thin shell of atmosphere which protects Gaia from the lifeless vacuum and radiation of outer space is being significantly altered; global warming is a fact, as is the progressive depletion of stratospheric ozone. The assault on Gaia is so severe and so multi-fold that the survival of humanity and most of the other species with which we share this unique planet is now in question.

Enemy of the Fourth World

For the nations of the Fourth World, the situation is equally urgent. James Scott (1998: 1) begins his excellent analysis of the problems inherent to the state system by asking "why the state has always seemed to be the enemy of 'people who move around'."

States, those seemingly unmoveable “gated communities” of the geo-political order, do much more than merely use borders to claim sovereignty over territory and people. As Scott shows, the project of state-building has increasingly “sedentarized” people and space, but also knowledge, replacing what Deleuze and Guattari call “smooth” space, nomadic peoples, and diverse epistemes with a striated order better suited to centralised control and domination.

As shown in Chapter Three, it is not just the state-form, but also the way in which economic and cognitive elites have been able to utilise state territorial claims and “monopoly on the use of violence” which has been so devastating to nomadic peoples around the world. It has become increasingly clear to environmental activists, bioregional theorists, aboriginal peoples, and at least one geographer that the processes collectively referred to as “globalisation” have resulted in the accretion of competing political systems and economic interests into a single, global system of power/knowledge. That system is, as Morpheus gravely warns Neo in *The Matrix*, “the enemy” (quoted in Chapter 3).

In a world where aboriginal peoples are systematically disempowered and denied their legally-acknowledged rights, the rhetoric of the Enlightenment has worn transparently thin. Former Assembly of First Nations Chief Ovide Mercredi noted in an address to the Conference on the *Report of the Royal Commission on Aboriginal Peoples* that aboriginal peoples have yet to see the much-celebrated fruits of Enlightenment morality (Mercredi 1997).⁵ Similar challenges have been presented by disempowered groups the world over. The word “justice”, spoken by a member of hegemonic culture,

sounds suspiciously like “just us”. For Chickasaw scholar James (Sákéj) Youngblood Henderson,

[m]odern society is a human artefact. It has been derived from an artificial context, an assumption about the “state of nature” [i.e., Hobbes’ “war of all against all”] that has been unquestionably accepted by modern thinkers. Indigenous people must remember that modern thought is conditional upon this assumption. If this assumption about the state of nature is wrong, then Indigenous peoples have the right to reject modernist thought and assert a new assumption for the state of nature and an Indigenous theory of society (Henderson 2000b: 13)

For aboriginal nations and other “minoritarian” (Deleuze and Guattari 1987) groups, Enlightenment morality appears to be little more than another strategy for subjugation, not least because it renders illegitimate violent resistance. Yet Enlightenment thought and its questionable assumptions lie at the heart of the “development” project which is now the chief mechanism by which Industria’s hold on the Earth is being expanded and strengthened.

Adopting a Gaiagraphic approach, grounded in ontological difference, incorporating the theoretical tenets of Gaia, the Fourth World, and bioregionalism, and utilising a methodology that includes good, old-fashioned field work so that corporeal wisdom may augment logo-centric knowledge, may well have value for researchers interested in the intertwining issues of development, globalisation, and the development of socio-ecological sustainability. A few thoughts therefore follow on the meaning of development, the ways development theory is influenced by understandings about the nature of “nature” and what it means to be human in an ontologically continuous world.

Development “Uncovered”

Human-earth relationships begin very early in our Western world and are permeated with Care from the beginning, a care that has the capacity to be translated into responsibility, husbandry, and stewardship ... [or] regrettably, the equal condition of possibility for their opposite: for courageous Brazilian ecologists to be murdered in the Amazon, for the rape of an ocean by nets 50 km long, for toxic dumping, for the Exxon *Valdez*, for loading plutonium 239 into light water reactors ... I do not have to go on (Gould 1991: 329).

To govern with the force of the market and the state is the new name of Apocalypse. It remains well hidden behind the mask of democratic promises made by the propagators of the “Global Project” (Esteva and Prakash 1998: 161).

Whether it be Cape Breton/Unama’kik, resource communities on Canada’s Northwest Coast, or diverse locations at the margins of Industria around the world, poverty and ecological decline have led to calls for “development”. Yet anthropologist James Ferguson points out that what is meant by “development” is by no means straightforward:

It is clear from reading scholarly literature on “development” that the word “development” is used to refer to at least two quite separate things. On the one hand, “development” is used to mean the process of transition or transformation toward a modern, capitalist industrial economy [i.e., Industria]... The second meaning... defines itself in terms of “quality of life” and “standard of living,” and refers to the reduction or amelioration of poverty and material want. [...] Liberals and “development” bureaucrats regularly conflate these two meanings, implicitly equating “modernization” with the elimination or alleviation of poverty. Against this view, critics argue that the two are different... (Ferguson 1990: 15)

As argued in Chapter Three, if the first of these two definitions is adopted, then what is being proposed is likely to have a catastrophic effect on human communities and the ecological community in general. It is perhaps no coincidence that the etymology of the word “development”, which is related to the verb “envelop”, suggests an “uncovering” --

the stripping away of forests and grasslands that is the very basis of sedentary civilisation. If the second meaning of the term is adopted, then “development” can not be abstracted from issues of political power and what counts as “knowledge”, for these issues are inseparable from discussions of quality of life. Moreover, the meaning of “nature”, and the importance of recognising that it is something which includes humanity, is a prerequisite to developing sustainability.

Nature and Knowledge

Perhaps people of the living world can neither describe nor orient their actions according to the intellectual logic of modern peoples; of the text or *logos*. [...] Following their impulses, coming from their gut, from their experiences in the flesh, from their cultures and long traditions, they seem to feel no need to produce abstract accounts of what they are doing for some abstract audience (Esteva and Prakash 1998: 166).

Aboriginal peoples continually remind us that though nature may be epistemologically “constructed” in different ways in a variety of discourses, there nonetheless presently exists something which would continue to exist in mostly unaltered form were humanity to become extinct: something variously referred to in Industria as “Nature”, the Biosphere”, “the global ecosystem”, “wilderness” etc. (Henderson 2000a). This is precisely the reason that “Gaia” is such an important discursive construction, for it acknowledges a totality of which humans are but one part, and rejects the ontological separation of subject and object, humanity and nature, which accompanied the very inappropriately named “Enlightenment”. As German sociologist Ulrich Beck says in his acclaimed *Risk Society*:

The social theories of the nineteenth century ... understood nature as something given, ascribed, to be subdued, and therefore always as something opposing us, alien to us, as *non-society* ... [I]n advanced modernity, society ... can no longer be understood as autonomous of nature ... At the end of the twentieth century nature *is* society and society is also '*nature*'. Anyone who continues to speak of nature as non-society is speaking in terms from a different century, which no longer captures our reality (Beck 1992: 80-1, *emph. orig.*).

This ontological re-marriage of humanity and nature is a core part of the structuralist and post-structuralist philosophical projects of the twentieth century (Conley 1997), and most importantly for the purposes of the present discussion, of the work of Gilles Deleuze.

Yet at the same time there exists a contingent of post-structuralists -- most notably Baudrillard and Derrida -- and their followers, whom Conley (1997) brands *persifleurs* because of their obsessive, petty mockery which seems to have robbed them of the ecological spirit of 1968. These thinkers who would have people believe that *all of Gaia* (though they would never use such a totalising word) is a human *construction* or *production*. Castree and Braun (1998: 4), for example, state that "More than ever before, then, nature is something made." Similarly, Gregory and Barnes (1997: 177, *emph. added*) argue that "the capitalist production of chlorofluorocarbons [*sic*] (CFCs)... has *produced* a nature in which there is now a large hole in the ozone layer" (a statement akin to a hunter claiming that he or she had "produced" a deer with a bullet hole in it). In such anthropocentric arrogance is an apparent refusal to countenance the possibility that from the perspective of a Timber Wolf (and yes, this author dares to imagine that *empfinden* with non-humans is possible)⁶ or of cultures of people *who have not forgotten how to think like wolves*, Gaia is a *collective* production; one that pre-existed and may very well outlast the geo-chronologically insignificant intrusion of *homo sapiens industriens*. This notion of collective production is one of the most profound implications of Gaia theory.

While Industrian humanity is without question *harming* the larger system of which it is a part, it is most certainly not single-handedly “producing”, “constructing”, or “creating” it.

Industria is, as so many radical ecologists have been fond of saying for almost three decades, disturbingly *cancerous* in nature (on this point see McMurtry 1999). If that be a productive metaphor then what must be said is this: the “social construction of nature” discourse comes perilously close to mistaking the tumour for the organism, or worse, supposing that the organism is the *creation* of the tumour. Philosopher David Kidner (2000) puts this only a trifle more gently, demonstrating that the social constructivist argument is a continuation of the Industrian tendency to separate humans and nature, and then assimilate the latter to the former, and is thus best viewed as a continuance of Industria’s physical assimilation of the natural world (see also Ford and Hipwell 2001). Though David Livingstone acknowledges that the sciences of nature and environment are “to a considerable degree socially constructed interpretations of the real world,” he emphasises that

...this does not mean that environmental science presents us with nothing but social fictions dressed up in scientific jargon: nature certainly sets limits on what we can say about it. Nor does it mean that we can play fast and loose with the environment, as though talk of environmental degradation is mere myth-making (Livingstone 1995: 371).

Talk of environmental degradation frequently makes reference to “wilderness” -- without question one of the most detested words in the social constructivist vocabulary, and one never found in their written arguments without cautionary quotation marks.⁷ Yet since numerous species of non-humans require in order to thrive a degree of “wildness” incompatible with Industrian forms of human behaviour, it is premature to discard the

word “wilderness” or disparage, as does Willems-Braun (1997), the courageous women and men who are willing to fight to preserve the qualities which it describes.

The Matter of Wilderness

The concept of wilderness has served as a potent catalyst for debate in geography and beyond (Proctor 1998b). In the foregoing chapters, it has been suggested that wilderness is best understood as a *quality*, high intensities of which are required by many complex life-forms such as Mountain Lions, Grizzly Bears and Timber Wolves. Indeed, this quality is the very essence of Gaia -- Gaia *is* the Wild -- and the disappearance of high intensity wilderness areas is a sinking barometer indicating Gaia’s death by degree. In Chapter Three it was argued that Industria and wilderness are best understood as two poles in a continuum of intensity; that Industria is, in short, the *opposite* of Gaia. The *taming, striating* (or “sedentarizing”) process which drives Industria’s growth is always by definition the diminution of the quality of wilderness. This, however, is not to imply that Industria and wilderness are spatially exclusive. In the heart of the largest city, or the depths of an Industrian’s heart, wilderness may yet be found, albeit it in low intensities. In the same sense, even the middle of an old-growth forest may harbour traces of anthropogenic pollutants, or be represented in an Industrian GIS program (Beck 1992).

The problem that many scholars have with the term “wilderness” is that they claim it is used carelessly by environmentalists in a way which implies the absence of humans and unwittingly advances the colonial project of deterritorialising aboriginal peoples (Willems-Braun 1997; Braun and Castree 1998). Proctor and Pincetl have similarly argued that it is categories such as wilderness which have served as the Other of civilization, and thereby reinforce a “nature-culture” dualism:

This act of purification inherent in the bulk of biodiversity conservation, is a linked epistemological and ontological project, seeking to cordon off or recreate spaces of nature as nonhuman habitat in the midst of industrial society's apparently insatiable appetite for commodifying the biophysical realm. [...] Yet conservation science, we believe, may do a very good job of achieving certain ends at the expense of others, especially those that entail a more frank admission of the complex ways in which nature and culture are bound together, and that engage critically with the history of purificationist attempts to inscribe distinct epistemological categories of nature and culture on the ontological landscape (Proctor and Pincetl 1996: 685-86).

Yet wilderness is more than just an abstract symbol or 'signifier', it is a word used by activists to denote real places of high Gaian intensity (and therefore very low Industrian intensity). These high-intensity wilderness areas are habitat for non-humans and non-industrial cultures, and particular struggles between wilderness advocates and developers or resource extractors are not merely "events" (*contra* Willems-Braun 1997), but real battles, the outcome of which will decide the fate of real human and non-human lives and futures. While there may be no "mute 'nature'" (Willems-Braun 1997: 25) that can be spoken for, there are thousands of individual wolves, bears, salmon, etc. who are consistently denied a voice (Wolch and Emel 1995).

Raymond Chipeniuk has researched the history of the word to its Old English roots, and concluded that, at least since the fifth century AD,

...speakers of English have always used the word 'wilderness' (*wildeornes*, 'wyldernes', etc.) to mean primarily *land not farmed or settled*; or, to put it the other way around, since land not farmed or settled is habitat for wildlife, *land inhabited by wild animals* (Chipeniuk 1991: 26, *emph. orig.*).

Merriam-Webster On-Line Dictionary dates the origin of the modern word "wilderness" a little later -- to the 13th century -- and defines it as

1a: (1): a tract or region uncultivated and uninhabited by human beings; (2): an area essentially undisturbed by human activity together with its naturally developed life community. b: an empty or pathless area or region. 2. obsolete: wild or uncultivated state" (Merriam-Webster 1998).

Both sources make it clear that wilderness areas are those spaces which Deleuze and Guattari would describe as "smooth", or which James Scott might call "un-sedentarized". However, in the *Merriam-Webster* definitions there is a problematic conflation between sedentary humanity and humanity as a whole; the first definition negates the possibility of nomadic habitation.

Given the contrast between sedentary agriculture and wilderness in the above definitions, it is not surprising that for many aboriginal peoples, whose cultures are nomadic and foraging-based, there is no separate word for 'wilderness':

"Wilderness? Oh, no, it has no meaning. The wilderness means something wild. No, we don't [have a word in Cree for wilderness]...It's a view from a whole different point of view. I say to myself 'That's the white people -- lost total spiritual contact with the world' (Cree informant quoted in Bertolas (1998: 106).

Similarly for the Mi'kmaq, who view themselves as co-extensive with Gaia, the notion of a separate identity-category of wilderness is nonsensical. Yet while ethnographer Ruth Holmes Whitehead's description of Mi'kmaq cosmology stories emphasises the notion of continuity, it also conveys the sense of polarities of intensity which, as argued above are the key to the wilderness concept:

In [Mi'kmaq] stories about these six worlds, it is always the forest where such [wild] beings and events are encountered. *The further into the forest, the stranger the encounter*, for it is the forest where reality becomes fluid. Within the [Mi'kmaq] universe, the forest is Chaos -- the unconscious, the unknown, the place where the map ends (Whitehead 1988: 6, emph. added).

In this regard the key attribute of bioregionalism is that it represents an attempt to build a civilisation wherein human activities, especially use of natural resources, would work with rather than against Gaia. In a bioregionally-organised Terran civilisation, human use of natural resources would be conducted in ways which do not impair the productive capacity, diversity, and wildness of Gaia. Respect would be given to the needs of those non-human members of the ecological community who require high intensity wilderness areas in which human activity does not simplify natural complexity nor impose a degree of order incompatible with the existence of "wild" things.

As discussed in Chapter Four, aboriginal cultures have developed ways of living and modes of production in which such respect is inherent. It was also shown in Chapters Four and Seven that aboriginal cultures including the Mi'kmaq, by virtue of their "ecological micro-management" practices, frequently *enhance* key ecological parameters and thereby contribute to the increasing diversity and vitality of Gaia. No less should be expected of human cultures which recognise that they are functional parts of a larger organism. The Fourth World's use of nature is inseparable from a profound respect for the needs and contributions of the non-human members of the ecological community.

This is in many ways an epistemological matter, for attaining the subjective understanding of non-humans necessary to respect their needs requires visceral experience, the "wisdom of the body" described in Chapter Two which forms the heart of Local/Traditional Ecological Knowledge. Zimmerer (1994) notes that approaches being embraced in the "new ecology" entail a similar focus on the subjectivity (behavioural and biological capacities) of organisms. Perhaps at some distant point in a post-Industrian future, when similarly sustainable and respectful patterns of living have been established,

and differential epistemologies have been widely accepted and are taught in the schools, the word “wilderness” will no longer be needed.

Democracy: The Power of Difference or the Equality of Identity?

It was shown in Chapter Two that Enlightenment morality, which lies at the heart of contemporary moral codes -- from state constitutions to the United Nations *Universal Declaration of Human Rights* -- is fundamentally “reactive”: negative and ultimately hostile to life. Similarly, the ideal of “democracy” upheld by Industrian elites is based on reactive principles. An ontology of power means that all relations between forces are relations of difference, and that therefore “equality” is illusory. Yet this illusory equality lies at the very heart of universal suffrage and the “one person, one vote” system which constitute what passes for democracy in mass society (Esteva and Prakash 1998), and results in a territorial concentration of political power in the urban centres of Industria. In Chapter Two, Esteva and Prakash were quoted in the section dealing with the problems inherent to an ontology of identity, which erases difference. The complete passage from which that quote was taken reads:

The assumption of equality continues to be the source of inequality and unjust privileges.. Real men and women, who are radically different and deserve to be treated according to their differential beings and conditions, are instead treated as if they were equals, with the usual implications of great injustice. In time, the elimination of such differences, of the radical heterogeneity of Being expressing the singularity and uniqueness of every man and woman, becomes an ideal, a social goal, to be accommodated to the homogeneity adopted as a premise and an assumption. Such homogeneity does not derive from any need or aspiration of “the people” themselves, but from a very well-specified organisation: the industrial mode of production, which needs to create and operate masses of homogenous consumers (Esteva and Prakash 1998: 171).

For Esteva and Prakash, movements such as the Zapatistas of Mexico represent the mobilisation of political difference in the face of the equalising, homogenising tendencies of “neo-liberalism” (which may be understood as the political-economic ideology of Industria). Postmodern grassroots movements identify modernity with the death of democracy, not with its flourishing. In modern (representational) democracy, the powerful elites can manipulate outcomes of votes, can control what the choices are available to the electorate, since “a skilled tyrant can win the heart of the masses, as amply demonstrated in the modern era” (Esteva and Prakash 1998: 155).

Populism (an elected elite leading the people) has failed. In their commons, the people are bound together by duties and obligations, not by an abstract notions of rights. They are bound together by the common sense of participating in or sharing common ways of living or dying. An ecocentric worldview would extend this idea beyond communities of *human* people, to the non-human members of the broader ecological community. The bioregional framework proposed by a Gaiagraphic approach opens up the possibility for an ecocentric, territorial and community-based “radical democracy” similar to that called for by Esteva and Prakash. Simon Dalby opines that

[i]n this sense as a strategy of resistance, the refusal of the category of the global is not an abrogation of political responsibility, but rather an attempt to reimagine politics without a collapse into the modern assumptions of liberal autonomous individuals with infinite “needs” and burgeoning rights to everything (Dalby 2000: 17).

This sort of radical democracy, based as it must be upon active values, may very well not adopt a principle of “universal suffrage” but instead take the form of a “terrocracy”, where political power is wielded on the basis of territory rather than population.

Conclusion

A Gaiagraphic approach to the project of developing sustainability (and this, really, is what resource-use management is all about) ensures that the needs of aboriginal cultures, non-Native resource communities, and non-human members of the ecological community are respected. Rather than adopting an anthropo- and Euro-centric “diffusionist” (Blaut 1993) stance that sees solutions to eco-political problems as lying in modernist approaches to knowledge and political theory, Gaiagraphy embraces the perspectives and worldviews of aboriginal peoples which see humanity as a part of a greater whole, towards which humans have responsibilities and obligations. It then brings to bear that most powerful of traditional geographers’ tools -- the regional concept -- and updates it with contemporary understandings of community and ecology. The epistemological implications of the philosophy of difference remind Gaiagraphers that no place or its inhabitants can ever be properly understood through intellectual approaches based in books and scientific models alone. Instead, “wisdom of the body” -- that knowledge only attainable through direct physical experience -- must play a central rôle in any scholarly investigation.

In the “Land of Fog”, this Gaiagraphic approach has provided some much-needed illumination. There is reason to suppose that the same approach could be used productively in other areas as well, particularly those where the struggle for sustainability is taking place in the context of negotiations between aboriginal peoples and the descendants of colonial settlers to establish a common future. As Industria brings Gaia progressively closer to the brink of death, it is clear that radical changes are required -- not only in the way geopolitics are imagined and organised, but also in the traditional

academic approaches which have thus far failed utterly to develop sustainability.

Inspiration for such changes must come from outside Industria: from the rhythms and patterns of Gaia, and from the situated human perspective of the peoples of the Fourth World.

No 'kmaq.

Notes to Chapter Nine

¹ "Unity" is not an entirely appropriate term, since it implies that the watershed is a hermetic entity. As has been shown, the Bras d'Or is in fact an open system characterised by intense local inter-dependency and inter-penetration of biotic and abiotic components (including humans), but which is strongly influenced by and has important effects on the larger ecosystems of which it is a part.

² It must be emphasised that these "hand-outs" do not even approximate the compensation which is due to the Mi'kmaq for the harm done over the centuries and the theft of their resources.

³ This entire section of *Thus Spoke Zarathustra*, entitled "On the New Idol", is a brilliant and poetic polemic against the state system. Among other things of interest to geographers, Nietzsche lays the blame for excessive population growth (the rise of the "all-too-many") on the state, which has invented "the superfluous", and now "devours them". Though Marx has alluded to similar things, in Nietzsche's formulation it is statism in general rather than only the capitalist version of statism which is the primary problem facing humanity and the planet.

⁴ New industrial-based technologies such as GIS are being used productively by the Mi'kmaq and other small communities as part of their strategies for local political empowerment and resource-use management.

⁵ In a similar vein, Bedford (1994) demonstrates that Marxism has failed to win support among aboriginal peoples because of its implicit Eurocentrism.

⁶ Folch-Serra (1989) argues that employing what nineteenth century German Idealist philosopher Wilhelm Dilthey called *Verstehen* or subjective understanding is central to a humanistic method. Similarly, Herder (cited in Livingstone 1992) argued in the eighteenth century that ethnographers must attempt *empfinden* ("to empathise") in order to understand cultures, using art rather than logic, and imagination rather than rationality. Both these concepts can be readily extended beyond the boundaries of *human* subjectivity. Geographers can seek to empathetically grasp the desires of the non-human members of biotic communities, and conclude, probably quite safely, that to *survive* and to *flourish*, and to successfully *reproduce* are core, intrinsic values shared by all living beings (see Bunge 1973 for a discussion of this "geobiological" imperative).

⁷ Even in oral presentations social constructivists perform a strange kind of flutter with their hands to assure their audience that although they have uttered the dreaded word, that the obligatory quotation marks do appear in their speaking notes.

Appendix A List of Acronyms Used in the Work

ACOA	Atlantic Canada Opportunities Agency
AFS	Aboriginal Fisheries Strategy
BDI	Bras d'Or Institute
BOLWG	Bras d'Or Lakes Working Group
BOWWG	Bras d'Or Watershed Working Group
BOPF	Bras d'Or Preservation Foundation
BSS	Bras d'Or Stewardship Society
CMM	Confederacy of Mainland Mi'kmaq
DEVCO	Cape Breton Development Corporation
DFO	Department of Fisheries and Oceans Canada
ECBC	Enterprise Cape Breton Corporation
EFWC	Eskasoni Fish and Wildlife Commission
KRA	Kelly Rock Aggregates Ltd.
LNG	Little Narrows Gypsum Company
Lo/TEK	Local/Traditional Ecological Knowledge
NSDNR	Nova Scotia Department of Natural Resources
NSDE	Nova Scotia Department of Environment and Labour (formerly the Department of the Environment)
UCCB	University College of Cape Breton
UINR	Unama'ki Institute of Natural Resources
UMA	Underwood McAllen Associates
UNSI	Union of Nova Scotia Indians

Appendix B The Bras d'Or Watershed

A detailed map of the Bras d'Or watershed, which was published as part of the Bras d'Or Watershed Working Group's "Taking Care of the Bras d'Or" report, has been reproduced for this study and may be found in a pocket inside the back cover.

Appendix C Methodology and Interview References

Background

Research for this study was conducted over four field seasons between 1997 and 2000. Interviews were conducted during the summers of 1997 and 2000, and the intervening years were devoted to archival research and site visits.

Research Ethics and Approvals

Although the author's Doctoral Committee approved the research proposal, and the Carleton University Ethics Committee approved the interview format, the permission of the Grand Council of the Mi'kmaq to enter Mi'kmaq territory and conduct research was also sought, in order to reflect the author's respect for Mi'kmaq sovereignty. Initially, this permission was granted indirectly by *Jikeptin* (Grand Captain) Alex Denny, who indicated that if the proposed doctoral research was acceptable to certain key people at the UNSI and the EFWC, that it would have *de facto* Grand Council approval. The project proposal was therefore presented to Dan Christmas, Joe B. Marshall, and Kim Paul of the UNSI and Charlie Dennis of the EFWC at a luncheon meeting in 1998, and these people gave their approval for the continuation of the research.

However, it subsequently came to the author's attention that a formal research committee ("The Mi'kmaq Research Ethics Committee") had been set up by the Grand Council under the auspices of the Mi'kmaq College Institute at the University College of Cape Breton (the Committee did not exist prior to 1999). The author felt that it was important that this committee, comprised of Mi'kmaq and other aboriginal academics

including prominent scholars Marie Battiste, James (Sákéj) Youngblood Henderson, Stephen Augustine and others, have an opportunity to formally review the proposed research topic and methodology. A proposal to the Mi'kmaq Research Ethics Committee was therefore submitted in the fall of 1999, immediately after the establishment of the Committee. The Committee reviewed the proposal, and on May 5, 2000, granted formal approval for further research. This was the first research project to be reviewed by the Mi'kmaq Research Ethics Committee, and is one of the first academic research projects to be conducted in *Mi'kma'ki* with the formal permission of the Grand Council of the Mi'kmaq.

Methodology

As suggested in the introduction and conclusion to this work, the Gaiagraphic approach taken to the study of the Bras d'Or holds as a central tenet that an adequate geographical account can never be provided in the absence of field work -- the first-hand human experience of a place and its people -- the importance of which has been underplayed in geographical research in recent years. Real field work has even been derided by the so-called "new" cultural geographers as "hairy-chested feats of scholarly endurance" (Cosgrove 1993) or "fighting through thickets of salmon berries" (Willems-Braun 1997). These positions are vehemently rejected here. Research for this study aimed to the greatest degree possible to augment the evidence available from conventional documentary sources with "wisdom of the body" -- real, corporeal experience of the land and life of Cape Breton/Unama'kik. Details of methodologies employed are detailed below.

Involvement in the Community

In order to get to know members of the community, the author stayed on the Eskasoni Reserve with Mi'kmaq families, and in Sydney with a Cape Bretoner family for a part of each field season. With members of the Mi'kmaq community, the author participated in more than twenty spiritual sweat lodge ceremonies, three pow-wows, a hike to Kluscap's Cave (a site of spiritual significance), fishing trips, and numerous other social and cultural activities, and observed a Sun Dance ceremony at the Afton First Nation near Antigonish. With Cape Bretoners, the author participated in numerous social and cultural events including meetings of the Bras d'Or Stewardship Society, Ceilidhs and folk music concerts.

Interviews

In order to augment and supplement the bibliographic record of events in the Bras d'Or watershed, and to help guide the direction of the investigation, interviews were conducted with 34 people. Respondents were either Bras d'Or watershed residents, members of Bras d'Or watershed conservation groups, people involved in efforts to protect the Bras d'Or such as those of various Mi'kmaq institutions or the Bras d'Or Watershed Working Group, or government officials familiar with relevant issues. Wherever possible, respondents were chosen on the basis of recommendations by their fellow community members. A concerted effort was made to contact and arrange interviews with all *Unama'ki* Mi'kmaq Band Council Chiefs. Unfortunately, a confluence of factors relating to the timing of research visits and availability of the Chiefs meant that ultimately, only Chief Morley Googoo was available for an interview. However, several other key Mi'kmaq decision-makers were interviewed, and it is not felt

that the absence of the voices of the other four Chiefs significantly affected the results of the research.

Interviews were semi-structured, guided by eight general questions, and took one to one-and-a-half hours each. With exception of telephone interviews conducted with government officials at their offices during business hours, all interview respondents were asked to read and sign an Informed Consent Form and Project Description, and were offered the choice of remaining anonymous. Those that chose anonymity are identified in this work by a letter-number code only. It is worth noting that as people in the community got to know the author, an increasing number chose to waive their right to anonymity, which is why most people interviewed in the year 2000 are identified by name.

Bibliographic Research

In addition to normal use of academic literature, research for this study included several non-standard sources. Historical records and media archives made available by the University College of Cape Breton's Beaton Institute and the Mi'kmaq Resource Centre helped provide historical context and details on recent events. UCCB Project Officer Sander Taylor kindly provided access to all documents associated with the Bras d'Or Watershed Working Group, including public submissions, Working Group correspondence, and early drafts of the "Taking Care of the Bras d'Or" report. The Eskasoni Fish and Wildlife Commission provided access to their library of unpublished documents and videos detailing Mi'kmaq resource-use management initiatives over the past fifteen years. The Paqtatek/Prism Project web-site was another valuable resource, particularly because of its comprehensive list of documents produced dealing with any

aspect of the Bras d'Or watershed. Other internet sources were used and are identified by URL in the Bibliographic References section.

Site Visits

In addition to the above-mentioned sources, the author also visited numerous sites within the watershed, including the Bras d'Or Interpretive Centre in Baddeck, the Mi'kmaq Oyster Research Station at Gillis Cove, and various sites of Mi'kmaq resource-use including gaspereau fishing areas at Barrachois ponds to observe and gain impressions which might not have been apparent through documentary sources.

Interview References

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Notes to Appendices

¹ Most interviews were tape recorded. The phrase in quotation marks is, except where noted, how the respondent agreed to be identified. Precise dates are not given in order to protect the anonymity of some respondents.

² Albert Marshall actually said that humility prevented him from identifying himself as an "Elder", but given his status in the community and his age, the word is appropriate.

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