

**Reclaiming Their Nature(s):
Toward a More Progressive Environmentalism in the Ottawa Region**

by

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ABSTRACT

This paper explores how some people in the Ottawa region, through their environmental initiatives, are contributing to discourse on sustainable futures, thereby challenging socio-ecological injustices. Post-modern and post-structural theories in social nature and political ecology inform this work, as do environmental psychology and sense of place theories. Participant narratives have been analysed and deconstructed for how knowledge and truth claims regarding people in nature are made visible through power. The role of political economy and governance are given much attention, as is the role of civil society. It is argued that if sustainable futures are to be realized, the knowledge that is produced by those in civil society working towards such futures must be afforded the public spaces to do so through political reform.

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DEDICATION

This thesis is dedicated to my aunt, Arlene Guthrie, a kindred spirit who has always quietly encouraged me to follow my dreams and to remain true to myself. The world is a better place with her in it.

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INTRODUCTION

Following an era of increased concern by many in the Western world for the degradation of Earth's ecological systems has come an era of expanded global production and consumption and the accumulation of greater material wealth for some and deteriorating living conditions for many others. As such, ecological systems and people's relationship with nature are being transformed at a pace and on a scale never before seen. Ecological and social well-being has become a lesser priority for heads of state, taking a backseat to priorities of global economic competitiveness (Barlow and Clark, 2001; Song and M'Gonigle, 2000; Paehlke, 2000; Blais, 2000; Burda and Gale, 1998; Korten, 1996; Menotti, 1998; Sachs, 1999).

In his opening statements in *The Ingenuity Gap*, Homer-Dixon indicates that, 'the complexity, unpredictability, and pace of events in our world, and the severity of global environmental stress, are soaring'. (2000:1) I support this argument but want to caution against a superficial treatment of environmental (and social) stress, viewed narrowly in terms of pace and scale, emphasizing, rather, the injustices embedded in socio-political institutions whereby local environments, economies, and people are suffering the effects of global trade processes, for example. Indeed, in *Planet Dialectics: Explorations in Environment and Development*, Sachs remarks that

As the number of economic actors on the global market continues to grow, so too does the competition between them – which is why governments everywhere tend to attach a higher value to competitive strength than to protection of the environment or of natural resources. (1999: 140)

With reference to the Uruguay Round of the General Agreement of Tariffs and Trade (GATT) and to the Earth Summit in Rio de Janeiro, Brazil, 1992, Menotti, the

Director of the Environment Program at the International Forum on Globalization in San Francisco, states that

It was entirely predictable, environmentalists said, that, without any new safeguards, intensifying economic activities through expanded international trade and investment would only magnify the negative environmental effects of the very development model the world was supposed to be abandoning. From the outset, this paradox undermined Rio's hope. (1998:354)

To support this claim, Menotti cites the World Business Council on Sustainable Development (WBCSD), which was founded by some of the world's largest corporations to influence the Rio process.

Globalization and liberalization of markets alone with the pressures of rapid urbanization have raised the degree of social inequity and unrest to a level that threatens basic survival of both human and environmental ecosystems. (cited in Menotti, 1998:354)

Nelles, a Senior Associate with the Sustainable Development Research Institute at the University of British Columbia, argues that threats to human well-being, such as ecological risks, have been globalized. He comments on how the changing world economy is accelerating the rapid expansion of world-wide poverty, unemployment and social disintegration alongside the expansion of prosperity by others. He suggests that the challenge is viewed as being how to enhance the benefits of the process of economic globalization and how to mitigate their negative effects. (1999:799-807)

In Canada, we have seen the deregulation of industry, the downloading of environmental responsibilities to local governments and private contractors, and the amalgamation of municipalities with greater responsibility for an increasing number of portfolios including the environment. Some view this situation as perilous and use the analogies of barrelling down a highway in a truck with no brakes or free-falling in an

airplane, with little or no regard for the inevitable consequences (Homer-Dixon, 2000; Anderson, 2004).

Feeling somewhat overwhelmed by the aforementioned scenario, I have found myself asking: How does a culture so far-removed from its organic roots find its way back to its sense of place within the world? I have considered myself extremely fortunate to have been able to feel so much a part of nature in my former job as a field instructor teaching ecological concepts in an outdoor education setting. At the time, I knew that my learning and that of others was invaluable as we explored ecosystems and other life-forms but I also believed that these learning experiences were somehow inadequate to deal with the enormity of the problems outlined above. While ecological concepts are essential, I believe, to our overall understanding of nature and our role in it, so are the more human socio-political factors that, arguably, are transforming our environments. After careful consideration, I decided that geography would be an appropriate discipline, through which to explore the meaning(s) individuals derive from nature and to interpret how these meanings might be translated into values and action in our social and political spaces.

There exist numerous individuals and organizations around the world, as is evident, for example, in the number of NGOs that exist today, who are living consciously in their environments, and for whom a social nature perspective (see Castree and Braun, 2001) and a vision of a sustainable future are leading the way to positive, practical approaches to improving social well-being, including the articulation of 'eco-socialist' strategies (see Escobar, 1996). From a critical geography perspective, discourse analysis represents a powerful method for gaining insight into how those with such a vision are

negotiating the complex social and political spaces where sustainable, survivable futures are being built. Indeed, Castree and Braun posit that

The production of nature is both material and discursive. ...[S]truggles over meaning are every bit as 'material' and important as practical struggles. ...[And] as 'environmental discourse' proliferates, new efforts must be made to map discursive constructions and their power geometries. In addition, efforts must also be made to understand the specific mechanisms of this construction. ...[P]ost-structuralism offers valuable theoretical resources here. (1998: 13)

Through a critical analysis of environmental narrative and discourse my research attends to the socio-political factors that, arguably, are largely responsible for driving this seemingly parasitic consumption and degradation of our ecological and social spaces by posing the question: *How are knowledge(s) of nature being challenged, re-imagined and re-situated by environmental and social activists in the Ottawa region for the purposes of effecting change toward more sustainable futures?* I have selected the Ottawa region because it is my home where connections with people and places in this region run deep. Having lived and travelled elsewhere has only served to heighten my identity with Ottawa and my attachment to this place. As such, my research interests have been founded in a desire to explore the efforts of people in this region working on behalf of sustainable futures and to expose the socio-political institutions and the power relations that operate through these negotiations.

For it is in the framing of ecological and social issues that much can be learned about where the challenges lie and where the potential for improving ecological and social conditions might be found, thereby ensuring sustainable futures. Indeed, with reference to the work of sociology of science knowledge (SSK) scholars, such as Haraway and Latour, that attends to the complex political networks among nature,

culture, science and technology - the 'monsters' that moderns have 'allowed to proliferate', Castree and Braun remark that

Being a modern thus requires re-skilling, fashioning new political lenses with the hope of 'seeing' differently. For moderns, no longer held in thrall by modern stories of the absolute separation of nature and society, monsters become 'visible and thinkable' and explicitly pose serious dilemmas for the social order. This all makes for a politics with which we are unfamiliar: neither technophilic nor technophobic, interested neither in preserving Eden nor rendering everything as resource, but attentive simply to the social and ecological consequences that everywhere are intertwined in everyday practices. (1998:33)

When building a research framework that contributes to the broader line of inquiry of socio-ecological decline around the globe, we must not only look to the more visible science of environmental change and the potential technological solutions but to the geopolitical institutions and processes that are driving these changes and, indeed, driving the scientific research to support these claims. If social forces are the drivers of global environmental change (GEC), then understanding GEC requires integrative studies in both the natural *and* the social sciences with physical *and* social scientists working together on research problems. Each type of science must inform the other thereby developing a discourse that can be utilized to produce a deeper understanding of environmental change - one that does not 'ignore, deny, or efface the social dimensions of nature'. (see Castree, 2001:9) If a social nature discourse can be crafted and fine-tuned and eco-socialist strategies developed, then this can only serve to facilitate the political process through which the mitigation of ecological degradation and its impacts on those most vulnerable to environmental change can be put into practice. A political ecology can better serve the environmental and social justice movement as a whole than can an environmentalism void of cultural context or a social nature; it could allow for a

public that is better-informed, or rather informed in a manner conducive to eco-socialist strategies. This argument is central to my thesis and is developed throughout.

In addition to peering through political lenses I lend some attention to our human relationship with nature from a more phenomenological perspective and explore the significance of directly felt and lived experience. In *Spell of the Sensuous* (1996) Abram speaks of our participatory reciprocity, founded in Husserl's intersubjective life-worlds (1938). With reference to Husserl, Abram remarks that 'the encompassing earth, he suggests, provides the most immediate, bodily awareness of space, from which all later *conceptions* of space are derived'. (1996:42)

Husserl's writings seem to suggest that the life-world has various layers, that underneath the layer of the diverse cultural life-worlds there reposes a deeper, more unitary life-world, always already there beneath all our cultural acquisitions, a vast and continually overlooked dimension of experience that nevertheless supports and sustains all our diverse and discontinuous worldviews. (Abram, 1996:42)

While I believe that much of our 'reality' is constituted through social relations and political negotiations, both public and hidden (see Scott, 1990), to deny our first way of knowing, our sensorial experience with the world, is to deny a wisdom that provides the foundation for all other knowledge constructs. The way in which people perceive and speak about their relationship with nature and their sense of place in it is germane, I argue, to which knowledge(s) and, ultimately, which worldviews are adopted. We, in the modern industrialized world, have become so disconnected from our place in nature that in our day-to-day living we seem to take for granted that which sustains us not only physically but in a spiritual sense as well. Having spent significant amounts of time with people in 'natural' spaces, or rather, spaces where humans and human interventions are not the dominant feature of the landscape, I believe that these experiences have

contributed significantly to my own sense of attachment and appreciation for the natural world of which we are arguably both constituted *and* constitutive of. As such, I have approached my research, in part, with a view to further understanding how people identify with their role and sense of place in nature and how this then, from a more existentialist perspective, translates into more (or less) ecologically-mindful behaviours.

My research is broadly framed then by two differing conceptual approaches, hermeneutic and critical, the more critical analysis being developed to a greater extent and focussing upon the connections people draw between ecological (and social) degradation and socio-political processes, especially the relationship between knowledge constructs and political power. As stated above, my way of knowing the bio-physical material world has evolved through direct experiences in less-built landscapes and, as well, through formal studies in ecology, biology, physical geography, and environmental education, as both student and teacher. And, while I posit that a reductionist approach to studying nature can only ever be partial and incomplete at best due to the sheer complexity of biological and ecological systems, I believe that the natural sciences have provided invaluable contributions to our overall understanding of bio-physical processes. Having stated this, when dealing with ecological decline or 'environmental problems' we cannot continue to look for solutions to these problems as though the answers lie outside of a value-laden society. We cannot continue to view nature as something that exists as something separate from humans. Rather, we must explore environmental problems as being socially embedded and contingent upon a multiplicity of factors including internal human factors, both affective and cognitive, and external social, political, and economic

structures. I argue that environmental problems are not only ecological but social and political by nature and must be addressed as such.

The work of Castree and Braun (1998, 2001) is especially germane to this argument as it is highly critical of claims that nature is external to society in a pristine sense; that nature is a given and somehow intrinsic to both external and human nature; and that nature is universal with an essential character, free of social biases and political interests. Of particular interest to these authors and other critical geographers is how claims about nature and ‘the actions based upon those claims – can serve as instruments of power and domination’. (Castree, 2001:9) As such, they argue for a ‘social nature’ approach rather than a strictly technocratic or eco-centric approach to dealing with socio-ecological challenges. That is, one which ‘entails a deep analysis of conventional understandings of, and interactions with, nature, with a view to eradicating relations of power and domination... (and one which envisages) a future world in which principles of social and ecological justice organize the society-nature nexus at both the local and global levels’. (Castree, 2001:4)

‘Deconstructing’ these knowledges therefore entails ‘denaturalizing’ them: that is, showing them to be social products arising in particular contexts and serving specific social or ecological ends that ought to be questioned. (Castree, 2001:13)

The primary purpose of this project then is to problematize ‘environmental problems’ by attending to some of the many discourses that serve to perpetuate conventional understandings of nature, which are contributing to large-scale ecological transformations and social injustice. For, looking only to our technological capacity to address the many ecological challenges we face today, when they are deeply rooted in

socio-political relations, is irresponsible. In a discussion on science studies reworking of our understanding of scientific objectivity, Castree and Braun state that

... 'strong objectivity' – borrowing from Harding (1986) – has everything to do with taking responsibility for the ways that our knowledge-production practices are 'situated' in particular historical moments and social-spatial contexts, acknowledging rather than abdicating our responsibility for the ways that knowledge reflects its enabling conditions. (1998:28)

Increasingly, critical social scientists are exploring the power relations and inequalities that permeate our social spaces (Foucault, 1980; Giddens, 1984; Scott, 1990; Barrett, 1991; Mackenzie, 1992; Castree and Braun, 1998, 2001; Braun, 2002) and contesting 'truth' claims and the universality of knowledge. Indeed, the way in which knowledge is constituted is being deconstructed and problematized (Butler, 1992; Dwyer and Limb, 2001; Flax, 1992; Jhappan, 1996; Escobar, 1996). Feminist researchers are shifting their attention also to researcher reflexivity and positionality and the research context, making explicit the situatedness of any knowledge. (Fine, 1994; Gibson-Graham, 1994; and Rose, 1997). It is within these post-modern, post-structural and feminist arenas that discourses on globalization and sustainable development, democracy and civil society, global environmental change, community, identity and sustainability, and nature are being re-imagined and re-framed by geographers, conservation biologists, environmental sociologists and science studies scholars alike. The groundwork for emerging discursive practices in political economy, political ecology, public ecology, a politics of dwelling, and social nature, all of particular relevance to this project, is being prepared by numerous scholars including Escobar (1996), Sachs (1999), Laurie, Dwyer, Holloway, and Smith (1999), Wallerstein (1999), Castree and Braun (1998, 2001), Ingold (2000), Robertson and Hull (2001), and Song and M'Gonigle (2001).

Within a critical framework of political ecology and social nature, my research is broadly conceptualized, as these theoretical perspectives resonate with my own worldview and, what Escobar (1996) refers to as 'eco-socialist strategies'. In Peet and Watts' *Liberation Ecology*, Escobar (1996: 48) is clear about the need for epistemological rigour in environmental research by 're-stating the case for the development of a poststructuralist political ecology as a means of ascertaining the types of knowledge that might be conducive to eco-socialist strategies'. Political ecology and social nature discourses, such as sustainability and survivable futures, for example, can then position themselves squarely as a counter-narrative to dominant discourses in political economy, notably the globalization of a free-trade economy and sustainable development. As such, this project sets out to investigate how some people in the Ottawa region are actively challenging hegemonic modes of socio-ecological practice by pursuing a vision of sustainable futures through their particular environmental initiatives. What I am *not* in search of is a comprehensive or singular approach to a political ecology and social nature that claims to be representative of the eco-socialist strategies being employed by those advocating social natures and sustainable futures. Rather, in the spirit of Barron's 'politics of articulation',

[W]e should [be] engag[ing] increasingly in a more nuanced, less essentialist politics that can engage a sceptical and increasingly informed public... (2000:101)

Barron describes articulatory politics as acknowledging the 'partiality of perspective' and as 'cultivating a care for multiple differences, call[ing] for conversation among equals that can admit some disagreement'. (2000:110) Therefore, in arguing for a political ecology and social nature, I am also arguing for a politics of articulation as it is more

‘discerning, and in step with the times’. (Barron, 2000:112) Further theorizing of this concept is located in section 4.3.

My methodological approach has been to employ intensive research methods choosing semi-structured, in-depth interviews and a focus-group discussion to engage with participants in this study. I began my search for potential candidates by meeting with an artist friend who designs dioramas of ecological communities for museums and who also devotes much of his time to local environmental stewardship initiatives. He provided me with a document entitled the *Ottawa-Carleton List of Environmental Speakers*, published in February 2000, by the then Urban Ecosystem Stewardship Council, Ottawa-Carleton and the Ottawa-Carleton Rural Stewardship Council which have since amalgamated in conjunction with the amalgamation of the former municipalities that became incorporated into the City of Ottawa. About half of those people I interviewed are from this list while the others either were referred to me by list members or through other personal and professional networks. More on this follows in much greater detail in the fourth chapter on methods and methodology.

The interviews and discussion questions generally have been framed to determine, first, if meaningful experiences in less-built environments and attachment to particular more-than-human places have been a function of people’s involvement in sustainability initiatives. The following questions are then posed: How are we to ensure that these experiences are not lost completely upon present and future generations of moderns? How are dominant discourses on environment, economy and politics being contested and re-imagined and alternative visions for more sustainable futures negotiated? And, how

significant is cultural identity, including gender, in influencing the outcomes of sustainability initiatives at the community level?

I make no claims that this work is representative of a broader social context, nor do I claim that it has any universal meaning or relevance. However, the knowledge that has been produced in this project, being situated and particular, does provide for a rich and complex treatise of how some in the Ottawa region are advocating for the protection and rehabilitation of ecosystems and eco-social sustainability, generally. I have attempted to be rigorous in my interpretation of these socially thick and value-laden narratives being ever mindful of how my own cultural identity and political position have permeated the research process. Also, recognizing that from the outset of this project and as final author of its text, there has existed between the participants and myself an uneven distribution of power and that that in itself makes this knowledge partial and temporary, open to further scrutiny and alternative interpretations.

Assuming a social nature perspective and a political ecology posture, a review of the global environmental change literature follows with a view to unpacking the various modes of discourse in this arena including those from conservation biology, environmental psychology, anthropology, human geography, and critical geography perspectives. The 'global' aspect of 'environmental' problems is given full attention in a critical review of economic globalization and its impacts on ecological and social conditions in localities around the world. This paper is structured in the following way: my first chapter focuses upon developing a rationale for eco-political strategies and building a case for social nature. I argue that nature's transformation is socially

constructed with normative discourses on nature contributing to its transformation. A review of the conservation biology and environmental change literature illustrates how these disciplines are struggling with the human-nature nexus. The second chapter moves inward to the human psyche and spirit and considers our psychological capacity to respond to environmental change and the role of place attachment and how we view ourselves in nature. Here I argue that finding our way back into nature through nurturing a sense of place and belonging is fundamental if we are to see ourselves as part of a sustainable nature. In the third chapter I outline the arguments for how our political economy has largely constructed our conceptual human-nature divide, exploring sustainable development and global trade discourses and how they have influenced state and global governance structures and, ultimately, the well-being of local communities. A reflexive treatment of my methods and methodology, including a discussion on researcher identity and position, precedes my analysis, discussion, and conclusions.

CHAPTER 1: TOWARD AN ETHICS AND POLITICS OF DWELLING

Conceiving of ecopolitics as the project of saving external nature from its destruction at the hands of humanity...risks leaving us wholly unprepared to imagine *how* we might responsibly inhabit our complex socioecological worlds...Social nature leads to an ethics and politics of “dwelling” rather than separation (Braun, 2002:10, 14)

1:1 Building a Political Ecology

Quite simply, and to borrow from Escobar (1996: 48), ‘ascertaining the types of knowledge that might be conducive to eco-socialist strategies’ is the central point of departure for my thesis. By eco-socialist strategies, I am referring to tactics that place the ecological *and* social well-being of communities as a political priority whereby humans are not privileged over other forms of nature and whereby the nature advocated envisages humans as part of the whole. This concept and the challenging of those knowledge(s), which I believe are counter-productive to sustainable communities, act as my guideposts throughout this thesis. An ecologist who believes firmly that humans are no less ‘natural’ than dragon-flies, soil communities, or streams, I argue that, with the multiple ways that modern cultures are engaging with the world and the myriad cultural and political factors that influence which worldviews are adopted, our understanding of and appreciation for our bio-physical relationship with our particular environments has become distorted, conceptually, and compromised, materially. Indeed, a loss of respect for our embeddedness in nature, generally, is evident in the way modern ways of knowing and being in the world have been privileged to the exclusion of other life-forms, indigenous human communities, and each other. In establishing a framework, therefore, from which to analyse how the privileging of certain forms of knowledge occurs through complex power networks while ‘complicit in forms of erasure and abjection’ (Braun, 2002:2) of

others, social nature theory and discourse analysis, I argue, offer important opportunities for engaging in the human-nature debate.

1:2 Ecosystems as Social in Nature

As indicated in the introduction, an approach to socio-ecological degradation that embraces humanity, such as social nature theorizing, for example, is well-situated to provide a solid foundation from which to build a case for a political ecology in communities, globally, including Ottawa. The primary tenet of social nature is premised upon the notion that conceiving of nature as somehow external to humans is flawed and particularly problematic when addressing ecological degradation. (see Castree and Braun, 2001; Braun, 2002) For example, to frame Canada's declining east coast fisheries, for so many years, as an ecological failure is irresponsible and has done nothing to address the socio-political causes that led to this decline. It is unthinkable to continue addressing the growing number of 'ecosystem' failures in a manner that treats our human activities as somehow distinct from the rest of nature.

Secondly, social nature theorizing is a political project that looks at how nature is *made* visible, both discursively and materially, through a diverse array of actors, including industrial capitalists, the state, visual and literary artists, religious institutions, farmers, scientists, adventure tourists, and environmentalists to name a few. (see Braun, 2002) As such, if a more progressive form of environmentalism is to proceed, one that acknowledges displaced and subjugated knowledges (see Braun, 2002 and Foucault, 1980), analysing how nature has been constructed, both conceptually and materially throughout history, is critical. From the outset, therefore, ridding ourselves of the

(colonial) notion that nature holds universal meaning is essential if we are to further our understanding of people in nature(s) and how sustainable futures might be realized. If we conceive of nature *only* as pockets of dwindling wilderness reserves around the world, then we have afforded no opportunity to explore nature in more built environments where human transformations of landscapes are most evident and where socio-ecological stress is, arguably, most pressing and, therefore, in greatest need of a more progressive political ecology. It is within our cities, farmlands, marine and fresh-water fisheries, hydro-power stations and oil exploration and drilling sites, and managed forests, parks, and greenspaces that we have much to learn about 'nature', and how we might engage more sustainably in these environments than is currently our practice. Specifically, if sustainable communities are desirable, then re-envisaging and re-engaging with our environments in such a way that does not compromise the capacity for these particular socio-ecological systems to function is critical.

Thirdly, if knowledges can be situated, then the power that infuses all socio-political negotiations that enable certain discourses and knowledges to be privileged over others can be exposed, *and challenged*, thereby furthering socio-ecological justice. For as Braun, with reference to the temperate rainforest of Clayoquot Sound, posits, 'what counts as the forest is an effect of power'. (2002:9)

Adopting this conceptual framework then and positing that what counts as *nature* is an effect of power, I argue that, for the purposes of analysis, it is precisely at this point where knowledges of nature are being contested that I might focus my engagement with environmentalists in the Ottawa region in an effort to analyse the power relations that infuse their every negotiation. In particular, I argue, as does Braun, that 'contemporary

environments are analyzable as in part the outcome of capitalist social formations'. (2002:11) Indeed, nature as a product of capitalist formations is addressed in greater detail in my third chapter.

1:3 Forging Just Practices: Revealing the Power in Politics

Numerous social practices, both discursive and material, have influenced how people engage with nature, conceptually and materially. It is my intention in this project to further the argument that if we are to fashion a politics that privileges ecological and social justice then we must move beyond nature as somehow existing outside of the human experience and as holding universal meaning for everyone by exploring the power that, historically, has underpinned which knowledges of nature have been normalized in our modern societies. As such, my investigation into how environmentalists in the Ottawa region are negotiating their power struggles with more dominant forms of social practice embedded in political economy and science discourses is important. These people are living examples of those who are forging a more progressive discourse of social nature, thereby opening up greater political space previously unimagined and, therefore, inaccessible. The participants in this study, far from viewing nature as a wilderness, are most concerned with the ecological *and* social well-being of their particular communities. Their struggles are unique and, as such, no one individual views nature in the same way; but, what they do share are their tactics of challenging dominant ways of knowing in an effort to improve the quality of life for members in their communities, human and otherwise.

1:4 Nature's Transformation: On Social Construction and Discourse

Arguably, human activities are considered by most, scientists and non-scientists alike, as having significant influence on the functioning of the interactive physical and biochemical processes of our planet. It is widely accepted that human technology and the industrial revolution of the past two hundred years have accelerated the rate of transformation of Earth's atmosphere, lithosphere, and hydrosphere.

...what happens to nature today may be of world-changing importance, both for ourselves and other species... [Bryce] could scarcely have anticipated a future in which mass deforestation, global warming, the collapse of commercial fisheries, chronic species extinction, transgenic organisms, a growing ozone 'hole', and desertification would be just a few of the problems arising from human transformations of nature. (Castree, 2001)

A dominant discourse on global environmental change (GEC) has emerged alongside a growing body of scientific research, referred to as Earth System science, producing 'evidence' that humans now have the capacity to 'alter the Earth System in ways that threaten the very processes and components, both biotic and abiotic, upon which humans depend'. (International Geosphere-Biosphere Programme (IGBP) Science, 4:4 – no date provided) In the same IGBP volume, an article entitled *Towards Global Sustainability* begins with a photograph of Earth from space with a large question mark centred in the photograph and beneath this image of our blue planet is a bolded caption stating that

Human-driven changes are pushing the Earth System beyond its natural operating domain into planetary *terra incognita*. Management strategies for global sustainability are urgently required. Earth System science is the key to implementing any approach towards good planetary management, as it can provide critical insights into the feasibility, risks, trade-offs and timeliness of any proposed strategy. (p. 27)

In a critical analysis of how the Earth is being conceived in sustainable development discourse, Sachs would describe this image of Earth from space as representative of the Astronaut's Perspective whereby the planet is conceived as a bio-physical system and an

object of management. (1999:83) Indeed, Richard Underwood, a specialist in space photography, remarks that

When we saw a tiny blue-white, round planet hanging out there, we realized something interesting and that was that we're all alone here ... we have no support systems that we can go elsewhere for... But it's the only planet we have so until we learn to build artificial planets, or go somewhere else, we're going to have to take better care of this one. (1991)

The first of the aforementioned statements suggests that science and management are 'urgently required' and 'key' to addressing human-driven changes on the planet. Indeed, Ingold, a social anthropologist, remarks that

[T]he image of the earth as a globe, implied in such phrases as 'global environmental change', is one that actually expels humanity from the lifeworld, such that rather than the environment surrounding *us*, it is we who have surrounded *it*. Far from reintegrating human society into the world of nature, the idea of the earth as a solid globe of opaque materiality marks their final separation. ...[I]t also leads to the systematic disempowerment of local communities, taking from them – in the name of preserving biodiversity – the responsibility to care for their own environments. (2000:154-55)

Sachs also observes that

The bio-physical conception of the earth as a system projects a transnational space where the existence of nations, the aspirations of communities or other human realities fade into irrelevance when compared to the overwhelming presence of the natural earth. (1999:83-4)

So while economic competitiveness might not be the focus of Earth system science, nor is social justice. It would appear that there is no room for addressing the needs of people in local contexts around the globe in this geo-political arena where economic growth and development and scientific knowledge, technological capacity, and the conservation of Earth systems are all vying for political space.

There are those including Buttel and Taylor (1992), Escobar (1996), Castree and Braun (1998), and Song and M'Gonigle (2000), who insist that global constructions of environmental knowledge and the social, political, and economic relations that shape these constructions require a much greater critical gaze. Indeed, Escobar suggests that in analysing environmental change discourse, a post-structural approach can and does go well beyond linguistic theory and is truly a 'theory of the production of social reality which includes the analysis of representations as social facts inseparable from what is commonly thought of as 'material reality'' (1996:46). Taking this a step further, if one supports the idea that discourse is constitutive of social reality and that, 'from a certain poststructural perspective (Foucaultian and Deleuzian in particular) there cannot be a materialist analysis which is not, at the same time, a discursive analysis', it can be argued that discourse is 'the articulation of knowledge and power'. (Escobar, 1996:46) From a post-structuralist point of view then, one must look beyond *what* is being posited as 'fact' or 'truth' or 'reality' and consider *whose* knowledge it is and how power is being exercised through the application of discourse and to what political end.

When considering the Earth System discourse of management, one must ask: management to benefit whom? And who, exactly, is responsible for 'pushing the Earth System beyond its natural operating domain'...? And, is it fair to suggest that we are all in this mess together and, therefore, that we shall all share equal responsibility? In addressing the causes of global environmental change it is absolutely essential to unpack the uneven nature of these discourses, socially, and to consider, also, the parallel discourses of a globalizing economy.

...[W]ithin both science and politics, the 'globalization' of the environment has arguably served to steer attention to common human interests in environmental conservation and away from analyzing the difficult politics that result from different social groups and nations having highly varied – if not conflicting – interests in contributing to and alleviating environmental problems...It is therefore not surprising that Third World reaction to 'environmental colonialism' has emerged... articulated by ... groups [that] have stressed that international environmental organizations have exaggerated the Third World contribution to global warming and the Western calculations of developing-country contributions to greenhouse gas emissions (and) have failed to note a fundamental First World/Third World difference in the nature of these emissions, that between the 'survival emissions' of the 'South' and the 'luxury emissions' of the 'North'. (Buttel and Taylor, 1992:212, 225-26)

To borrow from Sachs, both the crisis of nature and the crisis of justice must be attended to if social natures and sustainability are truly the goal.

To protect both the rights of nature and the rights of people ...an affirmation of people's 'moral economies' are called for. Searching for sustainable livelihoods in this sense means searching for decentralized, and not accumulation-centred, forms of society. (1999:97)

It is interesting to note that there are those who are considering the implications of 'integrated assessments' from a policy perspective. Yarnal (1996) of the Department of Geography at Pennsylvania State University argues for integrated assessments in global environmental change research which can better inform the policy process. In particular, he posits that research linking nature and society is critical in the overall knowledge that informs this process. He suggests that it is important to 'address [not only] the human actions responsible for biogeophysical environmental change... [but] the underlying social forces driving environmental change, including population change, technological innovation, economic growth, political and economic institutions, and cultural and individual behaviour'. (1996:169) Yarnal indicates the need for physical scientists to work with social scientists to make their work more relevant to social policy, remarking that the more typical approach to environmental problems involving science to policy-

analysts to policy-makers to public assumes that science is complete, certain, and value-free. In recognizing that science is none of these but rather socially constructed and discursive by nature makes room for a more progressive environmentalism.

When science loses its claim to authority as *the* vehicle to truth, the whole ground changes, but in an emancipatory way. The world is far larger than human knowledge will ever be; certainty is a futile quest; respect and reverence for what we cannot know is as empowering as the pursuit of what we can know. And, best of all, there are practical outlets for this new knowledge. (Song and M'Gonigle, 2000:985)

Not only must we accept how partial is our knowledge of the bio-physical world but more importantly, I argue, is that we attend to the social and political construction of this knowledge and consider the possibility for those knowledges that promote a politics of dwelling. By this I am referring to what Ingold (2000) has conceived of as the 'dwelling perspective'. He suggests that

[We take] the human condition to be that of a being immersed from the start, like other creatures, in an active, practical and perceptual engagement with constituents of the dwelt-in world. ...[A]pprehending the world is not a matter of construction but of engagement, not of building but of dwelling, not of making a view *of* the world but of taking up a view *in* it. (2000:42)

Indeed, in their critical assessment of environmental sociology and global environmental change Buttel and Taylor remark that

... the 'global construction' of environmental issues is as much or more a matter of the social construction and politics of knowledge production as it is a straightforward reflection of biophysical reality ... and the globalization of environmental policy involves shifts of institutional forums and processes – from national and sub-national politics to particular geopolitical arenas such as the international development finance and assistance establishment – that very substantially affect the framing of environmental issues and the consequences of policy decisions. (1992:214)

As such, the role of political economy in environmental discourse needs to be carefully unpacked. This concept is introduced at the end of this chapter and is developed further in chapter three. But first, it is essential, I argue, to consider the bio-physical world to

which we belong and, without which, an argument for a social nature and politics of dwelling would be pointless.

1:5 The Crisis of Nature: A Case for Biodiversity

Harper in *Environment and Society: Human Perspectives on Environmental Issues* posits that every society has three kinds of wealth including material, social/cultural, and biological, remarking that while material and cultural wealth are generally well-understood and appreciated, biological wealth is under-appreciated. (2001:91) He expresses the following concerns with declining biodiversity: that biodiversity has great actual and potential value as food, medicine, and other commercially important substances; that all life, including humans depend on ecosystem services which biodiversity provides; and that species diversity is irreplaceable and valuable in itself as species represent the Earth's evolutionary and biological heritage. (2001:97) Broad in scope, environmental services are considered to include such processes as photosynthesis, the provision of food and other renewable resources, soil generation and preservation, pollination of crops, recycling of nutrients, filtering of pollutants and waste assimilation, flood control, climate moderation, operation of the hydrological cycle, and maintenance of the gaseous composition of the atmosphere. (Folke, Holling, and Perrings, 1996; Harper, 2001)

In an assessment of the proximate causes and driving forces of environmental change including the loss of biodiversity, Harper has identified the following four types of change: population change; institutions, particularly political economies that stimulate economic growth; culture, attitudes, and beliefs, including social constructions and paradigms about the environment; and technological change. (2001:70) While all of these

changes have material consequences in nature, including such things as the distribution of resources, the causes and driving forces are primarily social in nature and need to be addressed as such. In particular, the power and politics that drive which knowledge(s) of nature become normative in a society and the practices of social institutions that ensue, including political economies, need to be challenged. Advocating a more socio-ecological or social nature approach when dealing with environmental change is critical if we are to curtail the further loss of biological diversity and all that that entails.

Let us consider for a moment an example of ecological decline that is firmly rooted in socio-political economy. From an ecological perspective the greatest threat to species loss is believed to be the destruction and fragmentation of habitats as humans occupy and control more of the planet (Harper, 2001:96) and that 'keystone process species' are indicative of critical thresholds of diversity that we should be striving to conserve. (Folke, Holling, and Perrings, 1996)

A limited number of organisms and groups of organisms seem to drive or control the critical processes necessary for ecosystem functioning, while the remaining organisms exist in the niches formed by these keystone process species. (Folke, Holling, and Perrings, 1996:1019)

The following example illustrates both the ecological significance of a keystone process species and the political economy of this 'environmental problem'. Budworm populations in Canadian boreal forests are controlled by migratory insectivorous birds that maintain the functional resilience of the boreal forest. (Folke, Holling, and Perrings, 1996) Biologists, generally, believe that the boreal forest ecosystem could withstand a loss of up to 75% of the bird population before it 'flips' into a different, less biodiverse and less resilient state. Deforestation and the fragmentation of forests along the migratory route of the birds, and the destruction of the tropical forests where these birds

over-winter, have caused a significant decline in the bird populations. Radar images of the flights of migratory birds over the Gulf of Mexico over a twenty-year period have indicated a 50% decline in the frequency of flights. Understanding the embeddedness and interconnectedness of local places within the larger spaces of the planet is critical if we are to curtail the further loss of biodiversity and sustainable communities.

It is important to articulate effectively not only those future ecological conditions that are desirable but also the social conditions of human communities as they relate to their particular spaces. The socio-economic driving forces that are contributing to environmental change must be made explicit at local and regional levels all over the planet. Scales of 'management' must be negotiated as must the state of nature valued be negotiated. To facilitate this process a democratically agreed upon understanding of what ecological quality means, one which is contingent upon and specific to people in a particular place, is essential. It is argued that an integrated, adaptive, and social nature approach, one that responds to ecological and social feedback at the local level, is required if we are to ensure sustainable communities. As Robertson and Hull indicate, the role of scientists cannot continue to be simply 'descriptively precise' but must include 'evaluatively rich' knowledge constructs that make social values explicit.

The challenge to ecological science, and conservation biology in particular, is to develop constructs that are not just descriptively precise and hence powerful scientifically at describing situations, but also evaluatively rich and hence powerful politically for deciding which situations are best (2001: 974)

1:6 On Defining Nature: Conservation Biologists Argue for a Public Ecology

In a discussion on how nature is being conceptualized by those in the field of conservation biology, authors Hull and Robertson consider the importance of language

and what they refer to as *public* ecology, especially as it pertains to the ‘prescriptive arenas’ of conservation policy and management.

Society must explicitly consider which definitions of nature and environmental quality have the most utility for restoring and managing nature. The challenge to all stakeholders is to help construct an environmental knowledge that functions effectively in the prescriptive arenas of policy and management. (2000: 98)

They deconstruct three commonly used terms to describe nature and illustrate how using the terms naturalness, health, or integrity to describe nature represent ‘values and preferences for competing visions and justifications for which nature should exist’ and that ‘a more public ecology – a body of environmental knowledge that is normative, contextual, multiscalar, integrative, adaptive, and accessible - is necessary for negotiating “which nature?”’ (Hull and Robertson, 2000: 110)

In unpacking the term ‘naturalness’, they have identified three broad definitions present in discursive practice including: that which is associated with a state of the environment that existed at some previous point in time; a state of the environment that exists in the absence of human modification; and a slow or ‘natural’ rate of change. Regarding the ‘point in time’ definition of nature, the authors point out that random events and accidents of history have caused ecosystems to be set along new trajectories of change and evolution and that there is no value-free way for choosing which of these trajectories should serve as *the* definition of nature. (2000:100) This concept supports that of Castree who remarks that nature is ‘intrinsically social ... that the all-too-common habit of talking of nature ‘in itself’, as a domain which is by definition non-social and unchanging, can lead not only to confusion but also the perpetuation of power and inequality in the wider world’. (2001:5)

Hull and Robertson (2000) suggest that using the term 'health' to describe an ecosystem is also problematic because it is difficult to define an ecosystem as ecosystems are not closed and health does not offer clear management prescriptions. Describing the health of an ecosystem is difficult also, if not impossible, they suggest, because nature is conceptually organized at many scales. The following example illustrates how nature is being conceived in different ways within the field of conservation biology, generally, and how a social nature perspective, where humans are viewed as no less integral to nature than are rocks and trees, represents one of those ways of understanding nature. The field of conservation biology can be divided, broadly, into two main schools of thought, each having differing ecological approaches with 'fundamentally different assumptions about the role of humans in nature, and [each being] used to support dramatically different conservation decisions and agendas'. (Calicott et al, 1999:23) Population-community ecologists, also referred to as compositionists, tend to view ecosystems as interconnected networks of living populations existing in the context of nonliving components *with humans as separate from nature* and environmental quality as best when there is little to no human modification. By contrast, process-functional ecologists, or functionalists, emphasize energy flows and nutrient cycling and *consider humans as 'embedded within and not easily distinguished from nature'* and capable of managing and sustaining ecosystem processes and services (Calicott, 1999, Hull and Robertson, 2000; Robertson and Hull, 2001:973) Robertson and Hull, belonging to this second school of thought, argue that

In the midst of fragmented ecosystems, invasive species, and global warming, conservation biology needs a vision of nature, ecological science, and environmental management that includes human society. (2001:971)

Environmental 'integrity' as a term is also considered problematic by these authors because, by definition, systems have integrity when their structures or processes are within an 'acceptable' level. This requires that there exists a benchmark of acceptable structures and processes against which the environment can be measured. (Robertson and Hull, 2001) Benchmarks are negotiated and determined in a society embedded in pluralist values. As such, this normative aspect of environmental knowledge must be recognized and made more explicit in environmental decision-making processes. Ultimately, environmental policy and, arguably, social and economic policy, reflect those values most skilfully negotiated for.

Knowledge is closely coupled with power, and all knowledge is for some purpose. They [science scholars] argue that science is a persuasive discourse constructed to serve specific socio-political goals. In this sense, knowledge is more powerful (i.e. effective) the more finely it is tuned to its intended use. (Robertson and Hull, 2001:972)

In reviewing the role of ecologists in environmental policy formation, Norton stresses the importance of going beyond scientific ecological assessments to include social values – what he refers to as ecological valuation. (1998:356) For a Newtonian science that separates itself from nature and expresses universal truths is not capable of informing sustainability efforts including a more post-modern, adaptive approach to science that situates itself within a place, embedded in social values particular to that place. (Norton, 1998:361)

Management situations are unique in that both the people involved and the locations are unique. Because there is no universal theory of ecology – there are no generalized, mathematical models of ecosystem structure and process to tell us what nature looks like and how it works in real places as there are in physics - understanding nature for the purpose of making decisions about the goals and objectives of management requires a more case-specific knowledge. (Robertson and Hull, 2001:974)

Finally, if we accept that there is much that we do not understand about the dynamic bio-physical interactions in nature and that science is incomplete and uncertain, a more precautionary approach might prove more practical than not at this stage when ecosystems are under increasing pressure due to expanding flows of capital, natural resources, and pollution. Expecting the natural sciences to provide solutions for what might be considered more appropriately social problems is unrealistic and not very useful if we are to proceed by living in a more sustainable fashion in our respective communities around the globe. Indeed, Robertson and Hull remark that ‘the world and how it works is so complex, chaotic, and changing that, relative to what might be known about it, we now know very little, and we are not likely to ever know all that much’.

(2001: 972)

As a post-normal rather than positivist approach to knowledge, public ecology does not require conservation science to be objective or universal; rather, it requires that the knowledge constructed for conservation decision making reflect the pluralist and pragmatic context of decision making while striving for the rigor and accountability that earns scientific knowledge its privileged place in the socio-political arena where conservation decisions are made. (Robertson and Hull, 2001:973)

1.7 The Political Economy of Global Environmental Change

Global environmental change (GEC) research typically looks at the major physical sub-systems of Earth which include the atmosphere, hydrosphere or freshwater and coastal/marine areas, and the lithosphere or land and biodiversity. GEC discourse and knowledge claims have achieved varying degrees of ‘success’ in these areas due to a number of factors. Indeed, Buttel and Taylor posit that

Global change/warming (has) lent itself to popularization on account of multiple projected “dread factors”: massive coastal inundation due to rising sea levels, increased incidence of cancer due to ozone layer depletion, loss of agricultural productivity (especially in the North American and other temperate bread-baskets)

due to climate alterations such as a growing incidence of drought and climatic extremes, wholesale loss of biodiversity, and so on. (1992: 222)

The authors are critical of GEC knowledge claims remarking that ‘the ‘global construction’ of environmental issues is as much or more a matter of the social construction and politics of knowledge production as it is a straightforward reflection of biophysical reality’. (1992: 214) In establishing a robust socio-ecological discourse, one that can compete with alternative truth claims, it is essential that scientific knowledge is carefully unpacked and the power and politics that hide in the shadows behind this knowledge be brought out into the light. In examining the role of political economy in environmental decision-making, Song and M’Gonigle remark that, ‘[E]conomic utility frequently remains the overriding criterion against which the value of knowledge is assessed.’(2001:981) And that,

The unstated but unshakeable premise of management is to ensure the continuance of the economic growth that constitutes the lifeblood of private economic players...In a system where historic patterns of production and growth hold sway, the needs of ecosystems are secondary. (2001:983)

I would add to this, the needs of ecosystems *and the people integral to these particular ecosystems* are secondary to patterns of production and growth. In working towards greater sustainability and a political ecology that counters economic utility as the primary objective then, it is essential that not only defining the conditions of *what* nature is important but *whose* nature is important, if the social relations of power are to be challenged. In other words, it is not sufficient to simply use the terms environment or nature without first defining that nature which is desirable, materially and socially. For example, it is likely that definitions of nature by urban dwellers differ from those of rural dwellers, fishers and hunters from canoeists, farmers from ecologists, aboriginal peoples

living more traditional lifestyles from parks and wilderness professionals, people in countries from the South from those living in highly industrialized countries of the North, CEO's from conservation biologists, and so on...

1:8 Conclusion

In an effort then to ascertain the types of knowledge that might bring us closer to an ethics and politics of dwelling, I argue that the crisis of (a)social natures be acknowledged and that the social construction of nature, normative discourses, and the power in environmental politics that are transforming nature be revealed and examined. In the next chapter, I develop my thesis for a move back to social natures by drawing on some environmental psychology and the more spiritual perspectives of sense of place literature, arguing that these types of knowledge are important considerations when analysing what underpins our move away from, *and our need to more back to*, social nature.

CHAPTER 2: FINDING OUR WAY BACK INTO NATURE

2:1 Psychological Responses to Environmental Change: Breaking through the Human-Nature Barrier

Another discipline relevant to this project found in environmental change literature is that of environmental psychology. Pooley and O'Connor, in their study on environmental education and attitudes, have determined that 'it is what people feel and believe about the environment that determines their attitudes toward it'. (2000:711) They indicate that 'to address the values and attitudes in developing environmentally conscious behaviour, it has been suggested that the key entry point for environmental education is via the affective domain'. (2000:712) In their study, they discovered that attitudes formed through direct experience and which are affect based are seen also as better predictors of behaviour. They go as far to suggest that 'the current reliance on environmental knowledge may be hindering the aim of environmental education'. (2000:719) I would argue that this is perhaps true because many forms of 'environmental knowledge', by design, cleave us in two, setting up a dichotomy of humans here and nature over there, thereby diminishing our emotional and, arguably, our spiritual attachment to our environments. An elaboration of spiritual attachment to place follows later in this chapter but first, more on our psyche.

When considering human psychological responses to environmental conditions it is important to understand how people perceive and interact with their environment at the local level because it is at this level that people function and exist in the most meaningful ways. (Uzzell, 2000:308) Interestingly, in his study undertaken in Australia, England, Ireland, and Slovakia, Uzzell discovered that while environmental problems were

considered to be more serious as the geographical distance from the perceiver increased, it was found that perceived individual responsibility for the environment is greatest at the neighbourhood level and decreases as the scale of the problem broadens becoming global. (2000:312) The author provides a number of psychological theories that might explain this decreased sense of responsibility towards *global* environmental change and a greater sense of responsibility towards the environment at the local level. The theories are set in psycho-physiological, behaviourist and individualistic, cognitive, risk, and social perspectives. While psychological theory is not the cornerstone of my thesis, I am advocating a more integrative and inter-disciplinary approach to the construction of environmental discourse whereby these theories and others could bolster a social nature approach and, hence, a more robust political ecology.

In research that seeks to distinguish the public's perceptions of environmental problems at the local level from those considered at the global level, Uzzell states that

Direct experience of environmental changes at the human psychological level is unlikely because the physical signals of global environmental change are way below the threshold of discernability of human sensory and memory mechanisms. (2000:315)

He remarks that environmental change is an abstract concept, because we typically only have a surrogate experience of it since our perceptions and knowledge are derived largely from the media; however, 'respondents from "developing countries were far more concerned about local environmental problems than respondents from the industrialized nations'. (2000:308) This suggests to me that the human-nature dichotomy might be more ingrained in the developed world where a greater capacity to mitigate adverse ecological conditions exists, thereby lessening our sense of connectedness to our ecological communities and increasing our perception that we are somehow exempt from all of the

ecological afflictions affecting the 'environment'. My study, located in a local community in the developed world, looks at how those engaged in environmental advocacy in the Ottawa region are breaking down this perceived barrier between people and nature by exposing our vulnerabilities to ecological decline caused by socio-political factors.

Another difficulty that Uzzell raises regarding our psychological sensibility to global environmental change is that it operates across considerable spatial and temporal social distances. The time-lapse between human actions and their noticeable effects is great while learning and behaviour modifications occur over time intervals of hours at most. Therefore, adopted behaviours will likely not continue if the effects are not readily noticeable. (2000:315) If we accept this theory then it seems fitting that efforts to improve upon ecological quality should be carried out at the local level where change is more likely discernable to those involved thereby encouraging people to continue with their efforts to realize sustainable futures.

Regarding our perceived vulnerability to ecological decline, two types of coping strategies are believed to exist in the face of threat, the first being problem-focused where an attempt is made to deal with the source of the environmental stressor. The second is emotion-focused where an individual will engage in strategies to lessen the psychological impact. Uzzell notes that this second strategy is typically employed if the threat is perceived as being uncontrollable. Denial and failure to act will occur, thereby alleviating fear and anxiety. Indeed, he remarks that

Many global environmental problems are not only perceived to be outside the individual's immediate control but also *appraised to be beyond reasonable socio-political powers*. (2000: 315) (my italics)

Is it possible then that, not only are socio-political structures securing how we know and behave in our environments, but so is our own human frailty to confront difficult situations that seem beyond our control? Is our human capacity to accept our interconnectedness with our environments becoming so overwhelming that maintaining a sense of nature as separate from us is easier to cope with? I think Uzzell's findings are valid and relevant to my study in that certain individuals might be better equipped with coping mechanisms to confront such threats, such as those who choose to involve themselves in environmental advocacy. For a future study then, it would be interesting, from a psychological perspective, to explore what motivates environmental activists, such as those in my study.

Uzzell goes on to suggest that 'before individuals engage in precaution-taking, they must move from accepting that a risk exists generally, or at a distance, to one of accepting personal susceptibility to the risk'. (2000:315) And, in the case of global environmental change, although the impact of changes such as global warming and loss of global biodiversity might be substantial and catastrophic they are not perceived as being as sensational as earthquakes or volcanoes, for example, and, therefore, can lead to ineffectual responses. Indeed, in drawing our attention to the ecological and activist writings of Aldo Leopold (1949) and Rachel Carson (1962) that rail against environmental destruction but that emphasize also the appreciation of nature, Hartig et al. indicate how these activists have recognized and utilized the knowledge that stressing the positive aesthetic and restorative qualities of the natural environment is more effective in changing people's behaviours.

As fear and threat can in some instances result in the denial of an environmental hazard, such as when it is perceived to be beyond personal control, attempting to

instil such negative feelings could actually work against involvement in environmentally protective activities. Attention to fascination, restoration, and other positive motivations might be better suited to promoting ecological behaviour. (Hartig et al. 2001: 603)

Gardner, in Chapter 10 of the State of the World 2001 report, echoes the belief that instilling fear in people of impending ecological disasters does not promote ecologically sustainable behaviour.

Raising awareness, it turns out, is important but often not sufficient in persuading people to change behaviours. Nor do people necessarily respond to appeals based on fear. A fear appeal simply leads to despair or denial, attitudes that may prevent people from discussing important topics... What people do respond to, say environmental psychologists, are the actions of their peers, direct appeals, effective communication, and enticing incentives... The encouraging lesson is that individuals who model sustainable behaviour might have more influence over others than they realize. (2001: 195)

If this is true, then perhaps the more people advocating *and modelling* a social nature approach to dealing with ecological problems, the more people might be inspired to adopt this way of thinking about and being in nature, thereby countering other dominant forms of practice, which are arguably unsustainable.

In their study entitled *Psychological Restoration in Nature as a Positive Motivation for Ecological Behaviour*, Hartig, Kaiser, and Bowler indicate that

People who see greater potential for restorative experiences in natural environments also do more to protect them by behaving ecologically. Restorative experiences involve the renewal of depleted psychological resources and occur in ongoing processes of emotion and self-regulation. People often develop emotional attachments to places that reliably support emotion and self-regulation (2001: 590, 592 & 602)

It is argued that psychological health can be nurtured by less modified environments where people can renew their sense of belonging to the Earth and that the development of emotional attachments to such places can affect resulting behaviours towards their environment. 'An emotional attachment to a place may engender protective behaviour.'

(Hartig et al., 2001:602) The authors describe restorative experiences, for example, as involving the psychological distancing from aspects of one's usual routines and demands on directed attention and the effortless attention engaged by objects in the less-built environments. They suggest that

[P]ositive experiences in natural environments underlie the formation, maintenance, and modification of positive attitudes regarding ecological behaviour and its consequences. (2001: 592)

While I believe that these authors are conceiving of nature as external, and perhaps universal, what they are alluding to is that if a sense of attachment to place can be developed then a greater sense of responsibility ensues; and that, psychologically, experiences in less-built environments are beneficial in that they help to erode the disconnect between humans and their organic worlds, arguably more difficult to achieve in highly built environments. In my study, my first point of departure for situating participants was to determine if such experiences in their earlier years contributed to their sense of belonging and responsibility towards their environments. This is developed later in my discussion of my findings in the chapter on people in nature and sustainable futures.

Uzzell addresses another psychological theory of interest to environmental behaviour research and of particular interest to this project in that it highlights the psychological disconnect between ecological concepts and social understanding. In studying the effects that experiences in environmental education settings have on children Uzzell argues that these hands-on experiences in 'nature' do not have the effect intended because 'invariably the child does not acquire a hands-on experience of the environmental problem itself'. (2000:314) In fact, he discovered that children's concern decreased

following an environmental education course because they could not relate the scientific content of their lessons to the social world they normally inhabit.

With an emphasis on scientific, especially chemobiological, investigations children are provided with experiential encounters with nature, but not social, cultural, economic and political encounters. A hands-on experience is invariably contextualized within a natural rather than a social and economic context and focuses on the symptoms, not on the system that supports one form of social or economic behaviour over another. Environmental problems lie in society, not in the environment. (Uzzell 1999, 2000:314)

In response to these findings, Uzzell rightly poses the following question: 'If direct environmental experiences do not compensate for psychological biases then what kind of theoretical frameworks can be superimposed on these findings to account for [these] phenomena?' (2000:314) It is evident that not only are geographers and biologists in search of a more useful framework from which to study human-nature problems but so are psychologists. It is becoming increasingly apparent that a theory of social nature comes closer than any other theory to date in addressing this paradox: that humans are arguably largely responsible for many of nature's transformations, material *and discursive*, and that conceiving of humans as nature itself is essential if we are to sustain viable communities. For, focusing only upon the bio-physical aspects of environmental change with no regard for the social and cultural aspects of nature and its transformation is not effective in promoting the behaviour changes necessary to alleviate socio-ecological degradation.

With regard to the scale of environmental change, Uzzell refers to the work of Zube (1991) that argues 'for the importance of studying how people perceive and interact with the environment at a local level because it is at this level that people function and exist in the most meaningful ways'. (in Uzzell, 2000:308) An emphasis on the local context is

evident across the literature when studying human interaction with nature. However, conservation biologists Robertson and Hull insist that recognizing how our local actions affect, and are in turn being affected by, biophysical processes *at greater scales*, both spatially and temporally remain critical to conservation policy.

Recognition of expansive scales of space and time is essential for meaningful discussions about sustainability and the goal of sustaining ecosystems where stakeholders are asked to think beyond their immediate and local self-interests. (2001:975)

While difficult, therefore, in terms of human psychology to situate one's perception of the local environment within the larger space around that place in order to appreciate the relationship one's immediate environment has with others, it remains important from a social and ecological perspective to facilitate this expanded vision.

2.2 The Crisis of Nature: A Case for Sense of Place

Norton, borrowing from Tuan (1974, 1977), emphasizes how a sense of place needs to be balanced with the larger space around the place.

A complete sense of place, one might say, inevitably includes a sense of space, a conception of how the home place relates outward, and also a sense of history, both cultural and natural, of the home place. So the integrative language we choose must also be capable of expressing spatio-temporal relations in a way that is clear and perspicuous. In this sense our language must be multiscalar. (1998:361)

Davis, an ethnobotanist and essayist, illustrates how many societies around the world, especially those indigenous communities which have maintained more traditional lifestyles, have a strong sense of place and belonging which goes well beyond having a deep attachment to the land.

For many people around the world, particularly those few still living in small communities unaffected by the frenzy and disappointments of the industrial age, this notion of belonging has never been forsaken. Indigenous cultures, though neither

sentimental nor weakened by nostalgia, have forged a traditional mystique of the earth that is based not only on deep attachment to the land, but on far more subtle intuition – the idea that the land itself is breathed into being by consciousness. Mountains, rivers, and forests are not perceived as inanimate, as mere props on a stage upon which the human drama unfolds. For these societies, *the land is alive*, a dynamic force that is embraced and transformed by the human imagination. Whether this is true in some absolute sense is not the point. Rather the significance lies in the manner in which the conviction plays out in the day-to-day lives of a people. (Davis, 1992:8)

While it is likely becoming more and more difficult to observe the different manner in which younger generations of indigenous peoples play out their day-to-day lives as they are living more modern lifestyles, I would argue that their historical and cultural sense of place and spiritual attachment to the land remains integral to how they perceive themselves in relation to the Earth. Ingold, also, has given considerable attention to this ‘dwelling perspective’ and argues that, with respect to hunter-gatherers, ‘the separation of mind and nature has no place in their thought and practice’ (2000:42) and that, ‘it is through dwelling in a landscape, through the incorporation of its features into a pattern of everyday activities, that it becomes home...’. (2000:57)

For example, the concept of ‘giving circles’, a Native North American tradition, is steeped in a reciprocity of humans in their environments, whether one continues to live a traditional hunter-gatherer lifestyle or not. Caduto and Bruchac explain the relationship between giving circles and an aboriginal person’s sense of place and relationship within the natural world.

The thin, living membrane covering Earth is only one one-thousandth of Earth’s diameter, like a skin 1 millimetre thick covering a ball 1 meter in diameter. Yet the *centre* of existence for each of us walking upon Earth is within; as the Oglala Lakota (Sioux) scholar Black Elk says, the centre is everywhere. We move on this living circle and can only maintain its entirety by completing our circles, by giving back every time we receive Earth’s bounty, by living in balance and by keeping each gift moving... [A] gift gains importance and power every time it is given to another. (1994:239)

Giving circles are symbolic of the traditional practice of showing reverence for nature by outwardly demonstrating appreciation for the Earth and its bounty. There are many native stories that illustrate this reverence for nature. 'The Woman Who Lives in the Earth' is one such story told by the Inuit and recounted by Caduto and Bruchac (1994:179-180). It tells of how Earth itself has something alive that dwells within it upon which all other life depends. The one who lives within the Earth is seen as a woman and on her coat she carries the souls of all the animals of the Earth that she protects. The story tells of her watching over a hunter who chooses a caribou carefully and speaks to its spirit before killing it and then thanks the animal's spirit after the kill. He becomes aware of her presence after his display of respect for the animal. He is reminded that failure to show such respect to another animal or any other part of the Earth will undoubtedly bring harm as it did to a man who dropped dead after cutting a live alder tree.

Another aspect to Native North American culture is that of the 'healing vision'. Caduto and Bruchac describe the healing vision or traditional medicine in the following way.

It is a sacred thing - the source of one's strength, wisdom, and power in the cosmos. Medicine encompasses all aspects of life that act on body, mind and spirit, as well as one's attitude toward them. This includes all forms of knowledge such as the advice of elders, natural and cultural laws and proverbs. (1994:239)

Caduto and Bruchac posit that a move away from this form of traditional medicine or healing vision is what has created *a crisis in our relationship with Earth*. (my italics)

We, humankind, through our great numbers, technological and industrial powers and political and economic conflicts have created a crisis in our relationship with Earth in the form of inestimable ecological damage...The way back, the healing, should not be sought by using more force. It needs to occur through a metamorphosis in our relationships with plants, animals, other people and all of creation. To make this change, we need to reorient our moral, ethical, spiritual, intellectual and scientific

energies away from manipulation and control toward peace, preservation and the perpetuation of the ecosphere. (1994:239)

So, it is with regard to this last statement that I would like to consider the potential, the possibility for change in our modern culture, to finding ‘the way back’. How does a culture so far removed, conceptually, from its organic roots find its way back to its sense of place within nature? Abram, an ecologist and philosopher, insists that direct experience is the most powerful way of knowing and explains how these experiences can contribute to a greater sense of place. In particular, direct experience within less modified environments is critical to not only understanding and appreciating the value of that which sustains us physically, but that which nurtures our spiritual self and in turn provides us with a sense of belonging and sense of place. Abram remarks that

I was repeatedly taught not to trust my senses – the senses, I was told again and again, are *deceptive*... I began to wonder if by our continual put-down of the senses, and of the sensuous world – by our endless [belittling] of the world of direct experience – we were not disparaging the truest world of all, the primary realm that secretly supports all those other ‘realities’, subatomic or otherwise...We have a habit of endlessly objectifying the more-than-human world, writing and speaking of every earthly entity (moss, mantis, or mountain) as though it were a determinate, quantifiable object without its own sensations and desires...For the senses are our most immediate access to the more-than-human natural world...Only a culture that dismisses the senses could neglect the living land as thoroughly as our culture does. (2001: 60-1)

Perhaps being more ‘tuned in’ to our senses, our first way of knowing, is essential if we are to reorient our energies away from manipulation and control and toward peace and preservation of natures in which humans are an integral part – toward a social nature. Ingold attends to our cultural privileging of vision over hearing in the West, which he indicates other philosophers have referred to as ‘ocularcentrism’, arguing that ‘the elevation of sight as the “noblest” of the senses, has tended to treat writing (which is seen) as inferior to speech (which is heard)’. (2000:155) He remarks that, in non-Western

societies, vision is non-representational as opposed to objectifying, 'a matter of watching rather than seeing. Like hearing, it is caught in the flow of time and bodily movement'. (2000:155,156) As such, he poses the question, 'To regain an appreciation of human dwelling in the world is it necessary to rebalance the sensorium, giving greater weight to the ear, and less to the eye, in the ratio of the senses?'(2000:155) I would add to this that a rebalancing of *all* of our senses could lend itself to bringing people back into nature – and nature back into people.

There are others who argue that our mistreatment of our environments is the cause of a serious problem other than ecological degradation. Rutledge, author of *Humans and the Earth: Toward a Personal Ecology*, argues that we have become alienated from our nature, including ourselves, in this process of ecological destruction. He argues, as does Abram (2001), that by not honouring direct experience or the learning derived from direct experience is to deny our truest way of knowing and being in the world. Rutledge remarks that

These events, the loss of personal assurance – the inner alienation – and the loss of a natural home- the outer alienation – are beginning to appear as two of the largest symptoms of our century's alienation. (1993:5)

Decisions that communities are faced with today require consideration for things far greater than scientific certainty, technological capacity and economic growth. The collective wisdom of individuals and societies rooted in particular places and diverse cultures around the world who have maintained lifestyles that are ecologically and socially sustainable is invaluable and has much to offer in the way of knowing and being in the world. With reference to the significance of rootedness and sense of place, Davis speaks of the American poet Snyder,

Yet the very ease with which we move about this small planet confronts us with a terrible irony. We journey to learn, yet in travelling grow each day further and further from where we began. When the American poet Gary Snyder was once asked to discuss at length how individuals could best help resolve the environmental crisis, he responded with two words: 'Stay put.' Only by rediscovering a sense of place, he suggested, a commitment to a particular piece of ground, will we be able to redefine our relationship to the planet. (1992:7)

2.3 Conclusion

It is evident that, in ascertaining the types of knowledge conducive to eco-socialist strategies (see Escobar, 1996) and building a case for a social nature (see Castree, 2001 and Braun, 2002) and a dwelling perspective (see Ingold, 2000), analysing people's responses to environmental change and their attachment and sense of belonging to place is highly relevant, and therefore, deserves further attention. Before providing a detailed account of my methodology in chapter four and beginning a discussion of my findings of participants experiences in environmental advocacy in the Ottawa area in chapter five, I devote the next chapter to the political economy of nature. I have done so because I argue that, no where is it more evident how modern cultures have severed themselves conceptually and spiritually from nature, as has been the experience of those in this study.

CHAPTER 3: THE EROSION OF SOCIAL NATURE

3.1 On Sustaining Development

Perhaps one of the most widely used global environmental knowledge constructs has been that of sustainable development or 'the sustainable management of the system of capitalized nature' as described by Escobar. (1996:47) He suggests that this concept is 'part of a broader process of the problematization of global survival, a process which induces a re-working of the relationship between nature and society'. (1996:51) This broader process to which Escobar refers is critically unpacked by Sachs (1999) who comments on the South as being categorized as 'underdeveloped'. He remarks 'That Truman coined a new word was not a matter of accident but a precise expression of a worldview ...' (Sachs, 1999:73) Indeed, Escobar illustrates how many environmentalists in defence of nature are contributing to such a development framework worldwide and 'accepting uncritically this sustainable development discourse'. (1996:52)

While I agree that many might have adopted a sustainable development framework to address environmental issues as being linked to the economy and society at large throughout the 1980s and early 1990s, especially following Brundtland's report for the World Commission on Environment and Development entitled *Our Common Future*, there are many more now who are challenging this framework and using the term 'sustainability' in place of sustainable development with a view to sustaining *livelihoods* and not development. Lake and Hanson in their editorial in *Urban Geography* refer to sustainable livelihoods as 'processes of social and ecological reproduction situated within diverse spatial contexts and crossing various spatial scales ... [and as] non-linear, indeterminate, contextually specific, and attainable through multiple pathways'. (2000:2)

Sustainability, as a conceptual framework, is a significant departure from global-scale sustainable development discourse in that it is conceived at multiple scales and goes well beyond the technological management of natural 'capital' as it seeks to address the socio-political implications of putting into practice behaviours that are socially and ecologically sustainable.

Sustainability is fundamentally a political rather than a technological or design problem, in the sense that the greatest barrier to sustainability lies in the absence of institutional designs for defining and implementing sustainable practice in local contexts. (Lake and Hanson, 2000:3)

A social nature and political ecology approach that 'sees nature as inescapably social' (Castree, 2001:3) could serve to facilitate sustainable practice by articulating a political agenda that counters those of institutions supporting sustainable development.

3.2 Global Flows of 'Natural Capital'

Sustainable development - its focus squarely on sustaining natural resource productivity for the purposes of expanding the global economy and, ultimately, corporate profits, through over-consumption and a drive to increase material wealth - is fuelling an unprecedented increase in highly polluting and extractive industrial practices. Global trade and financial institutions, and governments the world over, are facilitating this process by promoting economic growth, above all else, thereby compromising the planet's capacity to support life.

Globalization has shifted control over planetary health from communities to corporations that operate in a global marketplace with no government oversight. Fierce competition forces firms to shift ecological costs onto society in order to satisfy the demands of global financial markets. The result is a new political structure where no one is in control or accountable for the accelerating destruction. (Menotti, 1998:354)

One of the key government actions that Menotti is referring to and that is contributing to socio-ecological destruction, globally, is the forging of free-trade agreements that provide 'an enforceable international legal framework that transfers access and control over natural resources out of local hands and into those of the highest bidder in the global market-place'. (1998:355) The following is a prime example of how free-trade agreements have the potential to place the agendas of corporations, shareholders, and governments ahead of those of the local people who are living in the environments in question. Suzuki and Dressel (2002), in *Good News for Change: Hope for a Troubled Planet*, recount the story of a highly successful local co-operative up against one of the world's three largest multinational corporations, Mitsubishi. The story unfolds in Baja California, Mexico. What follows is a condensed summary of the salient points.

El Cooperativa Pesquera de Punta Abreojos is an economically thriving, environmentally responsible community of 3000 people living and working amongst their incredibly biodiverse lagoon and forests. While their lagoon, San Ignacio, is home to three species of endangered sea turtles and countless other marine and terrestrial species, it is one of only three places on Earth where the Pacific gray whale can breed. San Ignacio is the last breeding ground uncorrupted by industry or pollution. (Suzuki and Dressel, 2002:54) In 1979, San Ignacio was designated as a whale sanctuary by Mexico; it then became part of the El Vizcaino Biosphere Reserve, the largest protected natural area in Latin America; and in 1993, was named a world heritage site by the United Nations.

One hundred and twenty kilometres north of San Ignacio, Mitsubishi had been operating an enormous saltworks on another lagoon since the 1950s. However, in the

early 1990s, Mitsubishi, in a joint venture with the Mexican government, decided to close their operation and open a bigger operation at San Ignacio. It was to be almost entirely mechanized, eliminating 600 of the 800 workers who were employed at the time. Water was to be pumped out of the lagoon at a rate of an Olympic-sized swimming pool every two seconds, to fill evaporation ponds. The remaining liquid in the evaporation ponds, called bitter brine waste, is toxic to marine life, containing such compounds as boron, iodine, bromine, potassium chloride, and magnesium sulphate. This toxic waste was to be pumped back into the mouth of the bay at a rate of 22,000 tons a day. A pier over a mile long would be built in the pathway of the migrating whales, over the top of the existing fishery.

There was mounting opposition by the Mexican people to the construction of this new saltworks. Their government's response was that it could not afford to pass up the \$120 million U.S. in foreign investment for the construction of the facility and the expected \$80 million annual revenues through the operation of the plant. El Grupo de los Cien, a Mexican environmental organization, initiated what would become an international campaign to ban the construction of the facility. Support came from all corners of the Earth, including the Japanese people and the European Union, which threatened trade problems with the Mexican government if they did not withdraw consent for this facility. When Mitsubishi retaliated with a defence of their environmentally sound practices in their existing saltworks, investigators uncovered 298 violations of Mexican environmental law. With this information, fifteen mutual fund companies refused to buy Mitsubishi stock unless the saltworks was abandoned. 'On March 2, 2000, then-Mexican President Zedillo announced that the government still deemed the project both

economically and environmentally feasible, but nonetheless it was cancelled'. (Suzuki and Dressel, 2002:57) The eight million tons of salt that would have been extracted from this thriving community was to be used in the expanded production of polyvinyl chlorides, or PVCs. PVCs are a chemical known to be the primary hormone disrupter implicated in the increasing numbers of girls beginning to menstruate at the age of eight and boys being born with small or deformed penises. (Suzuki and Dressel, 2002:57) The authors conclude:

Our current global value system has made it necessary for thousands of people to expend extraordinary amounts of energy, time and money to save something that was supposed to be massively protected from this kind of industrial development in the first place. And it might easily have been worse. Currently, under the laws of the NAFTA U.S. /Mexico/Canada trade agreement, had Mitsubishi been an American or Canadian company, they could have sued the Mexican government for millions of dollars for the revenue they *would* have made if they hadn't been compelled to leave. It's just a stroke of luck that the World Trade Organization, of which both Mexico and Japan are members, hasn't yet been able to push through its Multilateral Agreement on Investment (the temporarily derailed MAI), which would have permitted such corporate lawsuits against governments world-wide, instead of just between Canada, Mexico and the United States. (2002:69)

It is evident that the trade rules established by these emerging free-trade agreements 'systemically punish ecologically-sustainable practices while rewarding environmentally-destructive ones'. (Menotti, 1998:354) Another key area where Menotti argues that the global economy is proving to be destructive to nature is the globalizing of financial markets. He states that 'because globalization provides unprecedented opportunities to increase one's return on capital, investors' expectations have been raised to levels that can only be achieved through wholesale exploitation of the natural world'. (1998:355)

3.3 A Question of Governance

David Korten describes the originally intended roles of the World Bank, the International Monetary Fund, and the International Trade Organization (ITO), collectively known as the Bretton Woods Institutions. He states that these institutions were designed to help national governments regulate trade in a way that would strengthen their domestic economies *and maintain balance* in the global system. He remarks that while many of the assumptions upon which these institutions were founded were valid, ‘two of the most important were deeply flawed’.

The first erroneous assumption is that economic growth and enhanced world trade would benefit everyone. The second is that economic growth would not be constrained by the limits of the planet. (Korten, 1996:21)

Maude Barlow, chair of the Council of Canadians, and co-author of *Global Showdown*, indicates that John Maynard Keynes, the architect of the Bretton Woods Institutions, intended for these institutions to be democratically overseen by the UN and that they were to regulate trade while incorporating all the basic UN covenants. With reference to the ITO, Barlow and Clark state that

It had rules against dumping of commodities and toxins, rules to stop global monopolies, and provisions to put a stop to anti-competitive corporate practices. It would even have allowed a country for reasons of national economic sovereignty, if this were necessary, to maintain the goals of full employment and social security. (2001:56)

The authors describe how the eventual downfall of a truly democratic employment of a Keynesian free-market economy was the result of a U.S. economy that had become highly industrialized in their war effort, producing more goods than they could consume, and even more than a recovering post-war/Europe could consume. Compounding this was the ever-looming threat of communism and fear of another war if industry could not

keep on producing and creating jobs. The seeds of a neo-liberal ideology were being sown in every country around the world that set the stage for the creation of the General Agreement on Tariff and Trade (GATT). Barlow and Clark state that

The U.S. killed the ITO in a single Council vote, creating the GATT in its place, and it then removed all three institutions from UN control, basically making them arms of the U.S. Treasury Board. (2001:56)

It is evident that John Maynard Keynes' vision of a democratic, transparent trade body that adheres to a code of social and environmental ethics has been lost upon the players in the global trading arena of today. Unfortunately, the consequences of 'an ever-continuing expansion of economic output and intensified competition is destroying the regenerative capacities of the ecosystem on which we and future generations depend'. (Korten, 1996:23) Quite rightly, Korten suggests that whether the global economy grows or shrinks is 'largely irrelevant' and, therefore, 'no longer a valid public policy priority'. He does insist that a more appropriate concern be 'whether the available planetary resources are being used in ways that: 1) meet the basic needs of all people; 2) maintain biodiversity; and 3) ensure the sustained availability of comparable resource flows to future generations'. (1996:24)

Menotti describes how our present economic paradigm is failing people and the planet. He argues that the rolling back of national regulations to attract more foreign investment is weakening environmental protections and citizens' rights. (1998:355) He provides a powerful example involving the United States logging industry. He explains how, due to decreasing access to forest resources, increasing regulatory costs, and greater competition from cheaper imports, the 1995 Timber Salvage Rider was created to serve as a sort of 'Global Competitiveness Restoration Act' for U.S. logging companies.

Without a hearing or proper committee vote, the rider was attached to the Rescissions Act of 1995. This Act rescinded \$16 million from national programs, while it handed out millions of dollars in subsidies to the logging industry. (Menotti, 1998:356) The Timber Salvage Rider suspended all laws applicable to logging in National Forests in the United States, including the Endangered Species Act, the Clean Air Act, the Clean Water Act, and the National Forest Management Act. (Menotti, 1998:356) This allowed the industry to harvest double the amount originally planned by the Forest Service over the next two-year period with the costs of the increased logging activities being absorbed by the taxpayers. The costs included degraded salmon habitats, damaged watersheds, and the building of logging roads into the country's last reservoirs of biodiversity. (Menotti, 1998:358)

During that same period of time, British Columbia's forest industry 'experienced record profits for the second year in a row' due to a high-volume production and hugely export-driven operation of low value-added commodity products. (Burda and Gale, 1998: 555) Indeed, Burda, a Senior Researcher with the Eco-Research Chair of Environmental Law and Policy, University of Victoria, and Gale, a scholar with the Department of Political Science, also at the University of Victoria, remark that

The commodity orientation of the industry favours large, publicly traded corporations, which now account for 85% of the province's total allowable annual cut or AAC. This orientation has led also to a significant decline in BC's old-growth forests, creating public concern over loss of biodiversity, soil erosion, stream siltation, visual quality, and damage to fisheries habitat and domestic water supplies. Moreover, while volume-based production generates corporate profits, it does not maximize the potential for jobs, government revenue, and community stability. (1998:555)

As the B.C. logging industry depletes its old-growth forests, there is increasing competition from countries such as New Zealand, Chile, Indonesia and Brazil who are

exporting large volumes of plantation wood and wood fibre at low cost into foreign markets. The relatively unexploited natural forests of Russia are now being cut, posing even more of a threat to the long-term viability of BC's forest industry. (Burda and Gale, 1998:564)

Burda and Gale argue that BC's forest industry composition is 'underdeveloped' and that 'little effort is being made to lower the overall volume of production necessary to achieve a sustainable value-added forestry economy'. (1998:566) They point out that, while Canada's wood product exports have increased at the same rate as its GNP, the country's forest harvest has increased substantially. Sweden, on the other hand, has reduced its wood harvest, while maintaining its ratio of forest product exports to GNP, by including more higher-value-added products such as specialty wood products and fine paper. (Burda and Gale, 1998:565) The authors conclude that corporate profits will not suffer as the BC forests decline because corporations can easily move out of BC and into countries where low-cost fibre is now more accessible.

3.4 Externalizing Nature: An Essential Element of the Present Paradigm

In an article spanning thirty pages, entitled 'Globalisation and its critics: A survey of globalisation', *The Economist* sets out to inform the reader of the many criticisms by the 'sceptics' to global economic trade, referred to here as globalisation. In the first 25 pages, the authors of the article execute a litany of arguments against global economic trade by 'the sceptics' and a chorus of counter-arguments by the proponents who insist that 'globalisation' is good for economic growth. The main issues they address are captured by their sub-titles throughout: Profits over people; Grinding the Poor; Is

government disappearing? A crisis of legitimacy; A plague of finance; Who elected the WTO?; and finally, A different manifesto. The 'environment' is mentioned for the first time on page 20, where the authors discuss the pros and cons of governments running budget deficits. They remark that a criticism of 'the sceptics' is that

...[T]he need to keep companies internationally competitive leaves governments no choice but to dismantle health and safety regulation or to ease up on environmental rules. [However], in reality, the global capital market makes it easier to run big budget deficits, because there is an infinitely larger pool of funds to tap. (The Economist, 2001:20)

There is no further mention of the environment as they repudiate the 'race to the bottom' argument, until page 26, where they enter into another discussion of the 'race to the bottom'.

In the regulation of products and processes, with respect either to safety or to environmental impact, signs of a race to the bottom are equally hard to find. All the movement is the other way. Everywhere, the adoption of more demanding environmental standards gathers pace as incomes rise. (2001:26)

I argue that the externalization of nature from humans and their local economies, and the associated costs of this externalization, are gathering pace as the incomes of a relatively few rise. The authors in this same article contrast the Asian 'tigers' with other countries, such as India and Pakistan, that 'separated themselves for so much longer from the international economy'.

...[A]lmost everywhere, trade has been good for growth...The lessons about what world markets did for the tigers in the space of few decades, and the missed opportunities of, say, India (which was well placed to achieve as much), have already been forgotten by many. (2001:12)

If we consider Japan and its environmental initiatives for a moment, it is evident that Japan has played somewhat of a leadership role in establishing environmental legislation, both domestically and internationally. Indeed, it was Japan's Environment Agency

Director who proposed the establishment of the World Commission on Environment and Development to the United Nations Environment Program in 1982. (Schreurs, 2000:118)

However, Japanese corporations have been largely responsible for the deforestation of the tropical forests in Southeast Asia. (Schreurs, 2000:138-39) In a section entitled 'Ex-Situ Conservation', the author explains that

Japan has been widely criticized for the ecological shadow that its economic activities cast on other parts of the world...One particularly important area to consider is the role Japan has played in tropical deforestation. Apart from the producing countries themselves, the main actors with influence over the fate of tropical forests are the importers. As the world's largest importer of tropical hardwoods, Japan has played a major role in the deforestation of the Philippines, Indonesia, and Malaysia. Japanese corporations are now moving into Papua New Guinea. (2000:138)

Previously, I described the activities of Mitsubishi in Baja California, Mexico, that clearly illustrated how the economic growth of a Japanese corporation externalized the costs of its saltworks operations to the ecological and social well-being of a once thriving community, and ultimately, to the potential for any other small scale economies by the local people. While the authors of *The Economist* might be correct in suggesting that economic trade with the international community has brought increased economic growth and material wealth to 'Asian Tigers' such as Japan, they neglect to acknowledge the externalized ecological and social costs to local communities, many of them indigenous, living in Southeast Asia, or anywhere else they do business.

I will draw on the same comments by *The Economist* regarding 'the (relative) economic position of India and Pakistan' (2001:12) to argue that economic growth is not synonymous with quality of life and/or sustainable futures. Kerala, India, with a population of 30 million people, boasts a 90% literacy rate; over 90% of the people own land; almost a third of its land is still forested; and they have the highest rate of poverty in

the country. (Suzuki and Dressel, 2002:327-331) The authors, in their final chapter entitled 'Breaking out of the box: New ways to think and to learn', make the following observations and comments. They remark that because of its 'politically active and informed populace, Kerala has remained outside the global economic free-for-all of international trade' and that even with a largely stagnant economy they have been 'singularly successful at implementing development through distribution.' (2002:329) Despite global economic claims of increased GDP and increased income in India, ever since the 1970s, statistics show that between 1972 and 1994 the average caloric intake for all of India actually dropped 5 % in rural areas while Kerala showed a caloric increase during the same time period. (Suzuki and Dressel, 2002:329)

These figures are very significant, because they help illustrate the fact that a country that is performing well in terms of mainstream economic measurements, such as GDP and level of participation in the global economy, is not always one that is actually enriching its general population. (Suzuki and Dressel, 2002:329)

In contrasting the social and ecological well-being of Kerala with the Punjab, India's most prosperous state, Suzuki and Dressel indicate that even with a per capita income 2.7 times that of Kerala's, 14% of children in the Punjab are severely malnourished, compared with only 6% in Kerala. (2002:330) Also, the mass adoption of industrial farming technologies in the Punjab, only accessible to the wealthy, is draining the ground water and compromising the ecological capacity of the region with its heavy dependence on fertilizers and pesticides. (Suzuki and Dressel, 2002:330)

Pakistan, another country mentioned by the authors in *The Economist*, as 'separating themselves from the global economy', is also adopting agricultural industrialization. Daanish Mustafa, from the Department of Geography at the University of Colorado, contrasts the geographies of vulnerability and exposure to flooding of the people living in

Pindi with those living in Qatalpur. Pindi, a village with no electricity, potable water supply, or sewage disposal facility is connected to the main highway by a dirt road and the majority of the residents are landless. Qatalpur, on the other hand, which is 20 km from Pindi, lies on somewhat higher ground, has electricity and potable water, and is connected to the highway by a high-quality road. Four major landlords dominate Qatalpur, each of whom own between 400 and 600 hectares of prime agricultural land. These landlords belong to one of the most politically influential families in the country. (Mustafa, 1998:296)

The Sidnai spillway channel, built in 1962, diverts floodwaters away from Qatalpur and into a river that feeds Pindi. The major floods of 1988 and 1992 forced the residents to live on the road for months before their land and homes were dry enough and safe enough from water-borne diseases. (Mustafa, 1998:298) Pindi residents received virtually no relief while the residents of Qatalpur reported active relief efforts during these floods. Mustafa remarks that

Everybody in Pindi and Qatalpur understood their exposure and vulnerability to floods as a function of their powerlessness and poverty. The Sidhnaï spillway design serves the interest of a powerful few, thereby transferring a disproportionate level of risk onto the weak. (1998:301) The same factors that contribute to inequitable and unsustainable development at the national level scale also contribute to vulnerability of communities and individuals to flood hazard at the local level. (1998:304)

3.5 More on Governance: The Canadian Experience

With this in mind, I argue that these socio-political factors to which Mustafa refers could be extended to the trans-national scale. The Economist observes that ‘governments have been known to oppress their subjects’ (2001:15) The authors argue that global markets with open borders make oppression more difficult and, therefore, ‘are plainly an

ally of human rights' (2001:15) They do concede that democracies are capable of oppression too, and that, 'one needs to recognise that some constraints on democracy are desirable, and then ask whether the constraints imposed by markets are too tight' (*The Economist*, 2001:15).

Korten articulates very clearly that the constraints currently being imposed by our global free-market economy are, in fact, too loose.

The issue is not the market per se. Trying to run an economy without markets is disastrous, as the experience of the Soviet Union demonstrated. However, there is a fundamentally important distinction between markets and free markets. Contrary to the claims of ideologues who preach a form of corporate libertarianism, markets need governments to function efficiently. It is well established in economic theory and practice that markets allocate resources efficiently only when markets are competitive and when firms pay for the social and environmental impact of their activity – that is, when they internalize the costs of their production. This requires that governments set and enforce rules that make cost internalization happen, and, since successful firms invariably grow larger and more monopolistic, governments regularly step in to break them up and restore competition. *For governments to play the necessary role of balancing market and community interests, governmental power must be equal to market power.* If markets are national, then there must be a strong national government. By expanding the boundaries of the market beyond the boundaries of the nation-state through economic globalization, the concentration of market power moves inevitably beyond the reach of government (Korten, 1996:25)

To illustrate this, one must consider our present global governance structure. Currently, governance decisions regarding global trade and investment are being executed through the Structural Adjustment Programs (SAPs) of the World Bank and the IMF, and the trade agreements negotiated under GATT (the WTO since 1995). A review of the IMF's 1995 'Consultation with Canada' sheds some light on why our Liberal government has seen fit to cut spending on education, health care, and the environment. According to Suzuki and Dressel, in Article IV of this document in a section entitled 'Areas of Adjustment', the IMF strongly encourages Canada to reduce spending on all of our federal programs, including through cuts in transfers to the provinces, to encourage

greater efficiencies; they also suggest interest-bearing student loans for post-secondary education; they recommend eliminating services by the CBC, transfers to VIA Rail, the CMHC, the NFB, the Canadian Film Development Corporation; they suggest 'there may be a limited need for an extensive federal regulatory or supervisory presence' in policy areas including agriculture, natural resources, Indian and Inuit Affairs, social, fisheries, and industry; finally, all of these recommendations are made 'with a view to increasing the private sector's responsibility for such activity'. (2002:77)

Robert Paelke, professor of environmental and resource studies and political science at Trent University, reviews the decline of environmental protection in Canada over the past decade. Paelke argues that any policy or economic variable that significantly affects production costs, including environmental protection, is viewed as needing to be avoided by governments if a medium-sized trading oriented economy such as ours is to remain competitive in the global market. (2000:165) He adds that this perspective combined with the election of extremely right-wing governments, in Alberta and Ontario (before 2003), and a huge Canadian debt, set the stage for rapid cutbacks in government spending on many different kinds of public programs. The elimination of a significant portion of industrial employment in Ontario during the early 1990s following the NAFTA was exacerbated by deregulation and the removal of the security of national trade barriers. (Paelke, 2000:166) One last critical perspective that Paelke brings forth is that decentralization and the down-loading of environmental duties by the federal government to provincial governments (Harmonization Accord) has resulted in serious environmental cutbacks at the provincial level and the further down-loading of environmental duties

from the provinces to the municipalities, thereby maximizing the relative power of multinational economic entities. (2000:173)

Paelke's last point is extremely important when considering the Canadian experience throughout the 1990s and into the new millennium. Our federal government shed many of its social and environmental responsibilities in order to eliminate the deficit, thereby remaining competitive in a fiercely competitive global arena. By doing so, it has set up a situation that has weakened the capacity of Canada to be effective in protecting the environment, especially when up against trans-national corporations whose activities often stress ecosystems' capacity to function and deteriorate air, water, and soil quality. The weakening of a government's capacity to protect its ecological and social wealth is a significantly detrimental outcome of the globalization of economic trade, not only in Canada, but world-wide.

Karen Litfin, an associate professor of political science at the University of Washington, studies advocacy coalitions operating along domestic-foreign frontiers. Her work focuses on the frontiers that pertain to globalization and Canadian Climate Change Policy, specifically. She especially notes Canada's shift from an activist position to a more cautious position over the past decade or more. She argues that the twin phenomena of economic globalization and the internationalization of environmental affairs are 'blurring the distinction' between at least some policy subsystems and the international arena. (2000:236) Appropriately, she indicates that 'climate change is by definition an internationalized environmental issue, even though both its causes and effects – socio-economic, ecological, and political – are local and regional in character'. (2000:237) Rightly so, Litfin observes how local interests are increasingly shaped by global

institutions. Indeed, the first concession made by *The Economist* that there might be some truth to the claims by ‘sceptics’ of economic globalization is that

The WTO is a kind of embryonic world government, but with none of the checks and balances that true democratic government requires. In short, it is an embryonic world tyranny. That is why, in the view of many sceptics, it is the most dangerous of all the institutions of globalisation. (2001:26)

3.6 Conclusion

The scope of decisions being made in a less than transparent, undemocratic fashion is far reaching and is proving to have significantly negative consequences for ecological and social communities around the world. Policies are such that civil society is rising up as was demonstrated in the case of El Cooperativo Pesquera and as is about to be revealed in the findings of my study in Ottawa. And, as has been illustrated throughout this and previous chapters, socio-economic, political, and cultural institutions and practices operating at many scales are being shown to be compromising the capacity for ecological and social systems all over the planet to function in a manner that is conducive to their continued functioning for generations to come.

The industrial revolution of the past couple hundred years has been facilitated by incredible feats of genius and technology and while these feats, and the more recent global expansion of this industrialization, have allowed many of us on this planet to enjoy a more physically comfortable life, they have simultaneously contributed significantly to our conceiving of nature as something which exists outside of us, resulting in wide-scale ecological decline and the downfall of human communities all around the world. For, in our enormous capacity to re-arrange the material world, driven in large part by curiosity and wonderment, science and technology have contributed to us becoming separated,

conceptually, from that which we find marvellous – and that which sustains us. Our modern political economies with hugely disparate modes of production and consumption, that offer great wealth for some, poverty for many others, and, arguably, unsustainable futures to all, is calling our very role in nature into question.

Lake and Hanson argue that more geographic research is needed on urban sustainability as geography with its 'shared traditions of society-space and nature-society studies, is well-positioned to contribute to understandings of urban sustainability'. (2000:2) Being mindful of these multiple perspectives on the nature-society nexus, I have situated my research in a local context, as such, with those engaged in activities they believe are contributing to ecologically and socially sustainable futures. These people are challenging the powerful knowledge constructs that are the foundation of our socio-political institutions and which have contributed greatly to our conceptual chasm from nature. I have illustrated how ecological decision-making is becoming highly politicized and dominant discourses in environmental science and political economy are being contested. What follows in the next chapter in methodology is a description and explanation of how I have situated by research ontologically, epistemologically, and geographically.

CHAPTER FOUR: METHODS AND METHODOLOGY

I begin this chapter with a brief discussion of my own positionality and identity as a researcher. Researcher reflexivity is a theme that runs throughout this chapter and, indeed, the remainder of my thesis. A rationale for my methodological approach is developed with an emphasis on the relationship between power and the construction of knowledge. An in-depth discussion of how I came to choose my research subjects follows, including a careful look at how our respective positions and identities impact the research process. Details regarding the specific methods of data collection are provided, including a reflection of how these methods have likely influenced the knowledge produced in this project. An overview of the research instrument is presented which includes a brief explanation of the flow of questioning and how these questions were employed. (See Appendix I for the research instrument)

4.1 Researcher Identity and Positionality

As a human geographer researching people's relationships with nature, I have entered this project with a fairly clear view of what I believed to be true regarding the significance of people's experiences in nature as contributing to conservationist attitudes and behaviours. While our human relationship with nature has remained an important question throughout and, I would argue, requires further investigation, I would be remiss in not attending to the many other more structural determinants and enabling conditions that are shaping nature(s) and people in nature(s) – the plural emphasizing the diversity in the ways in which people conceive and attach meaning to this term. In wrestling with how best to approach my own research I discovered that my worldview was being

challenged at every turn and that, hitherto, I had been somewhat uncritical of my relationship with nature and indeed, the beloved object of my affection. This is not to suggest that I have forgone my view of nature as a wondrous living, breathing refuge to be treasured. It is not by accident that I have situated myself in a picturesque venue overlooking a river, surrounded by trees, birds, and an ever-changing sky to provide inspiration as I write these pages. I am constantly seeking spaces where other-than-human features are more prevalent in the landscape than are our modern built environments, in order that I might feel more grounded within nature and, indeed, myself. However, I am cognizant of the fact that drawing clean drinking water from the ground and swimming in waters unpolluted by industry and human activities, generally, is a privilege - a luxury, enjoyed by relatively few. The challenge in such a research endeavour then for me has been to be at once mindful of not only the causes of ecological decline but the social injustices that can and do occur when championing 'the environment'. Although my research does not address the imperialism of global environmentalism, I have attempted to be critical throughout my methodology of the many socio-political factors that influence the way in which people are able to engage with nature. It is through a critical deconstruction - a careful sifting through of environmental discourse - that I have learned a certain degree of humility on the road to a deeper understanding of what humans in nature (or nature in humans) might mean, for some.

In preparing for my own research, the work of numerous scholars from a diversity of disciplines has been integral in assisting me to negotiate the multiple layers of this complicated and hugely political project. In attending to the politics of knowledge

construction I quickly discovered that the seemingly simple task of choosing whom I might interview was closely tied to my own political biases and positionality as a researcher.

4.2 Methodology

A number of theories on how knowledge is constructed and what is considered 'truth' or 'reality' have informed which methods and, indeed, which methodology I have employed throughout my research. To borrow from Hoggart, Lees, and Davies,

methodology is a more encompassing concept that embraces issues of method but has deeper roots in the bedrock of specific views on the nature of 'reality' (namely in ontology) and the grounds for knowledge (namely in epistemology). (2002:1)

This project has set out to explore why certain people have become involved in environmental advocacy; how they have met with and challenged the discursive practices, and the relative power associated with these practices, of individuals and institutions, that are counter to and compete with their own world-views; and what the implications of their activities and discursive practices might mean for greater society. As Rose might describe my 'tactics' in this project, they have been about 'turning extraordinarily complex power relations into a visible and clearly ordered space... [thereby] analysing the terrain of power in which research takes place'. (1997:310) Specifically, and as stated earlier in the introduction, I have posed the following question: *How is knowledge being challenged, re-imagined and re-situated by environmental and social activists in the Ottawa region for the purposes of effecting change toward more sustainable futures?* Indeed, I would argue that embarking upon any research project today that studies the human-nature interface without analysing how power is kneaded in

and around the political economy of the environment is, at best, a superficial treatment of the most contested problem of our time. In analysing the discourses of those involved in local environmental projects in the Ottawa region, this methodology affords a window to the movement of power through the stalwart efforts of those entangled in struggles amidst well-established norms, codes, natural laws, and disciplines. (see Foucault, 1980:106) For as Foucault indicates, ‘it is through the re-appearance of ...these local popular knowledges, these disqualified knowledges, that criticism performs its work’. (1980:82) In listening to the discourses of those participating in this project, the aim has not been to discredit or dismiss entirely the truth claims they take issue with but, rather, to locate the dissonance created by the power struggles between these local knowledges and the larger-scale, seemingly universal indoctrinations of our social institutions. Again, as Foucault remarks

We are concerned, rather, with the insurrection of knowledges that are opposed primarily not to the contents, methods or concepts of a science, but to the effects of the centralizing powers which are linked to the institution and functioning of an organized scientific discourse within a society such as ours. (1980:84)

In other words, whose knowledge or whose science counts and to what end is this science utilized? How does the exercise of this power through discourse then translate into the politics of people in their environment? Essentially, ‘what rules of right are implemented by the relations of power in the production of discourses of truth?’ (Foucault, 1980:93) To follow Foucault’s discussion on the triangle of power, right, and truth, very simply he is arguing that by delimiting rights through truth claims, power is exercised.

There can be no possible exercise of power without a certain economy of discourses of truth which operates through and on the basis of this association. We are subjected

to the production of truth through power and we cannot exercise power except through the production of truth. (Foucault, 1980:93)

So, in setting out to study people working in their communities on behalf of ecological and social well-being, it is important to look for the power relations that shape and are shaped by their struggles and how these local struggles are part of a more broadly defined political economy. Scott, in his book entitled *Domination and the Arts of Resistance*, speaks to the potential for analysis between what he refers to as the public and hidden transcripts of political discourse, where public transcripts are those open interactions between ‘subordinates and those who dominate’ and hidden transcripts, by contrast, ‘characterize discourse that takes place off-stage...and is produced for a different audience and under different constraints’ (1990:2,4-5). In a discussion on the forms of domination that continue to operate in British Columbia in the aftermath of colonial power, Braun remarks that, ‘Such power is often hidden, in part because discourse produces its own truth effects while simultaneously limiting the field of possible statements about a given topic’ (2002:23). From another perspective, Laurie, Dwyer, Holloway, and Smith make reference to the rise of new social movements and the new forms of doing politics, assumed to be more representative and democratic because of their grassroots origins (1999:25) They remark that ‘their informal structures contrast with the clearly defined hierarchies and power relations of formal politics’ (1999:25)

In speaking with people working in both grassroots organizations and government offices I believe I have been able to gain access to some of the workings of power and politics at the ground level and of a less public and formal nature.

Each participant will be familiar with the public transcript and the hidden transcript of his or her circle, but not with the hidden transcript of the other. For this reason, political analysis can be advanced by research that can compare the hidden transcript

of subordinate groups with the hidden transcript of the powerful and both hidden transcripts with the public transcript they share. This last facet of the comparison will reveal the effect of domination on political communication. (Scott, 1990:15)

And, in so revealing the effect of domination, 'counterhegemonic discourse is elaborated' (Scott, 1990:200) thereby lending support to the eco-socialist project. (see Escobar, 1996)

4.3 Participants in the Study

When this project was originally conceived, I had intended to interview those in the Ottawa region engaged in some form of environmental advocacy as well as private landowners, including farmers. Before I began my formal study, I met with a few people from the Rideau Valley Conservation Authority (RVCA), for example, to learn more about their work involving the conservation of ecosystems in the Rideau River watershed, including their interactions with landowners. I had wanted to tease out the differences in how these two loosely defined groups might regard and, ultimately, engage with nature. I then considered this project to be outside the scope of a Master's thesis as I felt that the number of people with whom I would need to speak was too great to be treated with adequate depth. While I did interview one dairy farmer from another watershed and gained some important insight in conversation with him, I found that I was more intrigued by those who are championing the environment and the challenges and barriers they have faced. I also felt better equipped as a novice in the field of social research to begin with a project whereby my participants' views might be more closely related to my own. Having said this I recognize, as Ley and Mountz in their chapter on interpretation, representation, and positionality remind us,

In interpretation it is important to remain – as far as possible, and this is never far enough – sceptical of all accounts, rather than hone in on an interpretation whose politics seem congruent with the author's own. (Ley and Mountz, 2001:237)

So, rather than 'slip[ping] too readily into a partisan discourse' (Ley and Mountz , 2001:237), I am mindful that in my analysis and interpretation of discourse by participants whose views I generally share, my challenge has been to 'listen carefully to conflict, maximize polyvocality and contextualize narratives by discussing subjectivity in an effort to situate knowledge' (Ley and Mountz, 2001: 240). In an effort to maximize polyvocality, therefore, I have deliberately sought diversity among those I interviewed with respect to their environmental initiatives and their unique life experiences relevant to this project.

As well as having met with those from the RVCA, I also met with a friend and colleague who formerly chaired the Ottawa-Carleton Rural Stewardship Council, co-founded the Carp River Rehabilitation Project, and who has been involved in many other projects related to ecological protection. Along with many interesting insights gained from his experiences as an environmentalist, he provided me with an extensive list and some background information of those whom I might be interested in interviewing. Included in that list of potential interviewees was the document entitled the *Ottawa-Carleton List of Environmental Speakers* and the names of a number of rural landowners who have been encouraged to be part of a river rehabilitation project and for whom ecological protection, according to him, has been a lesser priority than the right to continue with traditional farming practices that could be considered as diminishing the ecological quality of the river. Again, while the potential for diversity in perspectives

was appealing, the scope of such a project seemed too great for the time available to address the complexity of socio-political factors.

Ultimately, I chose to purposively sample those in the Ottawa area who are active in socio-ecological advocacy in a variety of capacities so that I might explore what inspired these people to become involved in their respective projects and to explore, also, the challenges they faced and the manner in which they dealt with these challenges - in particular, challenges of contested knowledges. As such, I was not in search of a representative sample of environmentalists but, rather, particular experiences that turn on a politics of articulation and that have the potential to promote a greater social nature perspective and, arguably, sustainable futures. I was able to discern, in some cases, what people's educational backgrounds were and what their particular interests regarding 'the environment' were by reading through the descriptors in the environmental speakers list. While I was unable to make contact with all those I had pencilled in from my initial list, the number of potential interviewees snowballed as I spoke with people, thereby allowing for sufficient diversity to satisfy the aims of this project. In total, I interviewed fourteen people including eight women and six men, none of whom were from visible minority groups. Six of these participants were from the Ottawa-Carleton List of Environmental Speakers.

Participants interviewed included the following: an ecologist with the Ministry of Natural Resources; a woodlot owner of over forty years and member of the Forest Advisory Council for the City of Ottawa; two City of Ottawa councillors, both involved in conservation and reforestation projects; a dairy farmer whose family has been on the same land, west of Ottawa, for five generations; a scientist with the National Research

Council of Canada and community volunteer who initiated and single-handedly maintained a greening of school grounds project for just over a decade while her children were in school; a community volunteer activist involved with several projects related to urban nature, including Girl Guides, the Museum of Nature School Program, the Mayors Task Force on Re-Treeing Ottawa, and a participant in the Sawmill Creek Study; an environmental planner with the City of Ottawa and formerly of the Regional Municipality of Ottawa-Carleton; a former public administrator with the municipality in Manotick, Ontario, who was chair for Trees for Rideau and author of Restore the Rideau Workshop and Action Kit, with expertise in community organization, environmental planning, and working with volunteers; an environmental educator with the Ottawa-Carleton District School Board and key volunteer member of the Forest Advisory Committee with the City of Ottawa; a bio-chemist and co-founder of the Wetland Preservation Group in the Township of West-Carleton, and activist in a variety of ecological preservation and human-health issues; an ethologist and proponent of animal's rights and biodiversity conservation, and founder of The Biodiversity Museum of Ontario; a visual artist, author, activist, and proponent of school ground transformation for social and ecological well-being; and an author and proponent of 'green' economics and founder of The Sustainability Project -7th Generation Initiative.

The details concerning when, where, and how I engaged with these participants are described in the methods section of this chapter and in the chapters including my analysis, interpretation, and discussion that follow. I would like to address, first, some of the considerations made throughout the process of participant selection whereby I have

tried to remain reflexive, always checking my assumptions and presuppositions and how they might influence this entire project. Rose remarks that

Reflexivity in general is being advocated by these writers [feminist geographers] as a strategy for situating knowledges: that is, as a means of avoiding the false neutrality and universality of so much academic knowledge. Thus understood, 'situating' is a crucial goal for all critical geographers. (1997:306)

In an effort to situate the knowledge produced in this project then, it has been important that I consider every aspect of the research process, including my point of entry – my access to those participating in this project. As mentioned previously, my colleague who is co-founder and former chair of a stewardship council and river rehabilitation project provided me with the names of several people with whom I might be interested in speaking. Many of these people worked together with my colleague on various projects. Having spoken with him on a number of occasions regarding his involvement in these environmental projects and about my own pending research, I was quite familiar with his views on how best to approach ecological sustainability. Being forthright, I knew that anyone who had worked with him would be familiar also with his perspective on ecological restoration and conservation. While I respect and share many of his views, I had some concerns about how his arguments for how we should be dealing with ecological decline might influence those views expressed by my respondents. I was particularly concerned that they might feel further influenced if aware of my association with him – especially in his role as gatekeeper – or in this case, silent partner – in helping me establish who might prove 'useful' subjects in my research. While my association with him did not determine whether I could secure an interview with these people or not, it most certainly shaped the kinds of people whom I interviewed, in six of the fourteen cases. As such, in an effort to minimize the potential homogenizing of consciousness and

imagination, upon making contact with each of these potential interviewees by telephone, I simply indicated that I had found their name on the stewardship council's environmental speakers list. My colleague's name was only mentioned if it surfaced either in our initial phone conversation or in the interview and in the context of projects they had worked on together.

While trying, therefore, to distance myself from my colleague - not wanting to be perceived as having identical views - I did want to be regarded as empathetic to the diversity of ways in which people are engaging with nature and envisioning sustainable futures. Conscious of how my biases might restrict or encourage certain aspects of their stories thereby producing a narrative more uneven than it might have been otherwise, I restrained my enthusiasm when views I shared were vocalized during the interview and tried to draw out the tensions that arose when pressing them to consider perspectives alternative to their own. While I was not trying to mask my own position or agency as Katz (1992:499) warns against, it was also not my intention to portray a singular identity or essential position thereby quashing diversity and multiple ways of knowing. I looked upon these interviews, and the focus-group discussion that followed, as an opportunity to empower those participating in this research. (see Rose, 1997; Moss, 1995; Farrow et al., 1995; Kobayashi, 1994; England, 1994; and Nast, 1994). While I was not so disconnected socio-economically or culturally from my participants, simply being the researcher, the one who would ultimately analyse their discourse, defined a distance - a power-imbalance between us. (see Nast, 1994).

So, in 'forg[ing] critical, situated understandings by thinking through difference and similarity' (see Rose, 1997:313) throughout this research process, I have been at once

conscious of supporting, indeed, celebrating the differences between myself and my research subjects, yet of constructing a common knowledge – a counter-narrative to hegemonic political economy discourse – one that addresses ecological and social welfare. For as Barron remarks with regard to the Labrador Innu, ‘essentialist politics promoted by distant supporters has not been without risk or consequence’. (2000:87) So, just as painting all Labrador Innu with the same brushstrokes and suggesting (they) all share identical viewpoints on land rights and stewardship issues has proven problematic in their fight for justice, any attempt to represent those participating in this research project as having one voice or one identity would prove impossible and, ultimately, diminish the capacity to challenge the social relations of power that is at the heart of every one of their individual projects.

The danger of representational politics is that it may ultimately undermine the very goals of the movement it seeks to support. (Barron, 2000:100)

Rather, it is more beneficial to work towards what Barron (2000) refers to as a ‘politics of articulation’ or what Gibson-Graham (1994:215) refers to as ‘social research as a public engagement in the construction of alternative discourses’, whereby subject-positions are constituted and defined through the discursive process in contrast to positions and identities being predetermined and unchanging. While many of my subjects could be identified as being environmentalists, it is the more nuanced aspects of their individual characters, perspectives, and particular practices of struggle that make this project rich as they lend themselves to previously unimagined alliances and strategies that are contingent, partial and temporary perhaps but also attentive to cultivating and nurturing diversity and polyvocality when working in solidarity toward a shared goal. Further to this, in attending to the situating of researcher and subject positions, it is

interesting to note that many feminist scholars have remarked upon how 'self' or one's own identity is defined by a difference with the 'other'. 'A sense of self depends on a sense of being different from someone else' (Rose, 1997:314); 'Only when there is an Other can you know who you are'. (Fine, 1994:72); and '...this 'I' would not be a thinking, speaking 'I' if it were not for the very positions that I oppose, for those positions, the ones that claim that the subject must be given in advance, that discourse is an instrument or reflection of that subject, are already part of what constitutes me' (Butler, 1992:9). I only raise this concept of the defining roles of 'self' and 'other' in research to indicate how these same authors, Fine in particular, caution us against the colonizing effects of othering. Fine (1994:75) in her discussion on writing against othering refers to Spivak (1988) and Scott (1991) as asking that 'researchers stop trying to know the Other or give voice to the other and listen instead to the plural voices of those Othered, as constructions and agents of knowledge'. Again, while solidarity of a shared objective by a group of 'environmentalists' might be achieved through a research project such as this, a careful analysis of the diversity and the dissonance within and across each interview and within the focus group discussion is where much might be learned to further 'more progressive society-nature articulations'. (see Castree and Braun, 2001:18)

I admit to having carefully combed through the environmental speakers' list scouting for those whose background descriptions seemed to include a more social nature perspective rather than a purely ecological or biological perspective. I was searching for those who might have crossed into the messy and difficult territory of people in nature, considering not only the physical aspects of ecological decline but also the socio-political

factors playing an integral role in environmental issues. I found myself drawn especially to those who were involved in more grass-roots, community-driven organizations and projects. I think it is important to note that most of those involved in volunteer and/or low-paying community level environmental projects whom I interviewed were women while those in official offices were mostly men. In the focus group discussion one woman remarked that it was unusual for her to be in a discussion group where the women outnumbered the men. I could have invited more of the men whom I interviewed to participate but I felt that although the numbers might be more even, those voices actually heard throughout the discussion might not be. Also, the size of the group could have become too large for effective discussion, further diminishing the opportunity for some to be heard. More importantly, all those who I felt had the most to offer in a discussion on people in nature were invited, with only one declining because he was nearing a publisher's deadline. In any event and, as is often the case, there was one person, a woman, who participated in the discussion more frequently than some of the others but she did pose some challenging ideas to the group that encouraged a spirited dialogue.

Ultimately, the seven people I chose to participate in the focus group discussion were incredibly diverse with respect to their eco-socialist strategies, thereby furthering my understanding of how some people are negotiating sustainable practices. More on this follows in the methods section. I am convinced now, more than ever, that the power relations in environmental decision-making must be brought to the forefront and made more visible to greater society. The ecological and social significance or, rather, the social nature of political and economic practice must be made explicit through research so that society is better equipped to critically assess and separate the grain from the chaff

in all forms of information related to their physical and social worlds. In analysing the discourse found throughout my interviews and focus-group discussion I am working towards a framework to confront the socio-political challenges experienced by those who, through their volunteer community projects and their professions, are trying to effect ecological and social change. For as Unwin remarks with regard to the place of geography in critical science:

The task of critical geography is to reveal these inequalities, to persuade those in power of their likely repercussions, and to be actively involved in the creation of new forms of social and economic organization. In short, it is to recognize the disturbed being of our society, to adopt a self-reflective stance towards it, and to serve as the psychoanalysts of the condition of which we are a part...Critical theory places the emphasis of change back on those who undertake research. (1992:182)

4.4 Methods

While I did meet two of my interviewees when participating in a neighbourhood tree-planting event, my research did not involve participant observation but rather in-depth, semi-structured, one-on-one interviews which I recorded using a digital recorder and a follow-up focus group discussion which I had video-taped. I began making contact, by telephone, with the majority of those I eventually interviewed in April 2003. My first interview was held in May 2003 and my last was held in February 2004. Almost all interviews were held in either the homes or offices of the participants with the exception of one which was in a public restaurant which turned out to be extremely noisy and, thus, distracting. My focus group discussion was held in March 2004 in a conference room in a City of Ottawa buildings offered by one of the participants. The date and location were mutually decided upon by those participating through a series of e-mail correspondences.

I chose these intensive methods as a means to 'get closer to lived experiences and to explore beliefs and actions in terms used by those under investigation'. (Hoggart, Lees, and Davies, 2002:202) And to counter criticisms of such qualitative methods being soft in relation to traditionally, hard positivistic social science that uses quantitative statistical methods, Hoggart, Lees, and Davies argue the following:

Far from being 'soft', in the sense of simplistic, idiosyncratic or easy, methods of heightened intensity are 'hard', because they embrace rather than deny the dynamic complexity of society...To be clear, intensive methods ...are appropriate for exploring rationalities, implications and meanings. (2002:204)

I found the interview process extremely fascinating in and of itself, regardless of the subject-matter at hand. It was an interesting exercise to be offering only minimal verbal and non-verbal feedback throughout the interview in response to a participant's remarks when I am more accustomed to 'piggy-backing' in conversation to lend support as an active listener. As well as gathering threads of participants' stories to form my next question, I found myself modulating my tone of voice a lot to indicate my interest in having them continue. I was wondering if they, too, might be feeling at all uneasy with the lack of real dialogue, and with the knowledge that what they were saying was being recorded. Interestingly, however, many who had expressed concern initially, suggesting that they might not have much in the way to offer to my project, seemed to have little difficulty speaking to me with candour and at length about their experiences, concerns, ideas, and opinions on sustainability. In fact, I sensed from all my participants, especially those involved with volunteer community projects, that they were appreciative that someone should be taking so much interest in the work they do. I made the

assumption then, for the most part, not only were participants able to comment on their experiences and articulate their opinions freely but that they did so willingly.

The role of civil society as a whole and the relative support, or lack thereof, for the work of volunteers championing sustainable ecological and social communities became a theme arising from the focus group discussion that I coordinated some months after my interviews with individual participants. While civil society was not a theme that I had focussed on necessarily during the interviews I did support further discussion of it when it was raised as an issue by one of the participants in the discussion. Indeed, I thought it to be an important concept that I might have otherwise overlooked. As such, with respect to transparent reflexivity and the uncertainties of research practice, I support Rose when she remarks that

...there is no clear landscape of social positions to be charted by an all-seeing analyst; neither is there a conscious agent, whether researcher or researched, simply waiting to be reflected in a research project...[W]e are made through our research as much as we make our own knowledge... Thus the authority of the researcher can be problematized by rendering her agency as a *performative effect* (my italics) of her relations with her researched others. (1997:316)

Perhaps having targeted people for the focus group discussion who seemed pre-disposed to a social nature perspective including those active in community projects and the provincial ecologist and municipal environmental planner, their ability to be frank about their experiences was facilitated by their knowledge of my background in environmental education and advocacy. However, in the initial stages of setting up the interviews I shared very little about myself by way of introduction but simply focussed on the research I was setting out to undertake. More often than not I was asked, either at the beginning or end of the interview, about my background which contributed to my being perceived as an 'insider' or as having somewhat of a shared identity, I believe. By

asking participants to share their stories with me, especially when those stories included the challenges they have faced, I believe I was viewed as being empathetic. Many displayed frustration, disbelief, and even anger at certain points during the interview when discussing their on-going battles in protecting nature, including human health and well-being. While it would be incorrect and unproductive to assume that everyone in this project, myself included, shared a singular identity, what was particular to the majority – that of imagining alternative ways of people interacting with nature and countering hegemonic forms of political economies - greatly facilitated the interview process. (see Barron, 2000)

Perhaps the flow of questioning throughout helped in this regard. The first question I posed to participants asked them to describe the work they did in the community as it relates to the natural environment and to describe also any life experiences that might have led them to this type of work. This seemed an easy way to encourage people to talk about what they knew well and what they were passionate about. I had not yet asked them to form any opinions but to simply relay their stories. Since I had spoken with each participant in a preliminary phone conversation learning a little about the work they did, this information was useful as a springboard in forming my initial questions during the formal interview. Reminding them at the beginning of the interview that I was somewhat familiar with their work, I indicated that I was interested in gaining greater insight into how they came to be involved in their respective projects and what motivated them to persevere with their work. Through participants' stories and in the spirit of Scott's 'Experience', I wanted to situate my subjects' experiences thereby 'insist(ing) ... on the productive quality of discourse' (1992:34).

Treating the emergence of a new identity as a discursive event is not to introduce a new form of linguistic determinism, nor to deprive subjects of agency. It is to refuse a separation between 'experience' and language...Subjects are constituted discursively, but there are conflicts among discursive systems, contradictions within any one of them, multiple meanings possible for the concepts they deploy. And subjects have agency. They are not unified, autonomous individuals exercising free will, but rather subjects whose agency is created through situations and statuses conferred on them. (Scott, 1992:34)

Flowing into questions concerning early personal experiences they might have had in less-built areas of nature that they viewed as memorable or significant in some way, I asked participants to tell me how relevant and /or important they believed these experiences were in contributing to their beliefs, understanding and values of nature. In an effort to remain rigorous in my interpretation of participants' narratives of their socio-ecological tactics and practices, I was seeking to establish a context for these practices by drawing on their earlier experiences in places they referred to as 'nature'. In fact, as will be covered in detail in the last chapter, I learned that the reasons for participants' involvement in environmental advocacy and the connections between this involvement and experiences in 'natural places' are particular and contingent with no one path identical to the next. In reading history and interpreting the events or experiences that become history, Scott poses some critical questions and suggests the following:

Rather, it is a way of changing the focus and the philosophy of our history, from one bent on naturalizing 'experience' through a belief in the unmediated relationship between words and things, to one that takes all categories of analysis as contextual, contested, and contingent. How have categories of representation and analysis – such as class, race, gender, relations of production, biology, identity, subjectivity, agency, experience, even culture – achieved their foundational status? What have been the effects of their articulations? (1992:36)

To take this a step further, if as Scott posits, 'experience is at once always already an interpretation *and* is in need of interpretation' (1992:37), then it is relevant to discuss

how I have arrived at this knowledge – how the knowledge in this project has been produced. To be sure, some participants had difficulty with this question, pointing out that they had never given much thought to the concept of early and/or significant experiences in nature being relevant to present behaviours. It was interesting, however, to observe participants reflecting on past experiences that might be connected to their present involvement in environmental advocacy. Some seemed to have on-the-spot revelations about experiences that could be considered significant in shaping how they regarded nature, not having reflected on possible connections before. I would like to believe that these truly were revelations, however, I am aware that given the interview format and the researcher-researched relationship participants might have felt compelled or obliged to provide an answer for fear of disappointing or seeming incapable. For, as Rose remarks with regard to siting, 'siting is intimately involved in sighting' (1997:308). In my position as poser of the questions relative to that of my participants trying to satisfy my queries, it could be viewed as somewhat of a power imbalance.

As indicated previously, I had planned to address the more phenomenological aspects of our human relationship with nature and was trying to achieve this through the abovementioned line of questioning. I feel, however, that my treatment in this area was somewhat superficial and uneven across interviews and, therefore, I believe that this line of inquiry requires further consideration. Details of this loosely defined category of humans in nature inquiry are highlighted in the last chapter.

Other questions that broadly framed the interview included what participants believed the greatest environmental problems of the 21st century to be and what they believed the priorities of our society should be regarding ecological degradation, social well-being,

and political economy. Also, I asked if they thought environmental legislation was adequate, too restrictive, or not restrictive enough and what role they thought government and/or individuals should play in protecting the environment. Finally, we focussed on aspects of community activities they viewed as contributing to and/or detracting from sustainable futures. I used this set of questions as a guideline, referring to it only when necessary to move the interview along. In actuality, the majority of my questions were of the probing nature, asking participants to clarify and qualify their responses. In so doing, they might begin to recount a related story to support their initial response, as was often the case. I encouraged these elaborations to allow me to dig deeper and situate their interpretations and meanings.

Before delving into the challenging task of analysing and interpreting my data I describe first the transcription process from which the texts used in the analysis are derived. Secondly, a detailed account of how I have coded the one hundred and fifty pages of text produced is provided. An in-depth analysis of these texts follows in the following chapters, which involves both locating the (social) context of the discourse and interpreting the construction of participant's arguments throughout. The focus- group discussion is analysed separately in the latter part of the last chapter and is then contrasted with the discourse from the individual transcripts.

4.5 Transcription and Transcripts: Love's Labour (not) Lost

The time required to transcribe each recorded interview was substantial as each of the eleven transcripts is approximately one and a half to two hours in length. On average, it took an hour to transcribe ten minutes of a recorded interview. Some were easier to

transcribe than others depending on how quickly a person spoke, on their voice inflections – sometimes inaudible at times - and on their use of grammar and their speech patterns.

Listening to my own voice also provided a good opportunity to reflect on my skills as an interviewer. I found that sometimes my questions were too lengthy and/or multi-tiered so that I would have to summarize my own question. I'm not sure whether participants found this beneficial or a challenge to their understanding of the question. I also used the word 'yes' a lot to indicate that I was actively listening but this could have been interpreted as being in agreement with what they were saying. In some cases it probably was to indicate agreement, whether consciously or not, but mostly it was to validate whatever they were saying and to encourage them to continue – which seemed to have that effect. One aspect of the interview process that I was pleased with was the flow and balance of seriousness and light-heartedness throughout. I found that the interviews took a lot of energy and, no doubt, the participants found this too. I was challenging them to reflect upon and articulate their thoughts, feelings, and opinions about what I consider to be some fairly serious stuff. A sense of humour and moments of laughter throughout allowed for a little breathing room - a release in the tension before tackling another question.

It was interesting to listen to the exaggerated pauses or immediate responses that certain questions would elicit. The pauses were often followed by a 'thinking out loud' type of process, whereby the participant would begin by saying one thing - and then rephrase their initial statement. They might then relate a story to support their response. On the other hand, immediate responses were usually exclamations of strongly held

opinions. I am generalizing somewhat but the point is that I found re-engaging with the interview in this way an incredibly valuable experience. With the original recordings lost due to a computer hard-drive failure, I cannot expand much further on this aspect of the process. However, I did use a system throughout the transcription process to capture, on paper, some of these other forms of communication to help me in establishing the context for *what* was said in my analysis by expanding on *how* something was said if it sounded remarkable. I used upper-case letters throughout the transcripts to indicate when participants placed emphasis on their words by raising their voice. If they whispered something for emphasis I stated this in brackets beside the whispered words. If I couldn't hear something, usually because they were speaking quickly and/or quietly or mumbling I used round brackets. Where there was laughter or especially long pauses, I stated so. People often spoke in a series of phrases rather than complete sentences so I used three periods (...) to indicate a thought left unfinished and would place the period when the thought seemed complete.

After several hours of transcription I produced ten and 'a half' transcripts. The one interview that I conducted in a restaurant was particularly difficult to hear due to background noise and so I transcribed only half of it, intending to finish it upon completing the others. However, the hard-drive failure on my computer meant I lost all of the audio recordings except for the last, which was still on my Sony digital recorder. Fortunately, I had transcribed and printed into hard copy all of my interviews except for the remainder of the restaurant interview and the one which remained on my recorder.

4.6 Extracting Messages and Coding: The Importance of Being Earnest

Ultimately these ten plus transcripts have provided me with texts rich in environmental discourse that I have had the privilege of analysing, critiquing, and interpreting. A first reading of each transcript entailed making notes on what was emphasized in the texts and establishing common arguments that developed within a transcript. A second reading involved identifying themes or patterns throughout and across transcripts and taking note of differences of opinion and dissonance across transcripts. I then compiled a list of all of the face-value messages I extracted from these readings, recording who made reference to which messages. With similar messages being repeated across interviews by different participants, each of the fifty-two messages extracted has more than one participant's name attached to it. The differences of opinion and/or opposite viewpoints expressed by participants are noted in sidebars in the transcripts and are given careful consideration throughout the analysis.

4.6.1 Interpretive Repertoires, Meta-themes, and In Vivo Codes

In Jackson's chapter entitled 'Making sense of qualitative data', he refers to the distinction made by Strauss (1987) between 'in vivo' codes, terms used by participants themselves, and the more abstracted or constructed codes made by the researcher interpreting the data (Jackson, 2001). The fifty-two messages that I have extracted directly from the transcripts are considered, henceforth, as 'in vivo' codes. I have grouped the in vivo codes into 'meta-themes' – an initial interpretive exercise that involved categorizing or classifying messages into common themes from which eleven

emerged. From these eleven meta-themes, I further grouped them into what I consider to be the key messages or 'interpretive repertoires' in these texts of which there are four.

The interpretive repertoires that form the framework for this project are as follows: knowledge and power politics; governance and political economy; people and nature; and sustainable futures. These four interpretive repertoires are listed below in bold print, while the meta-themes from which they are derived are indicated in italics, with the in vivo codes presented as bullets beneath each meta-theme.

Knowledge and Power Politics:

Media Messages

- Role of mass media in consumption
- Power of messages - information and counter-information

Ecological Education

- Ecology, biodiversity, science education

Empowerment/Capacity Building

- Capacity building in communities - knowledge and environmental expertise
- Listening to children
- Human capacity for change is great
- Role of volunteer advisory committees
- Tapping into interested people in community
- Public consultation

Politics and Power

- Bullying and/or corruption by schoolboards, developers and industry
- Lack of resources and expertise by municipal and provincial governments to enforce legislation
- Proportional representation
- Monopoly game and globalization
- Inequities in municipal system
- Who does government represent?
- Concentrations of convenience (toxins in environment)
- Patriarchy
- Politics of Ecological Conservation
- Corporate power and control

Social Justice

- Social justice
- Local ecological knowledge
- Simultaneous policy

Governance and Political Economy:*Role of Government*

- Government control
- Government mistrust

Green Governance and Green Economics

- Human expansion and consumption threatening physical capacity of planet to support life
- Economic drivers/incentives to promote environmental behaviours
- Environmental quality linked to property values

People and Nature:*Relationship with Nature*

- Individual responsibility
- Connection with nature early in life
- Shift in thinking necessary
- Humans together with nature
- Humans dominating nature
- Empathy with animals and consideration for wildlife

Urban Nature

- Tree-planting and community involvement
- Urban nature and urban forests
- Defence of ecologically significant land easier than protection of community/social greenspaces and forests
- Social perspective/evaluation comes late in planning process
- Preservation of rare species and fragile habitats

Sustainable Futures:*Sustainable Communities*

- Tree-planting and community involvement
- Ecologically barren communities
- Water quality
- Greenfield communities not protected from development – role of long-term planning
- Community design and sustainability

Sustainable Communities (cont'd)

- Sustainability and self-sufficiency
- Local market economies
- Volunteer simplicity movement
- 7th generation planning
- Learning, Loving and Laughter – making a living vs. earning a living
- Living for now – with no regard for the future

Social Maturity

- Development of society is like that of a child

4.7 Conclusion

Ultimately, I have distilled two principal interpretive or discursive repertoires from the above messages that have been extracted and coded from the texts. They are as follows: 1) Knowledge, Power, and Political Economy and; 2) People, Nature, and Sustainable Futures. One repertoire is seamlessly woven into the next with knowledge and power weaving its way into political economy, which becomes easily entwined with people in nature and, the question of sustainable futures. These two discursive repertoires, therefore, represent how I have approached my analysis and, as such, have given rise to chapters five and six, whereby in chapter five I look at how those in this study have challenged the workings of knowledge, power, and political economy in Ottawa; and in chapter six, I explore how social natures and sustainable futures are being produced in Ottawa.

CHAPTER FIVE: CHALLENGING KNOWLEDGE, POWER, AND POLITICAL ECONOMY

5.1 Introduction

Without exception, every participant in this study elaborates upon their particular experiences in environmental advocacy as having been infused with the politics of knowledge and power relations. In their efforts to build more ecologically sustainable communities, not only have these people engaged in experiences rich in contested knowledges but they have done so critically, ever questioning how knowledge and power at multiple scales influence their political, social and ecological spaces. As such, in analysing their narratives, a complex web of discursive relationships among knowledges, power, political economies, and natures is exposed.

Attempting to be as thorough as possible in extracting key arguments and honouring the context from which they were derived I recognize that I am working in a double hermeneutic, interpreting others' interpretations of their lived experiences. I acknowledge also that others might read and interpret these narratives differently, which in no way lessens the validity of my interpretation but, rather, has the potential to enrich it. That said, what follows is how I have read and understood how those participating in this study are engaging with and problematizing questions of people and nature and articulating a political ecology.

5.2 A Question of Whose Knowledge Counts

5.2.1 The Art of Spinning: An Excerpt

The question of whose knowledge counts surfaces repeatedly throughout and across narratives by those engaged in their particular struggles to defend the socio-ecological well-being of their communities. In a discussion about the cosmetic use of pesticides with one of my participants whom I shall refer to as Mary, I learned of the revealing exchanges she had with a representative from a chemical industry lobby group, called the 2-4-D Task Force, that illustrate how knowledge can be cleverly massaged and utilized, thereby exercising power to maintain or regain control in any given negotiation. Mary, who holds a doctorate in bio-chemical engineering, provides the following account of these exchanges and her views on the ‘spinning’ of information and the power of messages and media campaigns.

...[T]he Ontario Environmental Coalition and the Ottawa Environmental Coalition... they are all pesticides applicators with this green name going around saying that, ‘Responsible use of pesticides will give us beautiful, healthy lawns.’ And the spin on all of this is, is... Orwellian. We need to have people committed to making a change but the crap that people have to sift through to get to the root of the matter with these very expensive media campaigns - lobbying campaigns from these chemical industries - [they] are throwing zillions of dollars into lobbying. Chemical industries are lobbying against any kind of action regarding flame-retardants, for instance. We have 600,000 tonnes of flame-retardants - of brominated flame-retardant - these ones that act a bit like PCBs, produced every year in North America. While in Europe, they say, ‘We have viable alternatives and we’re using viable alternatives and we’re not going to continue to let these things accumulate in our environment’. In North America you’ve got the chemical company saying, ‘No, Europe is going to go all up in flames because it’s not protecting its citizens from fire dangers and you’ve got to use our chemicals... and *spinning* it, so that legislators don’t know whether they’re coming or going.

We’ve got something like the 2-4-D task force where you’ve got millions of dollars spent lobbying and as soon as anybody says anything about the chemical 2-4-D... if you want to get a package from these guys, write a letter to the editor, have it published, saying ‘2-4-D causes cancer and it’s the worst thing!’ and you will be immediately contacted by this 2-4-D Task Force ... to set you right. I spoke before a

committee of the Senate about the Pest Control Products Act and I said, 'Well, because our federal government isn't taking full responsibility for the cosmetic pesticides and you're seeing that individual citizens are upset and municipalities are upset and are taking action ... I said, really this responsibility should be taken care of at the federal level and you should apply an additional level of precaution when you've got such an incredibly frivolous application of the pesticide. You've got every [municipal] councillor across the country having to evaluate material, which might otherwise be sent to the Pest Management Regulatory Agency - these councillors who are totally uneducated in this science evaluating these documents! And they're being sent big piles of documents. For instance, one of them discusses the testing of 2-4-D by people drinking it in a slurry of milk. And human testing of a pesticide is something which is not ethical and it wouldn't be considered part of the evaluation by the Pest Management Regulatory Agency and yet this information that would not... *could not* be considered by the PMRA is being put before our councillors!

So, I got this letter from the 2-4-D task force fellows, saying that I was being... defamatory. He was basically threatening me with some kind of legal action. So I wrote back to the Senate and said, 'Well actually, Mr. [X] was kind enough to provide me with a copy of this document', and I quoted it, chapter and verse. (much laughter) And so then the senate people wrote back basically saying that, 'Witnesses before the senate are protected by Canadian law and if you don't want to be thrown in the slammer because you're in contempt of Parliament you better shut up and leave her alone', at which point he came back all conciliatory and he said he was going to be in town and he wanted to get together with me. At that point I'd been reading about Gandhi and he said if someone wants to talk to you then you go talk to them. So, a friend of mine and I went along. I figured if he's only in town for a day, the longer he spends with me the less time he'll be up on Parliament Hill or down at City Hall! (chuckling) So we went along and talked with him... and that was very fruitful because... Well, he talked to us for an hour and half which is pretty good, so *that's an hour and a half that he didn't spend with our legislators*. But one of the concerns with 2-4-D is how it's carcinogenic and there's been tons of studies that have shown that 2-4-D is linked in some way - the USE of 2-4-D is linked to non-Hodgkin's Lymphoma and various other problems - reproductive problems and so on. And he is saying, 'No, no, no. 2-4-D is a million times less toxic than salt and it's just perfect.' And so I asked him, 'Well, *what about dioxin contamination of 2-4-D?*' 'There is no dioxin contamination of 2-4-D! It's only the 2-4-5-T', which was another component of Agent Orange. And 2-4-5-T has three chlorines instead of two so there's just that much more chlorine in it. So a by-product of the manufacturing of 2-4-5-T is the most toxic dioxin. It's actually more stable. It's more of a problem... it has to do with the configuration of the molecule. It binds more strongly to the aryl-receptor, which is kind of the first step in several mechanisms of toxicity, including carcinogenicity and endocrine disruption. Endocrine disruption can end up with cancers being formed because you lose kinds of checks and balances.

Anyway, when *he* said *dioxin*, in quotes, he meant 2-3-7-8, but when everybody else in the world says dioxin, in quotes, they mean one of a huge family of chemicals. *So this is how he was spinning it... he wasn't talking the same language!* He went around the same little circle, several times, and finally I said, 'Look, I'm a chemical engineer. I know that when you put those ingredients together in a reactor and you heat it up, high temperature, high pressure... if the pressure is a bit too high, if the temperature is a bit too high, instead of having that monomer, you're going to have those oxygen bridges form and you're going to end up with some dioxins! *I know it! You can't tell me it's not true!* So, finally I said, 'Look, I know that there are dioxins formed. I don't mean just that one form of dioxin, I mean one of many forms of dioxin'. *And all of a sudden, it was as if he had flicked a switch.* 'Oh yes, well, you know... in the plants they monitor the temperature of the reactor and if the temperature gets too high, then they pull that batch.' So, *he knew damn well that dioxins are formed. He knew all along.* And he knows what the health effects of dioxins are. But he's just spinning it 'No. This one particular form isn't made because there aren't as many chlorines involved.'

If we consider how the argument between Mary and the 2-4-D Task Force representative is constructed, it is evident that each party uses knowledge as truth claims to substantiate their arguments, thereby lending power to their respective causes. In Mary's case, her aim is to protect people from what she and her colleagues believe are carcinogenic agents found in pesticides – as she envisages humans as directly connected with the soil, water, and air to which the pesticides are being applied. In the case of the 2-4-D representative, his goal is to promote the 'safe' use of 2-4-D by consumers and to assure them of 'weed'-free lawns, thereby securing industry and shareholder profits. This representative is also providing emotional relief, from a psychological perspective, to those who want to continue to believe that spraying toxins on their lawns is in no way connected to their own health. It is not difficult to make this claim because of the time-lapse between a given pesticide application and any potential and noticeable ill-health effects such as cancer, for example, which could be years. According to Uzzell (2000), learning and behaviour modifications occur over time intervals of hours at most. As such, given our psychological capacity to make these links, if people tend toward an

emotion-focused coping strategy, especially if they believe the environmental threat to be uncontrollable (such as the ubiquitous nature of chemicals in our environment) then perhaps, messages from the 2-4-D industry that assure people that their products have been approved at safe application rates is just what many want to hear, and believe. Maintaining a safe distance between people and nature allows some of us to cope, according to researchers like Uzzell. It also lends power to those who serve to gain from this chasm.

To reiterate what I elaborated upon previously, 'There can be no possible exercise of power without a certain economy of discourses of truth'. (see Foucault, 1980:93, in section 4.2) As such, whether people are informed about the potential health hazards of 2-4-D and protected through legislation or, whether, consumers can continue to apply pesticides to their lawns in the knowledge that they are safe in so doing and the 2-4-D industry continues to contribute to the gross domestic product of Canada, is largely dependant on whose knowledge and truth claims are more skilfully produced. And those claims most skilfully produced are often a product of power. 'We are subjected to the production of truth through power and we cannot exercise power except through the production of truth'. (Foucault, 1980:93)

The significance of power cannot be underscored enough. Not only does power allow for certain truth claims to become *seemingly* universally adopted and perpetuated but, at the same time, it narrows the opportunities for other ways of knowing and making other truths visible. For example, if people are convinced that applying chemicals to their lawns and crops will not have an adverse effect on their health then, to suggest that every chemical that we put into our air, water, and soil accumulates in the bodies of all life-

forms, including humans, becomes a difficult message to sell. Again, 'Such power is often hidden, in part because discourse produces its own truth effects while simultaneously limiting the field of possible statements about a given topic'. (Braun, 2002:23) Of course, environmentalists are not always the less powerful as Braun was indicating in making this statement, whereby those who perpetuate the notion that nature is somehow a wilderness to be preserved, with little regard for those human communities living within these coveted paradises, 'limit the field' of voices with alternative perspectives – namely indigenous voices living in the rainforests in question.

However, it is argued that the chemical industry is considered to be the more powerful player in this case, and those who challenge their truth claims, such as Mary, have their 'field of possible statements' about pesticides limited. Indeed, upon ascertaining that the 2-4-D representative is aware of the potential health hazards of dioxin contamination, her exchange with him proceeds as follows.

So I said, 'Well, what do they do with that batch that they pull?' Oh, well, he didn't know. 'Maybe they send it for toxic disposal or something or maybe they just mix it in with lower temperature batches'. So, the chemical industry knows when they are going to have higher concentrations of dioxins in these batches. I had written to the Pest Management Regulatory Agency about this... because 2-4-D was being re-evaluated. They said one of the stupidest things. 'Oh, well, they've changed their ways of making it so dioxins aren't such a problem'. Well, there aren't a lot of ways to do this. In the process of their re-evaluation, each company will choose five samples. So they get to hand pick their samples. They know when there are high levels of dioxin because they monitor the reactor temperatures! *They're hand-picking their [own] samples.* And then who's going to do the analyses? *They* are going to do the analyses! And then *they* will tell the PMRA that there's no problem. *And this is the level of safety that we have in Canada's pesticides approvals process.* At the same time, the fellow who is trying to push 2-4-D through all the regulatory processes knows damn well that they are contaminated. So, does 2-4-D cause cancer? I don't know. Does the dioxin that comes along with it ALL the time cause cancer? Quite possibly. Can we separate them? No, they're inseparable. One comes with the other. *But at the same time, we don't have millions of dollars to get these messages out.*

Mary is critical of our Canadian pesticides approval process that entrusts our safety to an industry that stands to lose should their samples be found contaminated and their product be pulled from the market for human health reasons. She exposes how a chemical industry *and their truth claims* are able to manipulate the regulatory process, remarking how our capacity to produce truth and ‘get the message out’ is so tied to money (and power).

5.2.2 Corporate Bullying and Slap Suits

Mary’s story is telling of the level and scale at which carefully constructed messages that incorporate confusing and/or deceitful language can act as powerful instruments in socio-political life, often for economic gain. She and others in this study have described this type of practice by the 2-4-D Task Force and other powerful industry groups as ‘corporate bullying’. According to Nick, ‘slap-suits’ are an example of corporate bullying and are common practice when individuals or community groups attempt to challenge the truth-claims of powerful players.

There’s a huge amount of... counter-information. And there are major efforts on the part of some corporations to disrupt the efforts of people who are trying to say, ‘Hey, look! You can’t feed baby formula to babies in the third world because the parents can’t afford to keep it up and they end up cutting it with water and the kids get malnourished and they get sick’. So these guys start to get effective and strategically apply law-suits against public participation with ‘slap-suits’... *they are tremendously destructive.*

I knew a guy in the Canadian Environmental Network who was getting ‘slapped’. And he knew that they had no foundation but that they had a whole lot of lawyers that they could put on the case... and if you can’t afford a good lawyer... it can be incredibly intimidating. You can lose your entire livelihood with that sort of intimidation. It’s a matter very often... is it going to cost more to comply with the regulations or would the fine be less? *It’s not about doing the right thing. It’s about doing the least expensive thing and that’s where the morality needs adjusting. It’s not just about money – it’s about long-term well-being.*

In Nick's mind, countering hegemonic discourse can be risky business if it means disrupting the flow of capital throughout the system. And, as he indicates, although the counter-narrative in this case is concerned with 'long-term well-being', it is often the discourse of the more powerful group that wins the battle when challenged. Gail, another participant in my study, has first-hand experience with 'bullying'. A scientist with NSERC (Natural Science and Engineering Research Council), having worked in a volunteer capacity for four years on the Urban Forest Advisory Committee for the City of Ottawa, including acting as chair, initiated a tree-planting program at her children's school. After convincing the parent council to provide her with some money to buy hoses, she had to get permission from the schoolboard to proceed with her project.

I ended up having a meeting...I think they brought out every big gun they could think of. They wanted to sort of scare me off. So, there were all these big shots coming to meet me from the plant department – they sent about four representatives. 'Had I thought about this and what was it I was intending to do?' I guess I passed.

Gail remarks how she had wanted to provide shelter for the kids in the playground, especially from too much exposure to the sun, but also from the cold in the winter months. She says that she thinks what pleased them was that she wasn't planning on planting several seedlings per year but, rather, a few calliper-sized trees each year that she and the children would water throughout the summer. She told them that she would be personally responsible for the project, notifying them each time she intended to do a planting, making sure not to plant over any of their pipelines. She notes that, previously, the schoolboard had had bad experiences with other volunteers who were a bit 'romantic' about their projects. However, even with her acknowledging and being responsive to the practical concerns of the plant supervisors at the schoolboard, in the ten years that she

was involved in this project she had to contend also with challenging negotiations with the custodian at the school. No longer an issue with the custodian, since the schoolboard then began to contract mowing out to 'the lowest bidder', she was then faced with dealing with sub-contractors from the plant who were damaging the trees with their large lawn mowers and snow removal equipment.

I've [made] endless complaints to them (the schoolboard), 'Will you *please* tell the contractor to watch out for my trees? Last year, I had to make an official complaint to the director of the plant department because four of the BIG well-established ones – really big – had to be mulched. There's nothing else we could do. They had been damaged. So I said, 'Well, I would like to be told that there is a penalty clause in the contract of the people that you hire'. I have never got a definitive answer about that from the school board.

Gail is reflective about her first experiences in community activism. She considers herself to be a shy person and she shares with me what has motivated her to remain committed in challenging an architect's notion and an entire schoolboard paradigm that trees in school grounds belong only in the front of the school and not in the back where the children play. Her comments on volunteerism and empowering civil society are insightful and relevant to a discussion on developing an ethics and politics of dwelling. These are explored in chapter six. What follows immediately are her and others' experiences in countering ignorance.

5.2.3 Countering Ignorance on the Way to Environmental and Social Justice

Gail relates a story about bringing her children, who were young at the time, over for a visit at her mother's home, where pesticides had been applied to the lawn.

I had to fight with my mother! I was so pissed off that I went to visit her and there's the pesticide sign on her lawn and I'm taking my kids to go visit her. She knows I disapprove. She's got six square feet of lawn and where are my kids going to play? They have to play there. So it was just thoughtless.

When I asked Gail if her mother understood why she might be upset with her, she replied

I think she does now. I shared a couple of information pieces with her. So, I think *there's a lot of ignorance* in the first place 'cause people don't make a habit of reading the science things that are available. *And there's habit too.* And there's folks like my mom! What she always does when you get dandelions? Well, you put pesticides down! *No stopping to think.*

Another participant in the study, Alice, recounts her dismay at the application of pesticides and the apparent disregard for children's safety in her community of Manotick, south of Ottawa. A retired township councillor, Alice, finds herself 'head-to-head' with the Council on the use of pesticides on park property. She describes this situation as having ignited over an issue concerning the spraying of pesticides in a park next to a school in town. Those contracted to do the spraying omitted placing any signage around the areas sprayed - the same areas where children were involved in a track meet the next day. Alice exclaims

I mean, it was just appalling...and it was appalling from our township's point of view to have permitted that, you know, and not informed... Anyway, we spent two years in trying to bring forward and integrate a pest management process... and they were just adamant that they weren't going down that road. So, I'm really pleased that under the new City [of Ottawa] that doesn't ... they do have a sense, at least on their own parkland...they have a sense of using pesticides as a very last resort.

Earlier I provided an excerpt from my interview with Mary and a detailed analysis of her exchange with a representative from the 2-4-D Task Force. To better understand her perseverance in this exchange, and those that follow, it is important to provide some context of how she first came to be a community activist, which began just before moving to their home in the country with their young children. When she asked the previous owner of their home if the reason they didn't have a deck out back was because

the mosquitoes were too bothersome, the owner replied that there were no mosquitoes at all because [the township] sprayed. Responding to Mary's exclamation of shock, they suggested that she need not worry because only water had been sprayed. Mary then makes the following comments

So...even before I moved here I was trying to find out what they sprayed and what the health effects were because *I didn't want my babies being sprayed with nerve poison*. As it turned out, they sprayed malithion several times a week to kill the mosquitoes around here. So, as soon as I moved here, I put together a little petition with a bit of information and rode around on my bike and collected names and went to the town council... so I rapidly learned who the green folk were around here because *some people were really incensed that I wouldn't want to have this nuisance taken care of with chemicals*. As it turned out, they never sprayed malithion while I was here. The first summer we were here was the summer from hell for mosquitoes. We went camping to get away from the mosquitoes, there were so many because all their predators had been killed off after decades of many times a week of being hammered away with these nerve poisons. *After they stopped [spraying], the dragonflies came back. Birds that they hadn't seen in decades came back.*

It is clear from her narrative that, although Mary and other 'green folk' like her who have knowledge of predator-prey relationships and, in particular, those of birds and dragonflies, and mosquitoes, many in her community do not share this knowledge and 'were really incensed' that she should be petitioning to have the spraying of malithion stopped. Her narrative is another example of contested knowledges, underpinned by how people view themselves in nature. ' "Deconstructing" these knowledges therefore entails "denaturalizing" them: that is, showing them to be social products arising in particular contexts and serving specific social or ecological ends that ought to be questioned.' (Castree, 2001:13) The challenge for Mary and others in this study then has been to make visible our social nature in a world where externalizing nature seems to have become commonplace. It should be noted that the reason the spraying stopped was due

to a technicality: the person who had been responsible for spraying was found not to have a license from the Ministry of the Environment.

At the request of a friend of hers who was elected to council, Mary would then become a key, founding member of a wetland preservation group to protect a wetland that was being transformed into a golf course by a developer, known by some throughout the province to be corrupt. When I asked Mary what she had learned in the process of fighting this developer she remarked, 'A sense of justice... that fired me up as much as anything! People just weren't conducting business in a respectable kind of way. Regardless of whether it was the environment or anything else...'

5.2.4 Doing Battle with the Giants

The golf course, to which Mary refers, was built on land that was supposed to have been protected from development under provincial legislation. It was classified by the Ministry of Natural Resources (MNR) as provincially significant wetland. The construction of the golf course occurred during the Ontario Municipal Board (OMB) hearing at which time the MNR was taking aerial photographs of the site, unable to gain access on the ground. Ultimately, the preservation group won the hearing and the developer was denied permission for re-zoning and then threatened to sue the township council fourteen million dollars for interfering. Regardless, the golf course was operational and there was a concern by some in the community about the potential for pesticide and fungicide run-off, especially after discovering high numbers of dead fish in the creek by the golf course the first spring after it was open for business. While the MNR responded with little interest, the Ministry of the Environment (MOE) took some

water samples. Mary remarks, 'We got back the water sample that was supposed to measure chloro-phalanol but the limited detection was a hundred times more than the maximum allowable limit. So, unless it was a hundred times over the level that was established to protect fish, you wouldn't see anything...*they just didn't use an appropriately sensitive test.*' In other words, the test that the MOE employed could only detect chloro-phalanol at levels one hundred times greater than that deemed safe for fish. As such, if the concentration of chloro-phalanol in the creek was less than that detected by the test but greater than the maximum allowable limit, fish would die as a result but the tests used would not be able to detect the lethal chemical agent responsible.

This 'concentration of convenience' is elaborated upon in the next section, however, there is another point of articulation in these narratives thus far that I would like to develop concerning Mary's and others' experiences with the OMB. She states, emphatically, that it has been ten years since a citizen's group or a private citizen has won a hearing at the OMB in the Ottawa area and that, 'if you don't have a lawyer and if you don't have a technical expert, you cannot go before today's Ontario Municipal Board. The Ontario Municipal Board is much less sympathetic to the environmental concern. It's much more concerned about economic growth.'

She explains how it is essential to have at least one person, if not more, who either have the technical expertise or the money to hire a technical expert and the money to hire a lawyer to present their case in an OMB hearing. When fighting a developer that is backed by millions of dollars to hire all the technical and legal expertise necessary to present their version of the truth, it becomes an upward struggle for an individual or community group to present their case. It is this imbalance in power that determines the

outcome, not necessarily what is in the best interest of the local community, ecologically or socially.

Not only do individuals and community groups engage in power struggles with the OMB but so, too, do municipalities. The OMB, is a planning tribunal of the province, known for its pro-development and pro-economy stance. Another participant in this study who I shall refer to as Don, an environmental planner with the City of Ottawa, describes the challenges the municipality faces in, not only, acquiring and designating land to be protected as green-spaces but also protecting land that has already been designated as having significant ecological features from development. The following is his account:

Even in areas designated environmental, it's not unheard of for a developer to go to the municipal board and get certain development rights for a property and we're ...wrestling with a couple of those right now and they can be fairly expensive. Certainly when you look into the rural area, we have some pro-active land acquisition programs: South March, Marlborough Forest and areas like that where it's not so much reversing decisions but deciding that we want really, an absolute level of certainty in terms of environmental protection and management, and have gone ahead and purchased land in front of people that could have otherwise maybe or maybe not have tried to saved them for some kind of an estate development, for example.

In one case the city turned down an application for a sub-division in an area that had been designated natural environment. We had offered to buy it at prices indicative of that designation. The owner said, 'Well no, we think it's urban land, so if you want to buy it, that's the price that we want.' And it went to the [Ontario] Municipal Board... so the City Council refused it and they appealed it...it goes to the Municipal Board... and that's like a court. One person comes from the province, appointed by the province - they have a tribunal and they sit and hear each side. So we argued our side and the developers argued their side and the Municipal Board came back and said 'No, we think that if you are going to give that absolute of a restriction then the onus is on you to purchase the land and if you're not willing to buy it we think that this is a reasonable development scheme'. And all of a sudden the land has urban value. It's still sitting with an environmental designation right now. But negotiations are considerably above my level... but at the end of the day I think that the city has been clear enough that we're not going to see houses on that piece of land. I think it will be an expensive decision to make even though it had an environmental designation forever. And that's because of the nature of the property... I mean there are two

types of features...wetlands, some of which are protected as a matter of provincial policy, which is fairly easy to defend. We can quarrel about the boundaries at times but it's a basic wetland and even other wetlands are not easy to develop. But a woodland... a couple of days with bull-dozers and a chain-saw and you're ready to throw up houses. The Municipal Board is still not in a position in Ontario... we don't have a firm provincial policy that gives us the background [or support – to protect non-wetland areas]. The Ontario Municipal Board has not, depending on who you get as a hearing officer, has not been inclined to simply say that regardless of how important you think that woodland is that you can simply say no.

Land use planning is firmly in the purview of the province and the province passes a policy statement that says, 'We, as a matter of provincial policy, are going to protect these wetlands. We think lots of other things should be protected but it's really up to the municipality to identify and protect them'. But then they also have a Municipal Board (OMB), a hands off, appointee board, that's been coming under a lot of criticism lately because the city can go through a long process and everything's done at City Council and [they] make a decision and then one person appointed by the province, at an arm's length relationship can say, 'No, I disagree' and boom, that's it. So, there's a fair bit of discussion in Ontario right now, I mean, *community groups have had it and I think the municipalities have a little bit as well.*

You need some...some recourse for landowners and the development community from Council because Council is subject to pressures just like everybody else. If a community group gets enough people out to a meeting, Council may make a decision based upon an up-coming election depending on how many constituents are yelling ...or any environmentalist ... *you need some recourse but right now it's gotten' pretty ridiculous.*

I view the challenges that Don describes as being more about *whose* knowledge counts and much *less about what* that knowledge might be, whether it is socio-ecological or economical in nature. Again, it matters, simply, who has more power in any given negotiation or rather, who uses power to their best advantage. That power may come in the form of legislation, capacity to enforce the legislation, money and support, both public and hidden, and the way in which knowledge and information is interpreted and re-configured. Don does concede that 'you need some recourse for landowners and the development community' but also that 'it's gotten pretty ridiculous'. His narrative illustrates how, even when there is provincial legislation to protect a space that has been deemed ecologically significant and worthy of protection, 'the city can [then] go through

a long process and everything's done at City Council and [they] make a decision and then one person [from the OMB], appointed by the province, at an arm's length relationship can say, "No, I disagree", and boom, that's it'.

While Don does support a fair distribution of land for use by the entire community, including developers, he remarks that there is little justice in the OMB hearings when they almost always favour those with the same political stripes. It should be noted that both Mary and Don's interviews were conducted when the Conservatives were in office in Ontario, and many on the OMB consisted of Conservative party members. I understand that there have been changes to the structure and power of the OMB since the Liberals took office late in 2003. In any event, understanding and appreciating the value of wetlands is knowledge that not everyone shares; or, perhaps more likely, their services are considered less valuable than the financial gains that can be made by a housing development. Such thinking is arguably part of our present paradigm that externalizes humans and human activities from nature.

5.2.5 Concentrations of Convenience

Previously, I made reference to Mary's narrative that focuses upon the inappropriate levels of sensitivity in tests that are being used to assure that the maximum allowable level of toxins in the environment are not exceeded. What follows illustrates how power is being exercised through the manipulation of knowledge, referred to here as 'concentrations of convenience'. This is a term of reference that Mary uses to describe the maximum allowable levels of toxins in our environment established by government to protect people and other animals - the criteria for which are then manipulated to suit their

own needs and those of industry. Her first example is cited earlier (see p.102) with regard to the fungicide, chloro-phalanol, running off into the creek from the golf course. To recall, the Ministry of the Environment tested water samples at an inappropriate level of sensitivity and determined that fungicide levels were safe for fish, even though there were dead fish present. The government test that used a limited detection of one hundred times that of the maximum allowable limit was deemed more valid, in this case, than the presence of dead fish discovered by a person living in the community paddling down the creek in his canoe.

Although we have science that assists us in establishing laws to delineate what levels of toxins in our environment are not safe for fish and humans, for example, what these narratives illustrate is the importance of appreciating that there are many ways scientific and legal knowledge can be interpreted and that those differences of interpretation can be utilized to produce messages which lead people to believe that their environments contribute to their health and that of other animals in their communities when, in fact, they could be detracting from their health.

Another story of a sliding scale of maximum allowable limits or 'concentrations of convenience' recounted by Mary is the story of houses that are being built near the Leitrim Wetland by the airport. She describes how the engineered storm-water management system that is being installed requires breaching the wall of the 'bathtub' of the wetland, even when this wetland has been designated as provincially and nationally significant. Throughout this process a toxic organic solvent, 1-4 dioxane, was detected in the groundwater they were planning to drain, the source of which is likely an old Gloucester land-fill site south of the airport, presently owned by Transport Canada. A

huge toxic plume has been emanating from hospital and research lab wastes buried there. In preparation for building the homes, the wetland was being drained and tonnes of peat removed. Water was being pumped out and treated and put back into the system with almost a tonne of organic solvents having been removed. Mary explains:

So, what happens is the 1-4 dioxane is very, very soluble. And it's kind of at the head of the band... and behind it is vinyl chloride, chlorinated ethanes, and these other toxic chemicals that have been detected in *non-wetland* areas but for some reason they haven't been detected in the wetland area. So Transport Canada says, 'Ha! Look at how well our pump and treat system is working! You see, it's only the 1-4 dioxane that got high!' So I said, 'Hang on! Who has analyzed the *peat* for this? You know what peat is famous for? [Absorption] It's for taking out...[the toxins] It's really good at this... it's really, really good! Kind of keeps us safe. 'Well, *no*. Our mandate is only to analyse the water. We're not interested in the peat', they say. So *nobody has analyzed this peat for any of these toxic chemicals*. They're making the claim that their technology is cleaning this water. And I bet my bottom dollar that it's the peat that's cleaning the water. The plan is to take the peat away and build houses.

Most of the time it's going to sit there but under some circumstances it's going to be sort of pushed through and it will up-well. And there are some areas of the wetland where the water is supplied from deep up-welling. You see... if there is significant pollution, then Transport Canada is sitting on a bigger problem than it wants to admit. Because Transport Canada owns the land with this pollution, Transport Canada is responsible for making sure that the pollution is cleaned up or dealt with. So they're monitoring and pumping and treating and they're saying, 'Oh, everything is fine. Yes, you can go ahead and build your houses. It's going to take over 85 years to clean up the groundwater but don't worry!'

So, they announced that they were going to seek a special dispensation to not have any alarm bells ring as long as the 1-4 dioxane in the groundwater was less than 50 thousand ppb. Well, in California the level for non-potable groundwater is *three*, in Washington State, it's *seven*. When they're pumping and treating, they are aiming to keep it below 66.5. It's purely for convenience. This is their concentration of convenience so they will never have to do anything about it. Because they figure that they will never detect it over 50 thousand ppb so they'll be safe from taking any action! It's not public health. It's not public safety. It's just the safety of Transport Canada from having to deal any further with this.

So you've got this wetland that's sitting there, probably dealing with a lot of pollution. If you drain that wetland you're going to increase the gradient, suck it out, whatever, you know, sure as a marble is going to fall faster down a gradient. You increase the gradient, you remove the material that is currently absorbing and dealing with this pollution and then you put houses right on this bedrock! And they're

saying, 'Well, there won't be any vinyl-chloride, there won't be any of these chlorinated ethanes, and chloroforms'. There's a great long list of ... benzenes, toluenes, xylenes, chloro-benzenes. None of this is going to be there because they haven't detected it in the wetland. But you know damn well that it will be there because they've removed what's taking it out. *So what are we going to do? Are we gonna' build Love Canal in Leitram?*

Mary remarks that, even with a 'whopping' analysis of over 8,000 ppb of para-dioxane, no-one bothered to contact Ontario's Medical Officer of Health and that because they can't cope with such a magnitude of toxicity they simply denied that it was a problem and changed the rules so that they wouldn't have to do anything. Her experience with this site illustrates how knowledge and truth-claims are malleable and fluid, open to being stretched and poured into the political form for which it is most skilfully negotiated and articulated. As such, scientific knowledge, as it has been applied above in the context of human health and having been constructed by Transport Canada cannot be considered absolute, universal, or value-free. Rather, as indicated earlier in chapter one in a discussion on the political economy of environmental change, 'economic utility frequently remains the overriding criterion against which the value of knowledge is assessed'. (Song and M'Gonigle, 2001:981)

In another case of concentrations of convenience, the maximum allowable limits of the pesticide malithion are re-approved by the Environmental Protection Agency (EPA) in the United States at a factor 90 times greater than deemed safe by exposure studies undertaken throughout the approvals process. Mary describes a televised interview she participated in alongside someone from Crop-Life Canada to discuss the re-approval of a chemical that she, and other scientists, were arguing is carcinogenic. She explains that in re-approving this pesticide, they did not incorporate a number of safety factors that

determine the maximum allowable limit of such a toxin in the environment. One of the safety factors not taken into consideration was the 10 times factor for children and others who are particularly sensitive, such as the elderly. Another factor was that none of the exposure studies were carried out on females who are considered more sensitive to chemicals in our environment, thereby ignoring another standard 3 times safety factor. Finally, they did not find a 'no observable effects level' for anti-acetyl-choloesterates. Mary explains the bio-chemical significance of this. The mechanism of action for organo-phosphates (pesticides) is enzyme inhibition, which ultimately shuts down the nervous system of an organism. What the chemical companies look for, evidently, is an application level at which there is no enzyme inhibition in the target species or a no observable effects level. Just above that level determines the point at which the application is considered effective, without applying any more toxicity to the environment than is necessary. In this case, they did not find a no-observable effects rate because insects, generally, are becoming so resistant to pesticides that it has become necessary to re-approve them at higher rates than they were approved previously, even when toxicologists and biologists are arguing that these higher rates are unsafe for humans and ecosystems, overall. Mary exclaims

I was on this T.V. show and I said, 'Look, when the EPA put its approval through it was against the wishes and the advice of a senior toxicologist and a whole panel of biologists. And he was saying, 'That's not true! Come on [Mary]. That's not true!' He was saying this on television. Well... I do know it's true. You just have to go to the EPA web-site and download it. But this guy is paid by Crop-Life Canada to go on T.V. and say that *black is white!* How do you counter that?!

In her seemingly tireless efforts to challenge discourse that is counter to a social nature perspective – a perspective whereby humans and nature are indistinguishable,

nerve toxins affecting all life-forms - Mary insists that 'you hammer away at people like the medical officer of health until he is begging for environmental expertise in his office' and 'you just try to keep accumulating as much knowledge' as possible. As a bio-chemist and an environmentalist, she has a remarkable sensitivity to how nature is made visible and constructed by not only those who share her understanding of nature but by others who deny a social nature perspective. Clearly, her ability to claim public spaces, materially and discursively, whereby she exposes and challenges the privileging of discourses that serve to deny our human embeddedness in nature – our social nature - allows her to move her eco-socialist politics forward, thereby contributing to the social and environmental justice movement overall.

5.2.6 Scrapping with the Experts

Carol, another participant in the study who has been active in re-designing and transforming school grounds to include more greenspace, feels that the City of Ottawa's public participation process is simply an exercise in public relations and that, in actuality, they don't really listen to people. She suggests that the City seeks public input but that it's a charade. Carol tells me that she overheard the head of planning saying, 'The sooner we get over this community thing, the better'. She remarks that,

He typifies that kind of arrogant planner who does not believe that the communities could possibly have any worthwhile input into the planning process or the ultimate plan. So, when you start off with people like that and then you put a lot of landscapers and landscape architects, architects, and planners into that sort of category, they really think that they know best. And I've told them many times, 'You might have fourteen letters after your name but *we're* experts at living in our own community and we know better than you because you can't live everywhere so you need the input of people living there'. I scrap with them all the time. It makes me tired.

Carol is an articulate woman, raised in England, and accustomed to having attended schools that were always nestled in some form of greenspace, including forest, heathland, farmland and an abandoned tree nursery. She comments on how, in her art school following highschool, they sculpted outside, they had their kilns outside and they took their life-models outside. 'We had a stream running through and a terrace garden. We had the most beautiful environment. It was just lovely. And then my last few years were in London where there was no land at all to do anything with'. (chuckling) Upon arriving in Ottawa with her own children, years later, she was 'horrified' to find such harsh 'warehouse'-like and 'prison'-like schools and school grounds covered in asphalt and enclosed in chain-link fencing. In particular, she was (and still is) concerned with how children in such environments have little access and opportunity to connect with nature. Her concern for the well-being of children sparked the beginning of a school grounds transformation project that continues to this day, as she argues that 'naturalizing' areas can promote social justice, among other things. Her argument for the greening of areas is developed further in my chapter entitled, *On Re-building Social Natures and Sustainable Futures*, where Carol reflects deeply on our human disconnect with nature.

In any event, her strong belief in a social nature has taken her beyond school yards and into other areas of her Ottawa community, requiring her to 'scrap' with those 'who think they know better' and who are in positions of greater power, having numerous letters after their names. It is evident that the question of whose knowledge counts underpins which nature matters, ultimately.

In a discussion on the relative importance of local knowledge, another participant, Liz, is critical of expert knowledge, generally, and in particular, that of a 'prominent local

ecologist' who determined that there was nothing of ecological significance in a local creek study. She explained that on walks in the area she had seen 'all kinds of animals and plants there', including foxes, mink, and ermine. While she still values some expert knowledge, she is quick to point out that it is important to challenge this knowledge and that 'the more informed people are, the better'...

I think people are more aware and they are going to question experts and that's good. I mean we need the expert information but we need people to question it. 'O.K., you say there's this – well, we have this... and don't ignore this.' I don't think it can be ignored anymore. Going back to the survey [of the creek], somebody had said they had seen an Eagle. Well, it was dismissed...'What do these old people know about birds?' Well, jeez, they've been birders for sixty years; I think they know when they've seen an eagle. 'Don't tell me I'm crazy...' We need experts and we need experts without pieces of paper... I mean, I would trust some of my birder friends over some biologist who has studied the theory.

5.2.7 Of Mice and Men

Hannah, a soft-spoken ethologist with a deep empathy for animals, is disturbed by our human disconnect from other animals, which, she argues, is rooted in our patriarchal society. About thirty minutes into our interview I ask how she thinks society should approach ecological challenges and whether we should be approaching these challenges from more of a social perspective (than a natural science perspective) and consider people's values and needs. Hannah replies in a gentle yet deliberate manner.

I think that part of the reason that we are [having] such a problem is because the male perspective has dominated the development of the world. (bashfully) I think if we look more at female principles and at the things that women find important, we would have less of a problem. We would not have no problem, but we would have less of a problem and we'd have a different perspective on things. I think that's across the board; I don't think that's just in relation to the environment... You know, I'm part of that generation of feminists in the 60s where the second feminist movement was really getting up speed [with] all the new philosophies, perspectives, and popular movement etc.... but, I haven't seen a whole lot of change. I mean real change...systemic change. A lot of the discrimination... I guess the male system can't be quite so blatant, perhaps, about things but it's gone underground, it hasn't

disappeared. I think in a lot of our systems – in our religions, in our political, in our economic systems... it's all still there. If you look around the table at the people who make the decisions, there aren't gonna' be very many women at the table... and even if there are, a lot of those women have decided the only way to play the game is by the guys rules and 'I'll just be better at it'. As opposed to saying, 'I'm going to bring another perspective and I'm going to fight for that. And I'm going to make sure that that's taken into account and that becomes the guiding force'.

Hannah's perspective is grounded, in part, in her experience with and knowledge of animal behaviour. She remarks that, 'there is a vast difference between the priorities of male and female animals'. She acknowledges that many women have other support systems that allow them to focus on things other than their offspring (if they have them) but that female animals are entirely focussed on safely bringing their offspring to maturity – and, only in a few species does the male raise their young. Hannah believes that 'how we view the Earth and the environment and other species... would change drastically' if our social, political, and economic spaces were not so male-dominated. With reference to one of Suzuki's *Nature of Things* she draws my attention to how 'he turns the tables on how we interpret animal behaviour'. Of particular interest is how we have adopted, uncritically, the view that male bird's singing behaviour is considered a form of aggression and territoriality. Hannah's engagement with Suzuki's comments are revealing.

We are always looking at birds singing and saying 'Oh, they are establishing their territory and they're being aggressive by singing and everything'. Well, he just sort of turned it upside down and said 'No, maybe there are other reasons for this. Maybe *this* is what they're doing... instead'. You know, this is a different way we can look at it... [and] I think that that's been part of the problem. There is the male and female perspective again, that we impune aggression [on males]. Too much of animal behaviour... we put territory, meaning possession, as the rationale for why we do a lot things. And that that's the only or the main rationale and then we stopped. A lot of that comes out of Darwin's *Survival of the Fittest* etc.. But we kind of stopped there. We stopped thinking about it! And I think there have been a lot more feminist views to say 'Well, hey, here's another perspective, you know, here's another way you can look at this and why isn't this just as valid'. And I think that this is, at the

very least, interesting, if not something that needs a lot more effort put into this. And I think that this is part of the problem... that we look at it through these male glasses.

If what Hannah is suggesting is that justifying male aggression (and, therefore, domination) in humans has been legitimized by a narrow-minded (and unfinished) study and interpretation of animal behaviour, then perhaps this could offer another point of departure for re-engaging in a social nature, whereby aggression and domination over nature fades into less of a naturalized and normalized construct. Hannah's language is perhaps somewhat essentialist, suggesting that women share a universal feminism that could save the planet; however, I believe the parallels she draws between humans and other animals deserve attention and should not be dismissed, even when some might argue that the human male-female dichotomy is simply another manifestation of a normalized construct. Whether a construct or not, it cannot be disputed that our world is male-dominated and, as such, justifies a comprehensive deconstruction of all knowledge constructs, in particular, those that have shaped how we have come to view our human role in nature. Hannah's story is elaborated in the chapter that follows, *On Building Social Natures*...as her deep, personal attachment to other animals is highly relevant to a discussion on narrowing the gap between people and nature.

Nick observes that Kerala, the Indian state referred to earlier in chapter three, likely thrives socially and ecologically because it is a matriarchy. He argues that 'men seem to be more interested, [generally], in large schemes and the big industrial process', whereas women, generally, are more concerned about children (than are men). In the case of Kerala, he suggests that since money is passed on to not only sons but daughters, as well, that it makes a difference as women use money for different purposes. When asked if he

thought that female leadership offers potential for change he echoed what Hannah believes, ‘I can see the potential but a lot of the female leaders I’ve seen take the male perspective so, I’m not sure that it’s a recipe for solutions’. Nick reveals what he believes the reasons are for the Green Party having had difficulty in attracting women to become involved in the party.

Because, you know ...the men get going and they don’t leave a lot of space and the women get frustrated. There are repeated efforts to try to progress...certainly in Europe there’s... I think they have proportional representation [men and women]. So they’ve got to balance it out...it’s not who *pushes* themselves the hardest to the front of the pack but who is considered most capable for doing the job. And if you’re interested in the 7th Generation, then you say, ‘Well, what’s the job?’ If the job is for us to get rich now...that’s different from ‘How can we arrange things so that generations [to come can sustain themselves]’.

5.3 Voluntary Simplicity and Long-term Well-being

5.3.1 Planning for Seven Generations

Nick is an advocate of what he calls the ‘voluntary simplicity movement’. He sustains himself as a cabinet-maker and says of his self-sufficient life-style, ‘I set up a wood shop quite easily and discovered that I could make enough money to live and more, depending on what I needed’. He is critical of our political economy, arguing that a system that promotes growing at any cost is out-dated. He insists that

Using *less* is going to be a big part of the solution but that has never been how we solve problems. We’ve always solved them by using more... but the priority can’t be to grow, come hell or high water. It doesn’t really matter what the economic indicators say – maybe they help, maybe they don’t. But we need to be able to eat and our children and our grandchildren and so on are all going to need access to basic nutrients and to forest products, and water to drink, air to breathe...You know, it’s just a whole different approach to saying, ‘If we can just get more people working producing more goods we’ll all be better off’. It worked fine two hundred years ago but...

Nick argues that before the mass production age, culture was all about being alive and well and, while mechanized production served people well for a time, it became so efficient that the system couldn't keep everybody busy, hence the need to expand into foreign markets and to 'convince people that they need stuff that they might not have thought of... to keep the engines of growth churning along'.

Before becoming a cabinet-maker, as a young man Nick travelled across the country talking to people about issues, 'inquiring about how to make change happen'.

The first summer I was on my own I was trying to figure out, 'What am I going to do with myself?' And I tried to figure out, 'Well, what needs doing?' Well, it just occurred to me, 'Let's check it out'. [I was] looking for people who were doing things... people motivated by some concern or another that was causing them to work on stuff, not necessarily for money but (for) their passion, their interest...for non-profit groups and other voluntary efforts. So I got a fair bit of inspiration about, you know, the extent to which problems are understood and which solutions were available. You know, wherever people see a problem, they do something about it... if it's not being addressed. That's where we see volunteers – they want to solve problems they want to see being dealt with. They find other people that share those views and form organizations and start going at it. And that's where I, some years later, discovered that amalgamation of that spectrum of concerns was *sustainability... long-term well-being*.

More than ten years ago, and well before first meeting Nick a few years ago at a workshop that he was leading at an environmental conference, and more recently, in the context of this study, I had used his workshop kit designed for facilitating group discussions on sustainability. The focus of his sustainability project is founded upon the principle of planning for seven generations and sustainable futures, and its goal has been to engage people in discussions and to move them into action. In our interview, he posed the following questions:

What are we trying to decide here? ...and are our decisions in order to make a killing... to get rich fast or to just make the economy grow big and make money now? Or is our decision based on the interest of the 7th generation? You know – not me, not my kids, not my grandchildren, not my great-grandchildren, but so far into

the future that it's NOT about me. It's about making a good decision for people... for society.

Nick questions our political will as individuals, and collectively as a society, to move in a direction that considers the well-being of not only ourselves and our immediate families but that of future generations. He also questions how powerful media messages that dominate our social spaces, thereby greatly influencing society's consumption patterns that fuel economic expansion, might be challenged. In Nick's imagination, if sustainability and long-term well-being are to be realized, the question of whose knowledge counts must be addressed. When speaking about sustainable futures, Nick describes a philosophical and practical approach that challenges our dominant way of thinking in the modern world.

If people say, 'I want to be alive and I want to then learn things and relate with people or to do things with my life rather than with more stuff', then the consumption wouldn't be necessary so it would drop immensely. That's of course not what the \$450 billion spent on advertising is brainwashing us to want to do. So we've got a major hurdle to clear there in terms of people realizing that creativity - *learning, loving, and laughter* - is what human beings are about, *not accumulation and consumption*. It's the biggest propaganda process that's ever taken place – the whole advertising industry. You know, *the difference between earning a living and making a living is a key one*.

When challenged to explain how he thought those of us living in cities could survive without earning a living he suggested that while it might be more difficult to 'make' a living in the city, even with fewer employment opportunities that allow people to 'earn' a living in rural areas, it is quite possible to 'make' a living outside of the city, 'cooperat(ing) with people to produce the things you need to live'. He claims that it's a choice we make. Nick's argument that advertising messages are powerful and that they have contributed greatly to our accumulative and consumptive mentality (and our need to earn bigger, and bigger incomes), as a modern society, is germane to the argument that

knowledge and information are employed as powerful political instruments, not only in the scientific arena but, especially, in political economy.

An active member of the Green Party of Canada, Nick's commitment to sustainable futures extends well beyond personal life-style choices. A critic of conventional forms of governance, he is re-thinking political economy and acknowledging our human embeddedness in nature.

The conventional parties are based on the way that the economic system has been working for the last two hundred years; and, you have a considerable difference between how the NDP (New Democratic Party) would use the proceeds of growth from how the Alliance (Party) would use proceeds of growth but they're both based on the assumption that we expand the amount of stuff that we're producing, the amount of money we're using. Certainly, the way things are set up now, the economy is not well if it's not growing – but it's not necessary that it be that way – it's just the way it's set up. Throughout history you could get more fish by putting more boats in the water, more people, more time, and more investment would mean more fish. But no matter how much you invest in the fish now, it's limited by the number of fish in the sea – and that makes a difference. And that requires a different form of governance. And that's the sort of thing the Greens emerged from – running into limits and the social repercussions of trying to grow at any cost.

So it's offering a real, fundamental difference according to the problems and the circumstances that we observe, not according to the abstracts or the formulae of economics... You know, it's not hard to find people who understand... and they're not all environmentalists anymore. If you recognize that there's been this change that has taken place and it requires that we change how we govern ourselves, it doesn't matter what your view was before that. It's not a matter of Left or Right anymore... it's ahead...it's looking towards the future.

5.3.2 Economics as Mutual Provision

In Nick's imagination, 'economics is people taking care of each other'. He remarks that, 'In the book I'm working on now, I use mutual provision interchangeably with economics and economic systems'. Nick is challenging society to re-think people's relationship with nature, including with each other, and to reconsider the wisdom of an ever-expanding tide of economic activity that is sweeping the globe. In a discussion on free-market economies he acknowledges the power imbalances amongst the players.

The more refined you get in the production of something it takes less and less energy per unit to produce and this is a good thing, largely, but you reach a certain point where it ceases to be. A good analogy is the monopoly game... it goes until somebody is obviously winning [at which point] you usually disband. On the *global* scale, playing capitalism, playing the monopoly game, we have winners. It's very clear that there's one...there's hugely powerful entities that are playing the monopoly game. And to think that the third world countries who are just starting to develop are going to be able to compete with multi-national corporations is... kind of silly. All of the commodity production that the third world is getting into to play in this game that they have either been convinced or brow-beaten into participating in ... it gets the stuff flowing and the prices drop because they're all competing with each other *and the winners continue to win*.

The deregulation and the opening up of borders, as far as I am concerned, is just making a bigger board. These people have won... they have basically won North America or Europe or their territories... *they're big fish in small ponds with these enormous economies and they just want to be able to get another bunch of winnings before the game is over*. If you can produce more goods at a cheaper price than theoretically that takes better care of people but when you have two hundred corporations producing seventy percent of all the consumer goods on the planet but employing only one percent of the population, there's a whole bunch of people that don't have anything to do...and it's not working.

So, while Mary's attention has been on human health, the toxins in our environment, and the value of wetlands, Nick's concern for long-term well-being has drawn his attention to markets and economies that are compromising the capacity of ecosystems and the human communities in those ecosystems to function sustainably. All those in this study cited thus far are defending humans rightful place in nature by challenging

powerful social institutions that deny a social nature. Indeed, with respect to mutual provision, Nick remarks that ‘the efficiency of the conventional [economic] system has sort of overstepped its own purpose.’ He asks, ‘How do we assure ourselves of that...livelihood? How do you get everybody involved in a way that doesn’t destroy [nature] or make them dependant?’

Nick argues for local market economies, whereby goods are produced based on local consumption needs: ‘You know, the whole elegance of markets would continue to work if it wasn’t for these huge, huge players that have control’. He posits that there are two socio-economic factors that are largely responsible for our present unjust and unsustainable global economic system, the first of which is with regard to price-controlling. He argues that to suggest everybody should buy more stuff and that we’ll all be better off is just a smoke-screen and, rather, that the price-controlling that has occurred since the 1950s has really distorted the process of markets. The second factor that Nick argues has played a huge role in distorting the process and working against mutual provision, and social nature, is the mass media.

In past circumstances where big changes in society have been necessary you didn’t have the capacity in one population to totally brainwash the entire population. And right now, you buy up the media... that’s one of the things you do with money - and you use that to convince everybody that they need stuff, that that’s the purpose in life... it’s not taking care of each other.

Nick does concede that many people are working hard and getting the results they want in this economic paradigm but that, also, they will be the last to recognize that their success is the problem. See also Mary’s comments that follow in the next section that exemplify this disconnect.

5.4 Society is Like a Child: From Flailing Fists to Plundering

In a discussion with Nick on corporate responsibility and legislation I make reference to Ray Anderson's comment in the film, *The Corporation*, about how he has been a 'plunderer' of the Earth and how he, and others like him, likely would be imprisoned in the not too distant future for the way in which they have been conducting business. I ask Nick if he believes that the trend is toward or away from more restrictive environmental legislation. He remarks that the legislation has been anything but restrictive, because of the control taken by 'globalizing forces'. He does, however, use the following analogy, if unconventional, to suggest that there is a 'precedent' for forcing corporations to take responsibility and for making them accountable.

Somewhere along the line we've got to recognize...well, we've got a precedent. It's not fair business for you to go the board meeting of the competition's company and murder their executive. That's not allowed... and it shouldn't be allowed to murder the Earth or the resource base or to poison the foundations in a way that makes it impossible for other people to do business and run their lives. There's a morality that has to catch up with our strength.

Nick states that, 'the evolution of a society is very much like the evolution of a child'. His point is like a child flailing its fists; earlier societies, while not innocuous, were relatively harmless as compared with older, more developed societies. They were also relatively oblivious to any harm they had inflicted on their environments. But when people and societies are grown, they can really do some damage and 'at that stage they start to become responsible under the law'.

In some localized places we disrupted things earlier, but we are now strong enough, we are no longer a child, we are no longer a young offender, we are adults as a species, we are mature as a species ...and we are responsible. And if nothing else, our own legal structure, our own morality brings us into that responsible position.

Mary also uses this analogy when speaking about how developers who cut down a community forest in Kanata, a suburb of Ottawa, behaved.

They said, 'Oh dear! What did we hit? Terrible mistake...all this old-growth forest. Oh well! Now that it's all cut down, we might as well build our houses'. And until this kind of action turns into *automatic denial* of permission for a hundred years, it works, you know! If you have a two-year-old who can lie on the floor and have a temper tantrum and it works...

At one point, when I first started this, you know, I was a mother of two-year-olds. (chuckling) And the parallel seemed really, really strong. 'Cause here I was with my little kids... and these developers were acting exactly like spoiled kids and they would behave in a totally, reproachful way. *They would do things that were completely irresponsible and yet they'd get away with it.*

Later in my interview with Mary, when we are talking about the listing of ingredients on domestic products, she comments on how it's a 'huge issue' in Canada now because under the new Canadian Environmental Protection Act all these products are to be assessed for toxicity. In particular, she makes reference to how flame retardants have gone up by a factor of ten to fifteen in the environment in the last decade and how they are believed to behave as endocrine disruptors, like PCBs, and that they are carcinogenic. She remarks,

We're seeing these levels rocketing up in breast milk and yet...in [Western] Europe, they've banned the chemicals. [H]ere in North America where we use thirty times as much of it, it's not even an issue.

When asked why she thinks this might be the case, she replies,

Because nobody has caught onto it. We don't have the same kind of strong environmental support at the government level and we don't have the same level of sensitivity amongst the public. You know, there isn't as much interest in the press.

I find Mary's comments interesting in that what she is describing are the different stages of development of the newer, younger society and the older, more mature society. Of course there are regional differences across Western Europe, as there are in Canada;

however, the older world having grown some and having become less oblivious, perhaps, to their reciprocity with nature demands that they assume more responsibility. Perhaps having occupied much of the space there is to occupy, conceiving of nature's *production* is more meaningful for Western Europeans than for North Americans, generally, whose imaginations are still focussed upon preserving a wilderness – a nature 'out there'.

In a speaking engagement in Ottawa at the Children's Hospital of Eastern Ontario (CHEO) Mary explains the toxic effects of pesticides in ecosystems. A medical doctor from the audience remarks how he has been witness to a return of dragonflies on the golf course in Chelsea, Quebec (just north of Ottawa), since this municipality has 'drastically reduced' the amount of pesticides being applied in the community. On the other hand, the Ministry of the Environment (MOE) has reported that the amount of organo-phosphates and insecticides running off lawns into the Don and Humber Rivers in the Toronto area is enough to wipe-out, entirely, the dragonfly population. Mary observes: 'And yet, that just quietly appears on the internet, buried in some web-site but you don't have this *chorus* of people across Toronto outraged that their water is being polluted'.

Paul, another participant in the study who is a City of Ottawa councillor, echoes his dismay at the lack of public interest in environmental issues. He describes how the City spent a million dollars on an environmental assessment for a section of the Rideau River that was being polluted by an industrial plant. He remarks how you could see, in aerial photographs, a huge plume of effluent spreading out into the river every few days. He says that when they ran it in the *Ottawa Citizen* (newspaper), it was just a 'hiccup'. Paul exclaims

Well, you'd expect with a big environmental impact in the river that you would see, 'Oh, you're polluting the river and *you've* got to do something about that.' And there

would be a huge... but there wasn't that huge impetus...there wasn't this big public reaction. Didn't get any e-mails. We spent a million dollars doing an EA [and] we chose the preferred option and everyone just said 'Ya, O.K.' I mean ... the public couldn't have cared, in large measure, whether we did it or not.

Paul, whose background is in economics, emphasizes throughout our interview how 'economic drivers' are what really encourage the public to adopt more ecologically-friendly behaviours. However, he expresses disappointment, again, when BOMA, the Building Owners and Managers Association, demonstrates little interest in a City of Ottawa project involving a district energy heating and cooling system, which he describes as having 'huge' environmental benefits. He remarks how the City has already invested a couple hundred thousand dollars in doing the feasibility studies and 'if we can get the downtown core hooked up, it has the effect of taking out ...twenty-thousand cars', and it would reduce the building owners costs.

Yet, it is incredibly difficult to generate any interest in that project either. I mean there's interest...[but] there isn't this huge wave of, 'Yes, this is what we need in downtown Ottawa, we need to move forward'. And it's not a project that involves any government money, other than seed money to get the feasibility study because it's a self-based project. So, you sit back and you wonder, 'What provides the incentive to engage at all, at a variety of levels?'

I first met Paul at a neighbourhood tree-planting initiative in my community in Ottawa. He describes how these smaller-scale activities where people in the community can feel more attached and involved are more effective than larger-scale projects. I ask him what or who is driving these bigger projects then, that garner little public interest. He suggests that, in large part, it is our 'highly professional public service', such as the Ministry of the Environment. For example, they were part of an inter-governmental team involved in a water-monitoring project. Paul says that when the results from the

monitoring came back they realized that they (the City) had a problem and that they would have to deal with it when they up-graded the plant.

Then the Ministry of the Environment looking back at it said, 'No, you should go a little faster. Because, although you meet our legislative tests, we believe that sooner is better than later, so we want you to accelerate that'. And that presents a challenge to us... and I think it was the right thing to do.

So, from the Ministry using its power of coercion, if you want, or regulation, it moves a traditional 'go slow' approach that municipal governments have, because they're traditionally very slow in looking at all the options, scheduling things and where can we most efficiently do this. So what happens is the Ministry gets in and they say, 'No, you've got to meet some deadlines'. And they've done that in a number of cases. And from that perspective, you know, a lot people give the Ministry a hard time but in those cases, the cases that we've been involved with in the City, I don't think they've done a particularly bad job in saying, 'We know there's a problem. We want schedules, we want you to be able to meet and solve this problem. You know, we're not fooling around'. So I give them credit for that.

In another speaking engagement on behalf of the Canadian Coalition for Health and the Environment, Mary addresses an audience in Oakville, Ontario - a place she refers to as having been the 'West-Nile virus ground zero for all of North America, the summer before last'. In her address, she draws links between pesticide use and the decline of dragonflies, a natural predator of the mosquito. She refers back to her earlier experience with the spraying of malithion in her own community: 'The aftermath when they stop [spraying] - you realize there are *so* many natural mechanisms that take care of these pests, that we can't possibly replicate that'.

I was driven around there [Oakville] and it's the richest area in all the GTA [Greater Toronto Area], with *monster* houses surrounded by turf that might as well be astro-turf. It's so perfect I think they comb it. (chuckling) But there was a biologist that was studying amphibians and he was not able to find an *un*-deformed frog...which is just really scary. There is something here that we do not want to replicate - its' ecologically barren. The natural streams have been turned into drainage ditches. The entire shore of Lake Ontario is big slabs of concrete. There's not so much as one reed for a dragonfly to crawl out of the water on.

There exists some dissonance between what Paul's experiences with the MOE have been and those of Mary's, at least with respect to the 'concentrations of convenience' being employed in the creek study. Is it possible that in the case of the MOE's involvement with the City, it is pushing society to mature a little and accept some responsibility? Was a test using an inappropriate level of sensitivity to toxicity employed by the MOE in the creek next to a golf course employed because there was some pressure to do so by the developer, 'known' to be corrupt'? Is Paul, who is a politician, telling me what he wants the public to perceive as being a congenial relationship between the City and the MOE? Is the MOE's zero-tolerance stance with the City a political move by the Premier of the province who wants to ensure that there are no 'Walkertons' under his leadership? Is it possible that there is some 'truth' in all of these scenarios?

5.5 Conclusion

As indicated earlier in the previous chapter, my 'tactics' in this project have been about 'turning extraordinarily complex power relations into a visible and clearly ordered space'. (Rose: 1997:310) This has proven to be no simple task, as there is a dynamism where people engaging in nature is concerned - how people engage in nature is in perpetual motion - never static, always becoming - and having many points of articulation. Given these multiple means of engagement, how are we able to re-orient our particular knowledges and practices such that they bring us closer to a politics of dwelling - a politics that allows for different ways of knowing - and, one that does not compromise the well-being of other communities, near and far? Whose knowledge will be privileged over another's becomes an important question when building sustainable

futures. In the chapter that follows, I explore those knowledges that are being produced in an effort to nurture and build social natures in the Ottawa area.

CHAPTER SIX: ON REBUILDING SOCIAL NATURES AND SUSTAINABLE FUTURES

6.1 Introduction

While the previous chapter reveals the many ways those in this study are re-conceptualizing and directly confronting and challenging the knowledge and practices that compete with eco-socialist strategies, this chapter focuses upon those aspects of participants' narratives whereby they speak of practices that nurture and tend to people's need to be more engaged with their environments. It is interesting to note that all those in this study, regardless of whether they are challenging or producing knowledge constructs in response to their perceived (psychological) vulnerabilities to socio-ecological decline, employ problem-focused coping strategies. (see Uzzell, 2000, in section 2.1) In other words, when dealing with the source of the particular environmental issues with which they are engaged, rather than slipping into an emotion-focused state of denial, whereby fear and anxiety might be alleviated (if only temporarily), they have chosen to act by 'imagining *how* we might responsibly inhabit our complex sociological worlds'. (Braun, 2002:10)

The following analyses illustrate how their imaginations are moving social nature beyond theory and into practice, thereby building sustainable futures. The chapter is structured as follows: I begin by exploring participants' narratives on their early memories of their sense of connectedness within nature. I then look at how a concern for the well-being of children has motivated some to become active in building social natures in their communities. A discussion on urban natures follows, whereby the need for a better-informed and educated public is stressed; and finally, a discussion on capacity

building and the importance of empowering volunteers and civil society is given full attention.

6.2 Locating a Sense of Dwelling: Early Influences in Nature

In order to establish a sense of what might have inspired participants to become engaged in ecopolitics, I began each interview by asking them to recall an experience in their lives that they viewed as having had significant meaning with regard to nature. Their responses are indicative of not only the diversity with which they have conceived of nature but of the potential for multiple points of entry for nurturing social natures and a politics of dwelling.

The important role that place plays in these significant experiences is evident in the way participants speak about their *sense of place in the world – in nature*. For example, Liz recalls doing a lot of ‘wilderness’ canoeing and remarks how she would ‘just rather be *there* than anywhere’. For Liz, ‘there’ is not only a physical space but a way of being in the world. She also tells me that she would have liked to study ecology when she was in university in the early 1960s but that she did not have good enough grades and how, at that time, ‘you had to be quite an aggressive woman if you wanted to do anything different’. Nevertheless, her compassion for people’s belonging in nature led her to become extremely involved over a number of years in a volunteer capacity, nurturing a social nature within her community - mainly through the Girl Guides of Canada - and later, as a volunteer interpreter at the Canadian Museum of Nature in Ottawa and as a member of the Mayor’s Task-Force on Re-Treeing Ottawa.

Janice, another participant with whom the reader has yet to be acquainted, having lived with her grandparents in Windsor, Ontario, remembers journeying down to Point Pelee, 'one of their favourite spots', at an early age to watch the bird migrations. 'We saw the monarch migration one year...all the butterflies dripping off the trees - it was just amazing'. She explains that when she left her grandparents' home a few years later, she had no real sense of engagement with nature again, until moving to Ottawa with her husband and young children about fifteen years ago when she joined the Ottawa Field Naturalists. In the back of a quarterly magazine published by the Naturalists was an invitation to participate in a bird-banding program. Janice says, 'I kind of thought that would be cool, so I just decided I needed to get out of the house and off I went'. She describes how only one other person showed up on that chilly -20° C January day, other than the woman running the program. She explains how just seeing what this woman was doing 'captivated' her – through bird-banding, Janice discovered a real sense of connection with nature. 'It was phenomenal... it was just like, wow! You know, so I kept showing up every Saturday...' Her commitment to developing this connection is revealing as she describes how she had only 'small pockets of time' because her youngest daughter was less than a year old at the time. She recalls having learned a lot about field research and identification. Working as a computer scientist in Toronto before coming to Ottawa, Janice would then become the founding member of the Torbolton Forest Advisory Committee and is now a key member on the City of Ottawa's Forest Advisory Committee. More on her interesting journey into urban forests and urban nature follows in a later section of this chapter.

Hannah describes Jane Goodall as having been a ‘pivotal influence’ on her, having become familiar with her work in the 1960s. After graduating from highschool in 1969, Hannah went to McGill and studied ethology, hoping that she would do work similar to that of Goodall. She explains what further influenced her perception of people in nature. ‘I did a lot of work in the arctic... the high arctic. I think that, overall, that experience over many summers, working up there in such a fragile yet tough environment shaped my view of a lot of things’. Of particular interest in Hannah’s narrative is that she believes that

Humans shouldn’t necessarily be everywhere and there are some things that we have to restrict ourselves from... I think that’s been my experience in the arctic, knowing that every time you take a step you leave an imprint and that it might be there for another hundred years, depending on the habitat you’re in. That’s probably quite defining for me as well.

Hannah is one of the founding members of the Biodiversity Museum of Eastern Ontario and, while at first glance, she might be considered as having a preservationist perspective, I will argue in a later section, that her insights are contributing greatly to a deeper sense of attachment to nature and, hence, to a social nature overall. Not only are her insights ‘descriptively precise’ regarding her profound understanding and appreciation for biodiversity, including the ecosystem services upon which all life depends, including humans; they are, also, ‘evaluatively rich’ in the manner with which she engages how people value other animals. (see Robertson and Hull, 2001:974, in section 1.5)

Alice, who was raised in a rural area ‘with ready access to the outdoors’, grew up swimming in a river and playing in a forest for a good part of her childhood. When considering her attachment to nature in response to my question, she remarks, ‘I just cherished that space... and so it was an important part in raising my own family’. Alice’s

early experiences contributed to her decision to study recreation and to also pursue a Master's degree in public administration. Her engagement in social nature is very much evident in the work she has engaged with in her own community, as a public administrator with an affinity to inspiring community involvement and, in her role as chair of Trees for Rideau. Her capacity to nurture those in her community who aspire to having a sense of dwelling and attachment is remarkable. Her work is described in greater detail later in this chapter.

Mary's early influences were more about having a social conscience than anything else. Living in Northern Ontario for a while near Keewaytin and Lake of the Woods, she describes this region as being 'an awfully pretty part of the country... and awfully cold and full of mosquitoes too'. She explains how her family was not very ecologically inclined and that her mother was 'loathe to recycle' but that her father, who was involved with the Children's Aid Society, had a greater sense of 'the good of society as opposed to the good of me'. In describing her doctoral work in bio-chemical engineering, whereby she studied how the cell walls of mould take contaminants out of water, Mary remarks that, 'This was all very much controlled in the lab kind of work. I didn't have the nerve to do anything I didn't have a lot of control over'. When asked what prompted her to pursue that type of research she responded

I just had a sense that biological processes were incredibly complex and powerful. And while people were trying to do things like – well, for example, make fertilizer – we used immense amounts of energy and built huge polluting plants to produce something like nitrogen fertilizer; whereas, very quietly on a little bump on a root, a rhizobium bacterium can do exactly the same thing. So, there's got to be, in nature, already in this world, much slicker processes than we can devise, to do the kinds of things that man needs to do. So, an engineer, I was hoping that we could explore and exploit the really slick, neat things that nature can do already, rather than trying to go out and re-invent a great, big, damaging wheel.

Mary's deep respect for nature and the power and complexity of bio-chemical processes is ever-present throughout her narrative. Her own intellect - her own nature - seems to have been the source for her innate sense of belonging within the greater world. She observes that, 'People are really out of touch with the amazing mechanisms that are really responsible for keeping us healthy and happy in this world'. Indeed, as was evident in the previous chapter, Mary's perseverance in challenging the truth-claims of powerful lobby groups whose messages perpetuate a dichotomous human-nature worldview has opened up spaces for social nature discourse and action, thereby bringing people back in touch with these amazing mechanisms.

In recalling significant early experiences in nature, Don indicates how geography and history were his favourite subjects in high school and how these inspired him to become involved in projects on the protection of agricultural lands. Don's father, a soil and land resource scientist at the University of Guelph, was also influential in Don becoming an environmental planner. He remarks that, 'I was exposed to some of his colleagues that work in the environmental planning area'. Undergraduate courses in environmental science confirmed that 'environmental issues were of particular interest'. Before becoming a planner with the Regional Municipality of Ottawa-Carleton, and now with the City of Ottawa, Don worked at a Conservation Area in floodplain regulation and then, completed an MSc at the University of British Columbia. What Don brings to this study are his unique insights as an environmental planner as he explains how social natures are not easily argued for under the current planning paradigm. I explore this further later in the chapter.

Gail, another participant whose father played a large role in her own sense of place in nature, describes her relationship with him as 'very close'. He worked for Massey Ferguson and she recalls that half the time her father was out building and testing combine harvesters, 'tinkering with the machinery and working with his crew...and the other half of the time [he would] be hanging onto the strap in the subway, wearing a suit, going down [into Toronto] to deal with the results of his work, delivering papers and crunching numbers'. She thought that this was the 'perfect combination' of outdoor activity, working with your hands, and mental challenges; throughout our interview she stresses how important it is for her to get outside and 'get dirty'. Having spent her grade twelve year in England, she explains how she had a biology master who greatly inspired her. It was in England where she considers her 'pinnacle experience in the outdoors' to have occurred. Asking me if I have ever walked on the Downs, she explains that

Going for walks in England is always the thing I found the most exciting of all. You can walk for miles and the world is laid out at your feet. The wind is always blowing...and, well, you can hear the birds singing, you can see sheep on the Downs. That's a really exhilarating image and I spent a lot of time doing this.

Strangely, she then remarks to me that

It doesn't seem all that relevant...It doesn't seem like an obvious connection – not really spiritual, I'm not a terribly spiritual person. It was a thrill. It was just like a high.

It seems as though she is trying to downplay the validity of having felt exhilarated, and to deny her sense of belonging in nature on those walks on the Downs. Her becoming chair of the Forest Advisory Committee for the City of Ottawa and her years of volunteer work with the school grounds tree-planting project proves otherwise. Indeed, Gail becomes reflective as she shares some poignant aspects of her personal journey of becoming a community activist, articulating a social nature. More on Gail's story is revealed later.

Paul, the City of Ottawa councillor with a background in economics, is frank about how he is not a scientist, but a politician. He describes how in the early 1990s, upon being elected, environmental issues were 'very prominent' and, as such, he became engaged in the issues. Appearing very aware and connected to the issues, he remarks that, 'You can say that pretty much everything we do in a municipality has an impact on our environment'. He identifies the land-fill site, waste-water treatment, land use, and transportation as being some of the major environmental concerns with which the City is involved. He refers also to a program established by the former Regional Municipality called Environmental Effects Monitoring that the City has adopted to monitor the health of the rivers, for example. Paul's perspective on social nature is particularly relevant to a discussion on building sustainable futures because, in his role as a City councillor, and from a practical standpoint, he must engage his constituents in developing a dwelling perspective if the City is to be sustainable. He reflects upon a number of community initiatives and the inroads being made toward households assuming more responsibility and developing a greater sense of belonging in their communities. Their importance to this project is discussed later in the chapter.

Nick, having grown up in Winnipeg, spent his summers on a lake on the western edge of Ontario where his family built a cabin. He says, 'We used to go up there when school was out and not come back until we had to go back school'. He describes having had a 'wonderful opportunity to live with nature'. After our formal interview was over, I learned that Nick's mother was the first Green Party candidate in Canada. Evidently, Nick has been primed for a life in eco-politics, which explains his serious dedication to contributing to sustainable futures, including his work on developing the Sustainability

Project - 7th Generation Initiative. A day after our interview, Nick forwarded an excerpt from his soon to be published book, *Life, Money, & Illusion*, which he invited me to splice into my own text.

In the 1950s when nuclear bomb tests were raising mushroom clouds into the atmosphere above the Arizona desert, I was a child and my Mother was one of many women, from Winnipeg and elsewhere across the Great Plains of North America, who collected their children's baby teeth and sent them for testing. Strontium 90 was found in our baby teeth and the evidence made a strong argument for stopping the above ground testing of nuclear bombs.

I remember my Mother reading bedtime stories to us from Rachel Carson's biologically inspired, almost poetic narrative, 'The Sea Around Us'. I didn't hear about Carson's critical book 'Silent Spring' until years later, but I know now that Mom had read it when it was first published. She has since told me about how Rachel Carson was harassed by the scientific community at the time for her 'alarmist ideas' about broadcasting manufactured poisons into the environment and for suggesting that we should look to the natural world for our models of survival and well-being.

Having learned about natural resources and pollution at my Mother's knee, it is little wonder that, when I finished my formal schooling, I wanted to do something to help. With typical youthful enthusiasm I felt the great power of being human. The ability to learn, to think and to create according to my will. What would I apply myself to? What needed to be done?

To learn how Nick has applied himself, his well-conceived and practical initiatives are discussed in the final section of this chapter, where I draw upon his narrative, and those of others who are considering our human capacity to make a difference, thereby bringing us closer to a dwelling perspective. Far from 'a confused environmentalism that expends immense resources preserving those sites that can most signify wildness, while remaining unable to imagine an environmentalism for all those other areas- the vast majority of the world – that cannot appear pristine' (Braun, 2000:258), Nick's politics of articulation are firmly planted in the cultural politics of nature.

Carol describes having grown up about thirty miles south-west of London, England, in a very diverse area of mixed forest on the one side and heathland that extended for about forty miles on the other. With a huge stand of yew trees that was home to long-tailed tits, she exclaims, 'they had the most *amazing* nests - they were very long and light and fluffy and full of feathers'. The forest now gone, being replaced by a road, and the bird's presence likely never having been recognized, Carol indicates that she probably never appreciated how much she was learning from those different environments. When the different kinds of heather in the heathland would get burned over, every five years or so, she and others would break off the charcoal sticks and use them for drawing; and small silver birches would just be getting established before another fire would sweep over. 'So you experienced succession without realizing quite that's what you were experiencing. You just *knew* it'. Carol's descriptions of her experiences in nature are so vivid that, during conversation, you are made to feel how she might have felt. Like Abram (2001) (see section 2.2), she believes strongly in the world of direct sensorial experiences. '[U]nderneath the layer of the diverse cultural life-worlds there reposes a deeper, more unitary life-world, always already there beneath all our cultural acquisitions, a vast and continually overlooked dimension of experience that nevertheless supports and sustains all our diverse and discontinuous worldviews.' (Abram, 1996:42) (see introduction)

As well as being immersed in these 'diverse habitats', Carol explains how her school life was also influential in developing her sense of place within nature, having received two and a half hours of natural history lessons every week throughout her entire school life. And, of particular relevance to her work today, she recalls how very green the

schoolyards were where she grew up. ‘We had gardens, we had a farm, we grew vegetables, we had compost heaps. We did the work. Half the week actually had farm staff, partly out of necessity and partly because that was the best way to learn’. As we learned in the previous chapter, Carol was horrified to discover how ‘harsh and non-nurturing’ the schoolyard environments are in Ottawa, in sharp contrast to her own school life experiences. What follows is a telling account of what has motivated her to become so passionately involved in transforming school grounds from ‘ware-houses’ and ‘prison-yards’ to places where children can feel calm, peaceful, and connected with nature.

6.3 Toward an Informed Public

6.3.1 Concern for Children Inspires a Politics of Dwelling

The schoolyards here, whether they are located in urban, suburban, or rural areas, are ‘ware-housy, office-like, and not very child-appropriate’, according to Carol, perhaps because ‘they haven’t traditionally seen the schoolyard as a place where children learn’. With more and more people living in cities where there is less and less green space, Carol asks, ‘What opportunities do the children have to experience nature?’ With many people, especially poorer ones, not having the option to get out of the city, ‘the alternative, of course, is to have nature in the city’.

In 2000, Carol did some consulting work with Environment Canada where she surveyed fifteen hundred school children in their classrooms to investigate their attitudes and values regarding environmental issues. She began by asking them to describe their favourite places, to which the majority of the children responded by citing a ‘natural’ area, as did their parents when the survey was sent home. Some of the others, mostly the

very young or inner-city kids, mentioned being at home with their moms as being their favourite places. When asked how these places made them feel, they responded with such qualities as 'calm, peaceful, happy, and healthy'. Conversely, the responses to how some of their least favourite places made them feel were, not calm or peaceful. Carol argues that, 'you can see all kinds of social problems stemming from that and that's exactly what you see in the schoolyard. You have a stark, harsh, non-nurturing kind of environment and the children turn into that'.

Carol draws parallels between vandalism to school property and how angry many children feel for being 'held prisoner' for so many years. 'They're in an environment, an outdoor environment that they have to spend a lot of time in and it's one that doesn't meet their needs... it's not nurturing'. She reports that 52% of all accidents in the schoolyard are from falling over onto the pavement, where there are no obstacles to slow them down. 'Transforming the school grounds, in part, has to do with slowing down the speed'. Rutledge (1993) (see section 2.2) who writes about our human relationship with the Earth argues that, in the process of ecological destruction, we have become alienated from nature and, indeed, ourselves. '[T]he loss of personal assurance – the inner alienation – and the loss of a natural home – the outer alienation – are beginning to appear as two of the largest symptoms of our century's alienation.' (1993:5)

In working on her school grounds transformation project Carol emphasizes how she discourages schools from separating the primary yards from those of the junior and intermediate with boundaries that prevent them from mixing. She argues that it's not the children mixing that is the problem but rather the activities themselves. 'A big portion of the yard tends to be occupied by boys kicking balls around and other people are

marginalized because they don't want to get kicked or hit or knocked down, so they move towards the edges around the yard – and that's just not equitable'. Carol believes that there exists the potential for promoting a sense of fairness and consideration for others by transforming children through their environments. 'You can see how if they learn these kinds of skills when they're *young* and they think about this kind of thing when they're young, maybe they will throughout their entire lives'.

Carol refers to a school in Aldershot, England, home to the British Army, where the school children are mostly the offspring of people in the military. In speaking with one of the staff from this school, Carol learns of the problems with bullying and aggressive behaviour that occur in the schoolyard. Apparently, when they began to 'green' the school grounds and involved the children in working co-operatively on the project, all of the anti-social behaviour stopped. 'She said, "And I mean all of it".' Indeed, Caduto and Bruchac, in a discussion on the traditional medicine and healing vision of Native North American culture observe the following

We, humankind, through our great numbers, technological and industrial powers and political and economic conflicts have created a crisis in our relationship with Earth in the form of inestimable ecological damage...The way back, the healing, should not be sought by using more force. It needs to occur through a metamorphosis in our relationships with plants, animals, other people and all of creation. To make this change, we need to reorient our moral, ethical, spiritual, intellectual and scientific energies away from manipulation and control toward peace, preservation and the perpetuation of the ecosphere. (1994:239)

Returning to her argument for the greening of school grounds, Carol draws connections between the paving in schoolyards and how the kids are made to feel irritable. She remarks that they bake and burn in the heat from which they cannot escape and that the wind also makes them irritable. This impacts on their learning because once

they've returned to the classroom it takes time for them to calm down. If they are feeling irritable, they are more likely to engage in fighting; and if bored, with nothing to do in the playground, this leads to aggression, like animals in a cage at a zoo. 'So, [if] you change the place, you change the individuals that are living in that place...it doesn't matter whether it's a chimp or human.'

Carol's narrative is replete with a politics of dwelling *and peace* - one that articulates the human need to bring nature back into our lives. For her, separating nature out of people is a travesty that leads to disconnected individuals, anti-social behaviour, and human suffering. What I find most poignant about her narrative is that when she is speaking about nature, it is never in the absence of humans. Carol's nature begins within her, extending outward and into her environment. For her, the concept of an external nature is absurd, as she sees herself as a part of the whole of nature - being nourished physically and spiritually from her experience of dwelling in nature. Well-informed about the benefits of greening school grounds, she shares her knowledge with school communities, facilitating the transformations of their environments and, in turn, themselves. '[P]ositive experiences in natural environments underlie the formation, maintenance, and modification of positive attitudes regarding ecological behaviour and its consequences.' (Hartig, Kaiser, and Bowler, 2001:592, see section 2.1)

Another woman in this study who is engaged in the greening of school grounds is Gail, although her reasons for doing so differ from those of Carol. Claiming not to be a spiritual person, her conceptual access to nature is, in large part, through science. While on maternity leave with her first child, a boy with reddish hair and 'the milky white skin that goes with this', Gail visited the local playgrounds in her area. In regard to the many

warnings, especially for young children, against having too much exposure to the sun, she remarks

I was noticing that all the playgrounds where there are small children are totally exposed to the sun and the schoolyards are the worst. And this made me really mad. I mean, on the one hand they are saying, 'Keep your child out of the sun', and on the other hand, all they could suggest was to keep your children in until 2:30 in the afternoon. *'I'm sorry but I don't find this acceptable!'*

Feeling as though she, and her son, should have been able to have access to shade while in the playground, she wondered what could be done to improve the situation. After her second child was born, who was also fair-skinned, she had planned to take about five years away from her job, in which case she would have some time on her hands to deal with the problem. Not one to complain without taking action, she thought about planting trees but wanted to 'do it properly'; she then noticed an advertisement in the newspaper for the (then) City of Ottawa, Urban Forest Citizen's Committee. Being at home with her children and feeling the need for an intellectual challenge, Gail welcomed the opportunity to work on the committee, to become informed and 'to address the problem'. A problem-focused rather than a bury your head in the sand type of individual, she served on the committee for four years and became the chair.

That was a fascinating experience because it was organized by the City of Ottawa Urban Forester. So the City staff were running the committee but the committee was made up of volunteers and their mandate was to advise City staff about all matters pertaining to the urban forest.

She learned a lot about the potential pitfalls of planting trees, including the damage caused by snow removal equipment and paving completely around the base of a tree. Gail discovered, also, that volunteer organizations could receive trees at no cost to the organization from the City; and that a common problem with volunteer groups tree-planting projects was that trees died due to insufficient watering, in particular. Gail's

work on the committee provided her with enough knowledge 'to do it properly', and it also prepared her well for her next challenge of becoming a community activist. This aspect of her narrative is explored further in a later section of this chapter.

Gail, a scientist, initially viewed the solution to this problem of lack of shade as simply practical in nature. She wanted to protect her children from the harmful rays of the sun and thought it foolish that there should be no trees in areas where children play. Her desire to protect children, therefore, motivated her to become more informed and, in so doing, she discovered that she was instrumental in empowering children to connect with their environments. Indeed, it was via the experience of planting trees and not through a lesson on global warming and carbon sinks, that these children could respond more readily to the need for more trees. In their study on environmental education and attitudes, Pooley and O'Connor have determined that 'it is what people feel and believe about the environment that determines their attitudes [and behaviours] toward it'. (2000:711)

In pondering the relevance of planting trees with children in her community schools, Gail observes,

You've got to preserve parks and their species, but you also have to have responsible stewardship in the cities. It seems to me that cities are taking up such an increasing amount of space that it's increasingly important that we focus on making this as biologically diverse as possible.

Indeed, the importance of this statement in the face of the image of Earth as a globe that 'expels humanity from the lifeworld ... lead[ing] to the systematic disempowerment of local communities' (Ingold, 2000:154); and, 'the bio-physical conception of the earth as a system [that] projects a transnational space where... the aspirations of communities...fade into irrelevance' (Sachs, 1999:83-4) must be underscored. If people

are to remain (or become) physically, conceptually, emotionally, and spiritually connected to their urban environments then initiatives like those of Gail, Carol, and Alice become increasingly important in the political ecology project and a social nature worldview.

6.3.2 On Building Urban Natures

Carol, when speaking about her school grounds transformation project, describes having been in communication for years with the Environmental and Global Education Co-ordinator for the Toronto District School Board who eventually, when given the opportunity, made school grounds transformation a board policy. They hired someone within the board whose job it is to oversee the entire project, with half of her salary being funded by an environmental foundation. There are over six hundred schools in the board that have the potential of being transformed into places that nurture young people in their environments rather than those that deny them access to greenspace. In Ottawa, the reception by the Catholic school board to the concept of transforming school grounds has always been excellent because any plan for such a project goes to the trustees. Whereas, in other school boards, these plans typically are directed to the grounds manager. Carol exclaims, 'And if that person, whoever it is, doesn't like the idea, it *never* goes past him or her. They make the decisions. So, *sometimes, the health and happiness of children, at hundreds of schools, depends on one person. And I think that's wrong*'.

When I ask if she thinks people recognize what the psychological and social impacts of our current school grounds might be on students, she comments on how she believes people are becoming more educated and more aware of the potential for such a transformation project but that school boards rarely adopt it. And even in the ones that

do, the schools within the board show little interest. She remarks how the Toronto board was simply smart about how they went about it; they embedded the program into their geography curriculum from the beginning so that the process itself becomes a learning opportunity. Carol cites a study called *Closing the Achievement Gap*, which was undertaken in forty schools in the United States that use the environment as the context for learning.

They found that the kids in those forty schools scored consistently higher than their peers in other schools that weren't using the environment as the context for learning. And it was simply... you remember smells and tastes and sounds... things you touch. That helps you to remember things that you were taught and that is *missing* from education these days.

Ingold, refers to such learning environments that are void of sensorial experiences (in the West) as being 'ocularcentric', arguing that 'the elevation of sight as the "noblest" of the senses, has tended to treat writing (which is seen) as inferior to speech (which is heard)'. (2000:155) He questions whether 'to regain an appreciation of human dwelling in the world [it] is necessary to rebalance the sensorium'. (2000:155) At the same time, Carol is arguing that our current system that promotes high-technology and denies the outdoor classroom most of the time is producing totally disconnected people who don't know that they need the natural environment in order to survive.

I think people are growing up thinking they can do anything. You've got this arrogance, this lack of humility, you have this 'press a few buttons' and you've got solutions. I mean people are very upset when the power is out for a while. What if they get upset when gas prices go up but they don't understand we should be paying about eight times more for gas than we are right now, given the impacts and so on. And it *is* going to go up and it *is* going to become more scarce. And what's going to happen when this happens to a number of commodities that we've taken for granted all at the same time... because it's going to happen in these people's life-times, *for sure*. I don't know what they're going to do because they're not the sort of people, anymore, who are self-reliant. They've come to be very spoiled and come to have very high expectations and also come to believe in invulnerability... and I think it's very dangerous.

Carol's objective in the school grounds transformation project has been to ensure that children do not lose their dwelling perspective. In working with children, she remarks that, 'I find they're very honest, they're very direct, and very connected to the natural world and it slowly gets beaten out of them'. Carol has just published a book on the subject in an effort to educate more people about the merits of providing more nurturing environments for school children in the hope that they have a better chance of not losing their sense of connectedness within nature.

Trees for Rideau is a project that Alice initiated in order to facilitate her community's capacity to connect with their local environment. While it was implemented over several years, she describes the largest planting that occurred in 1995, with teams on twenty-five sites. 'It was wonderful for the community'. Having leveraged sixty-thousand dollars, they were able to put in large stock (trees) and, as such, had a very good success rate in terms of trees surviving. Her committee selected team captains for each of the twenty-five sites and the captains then recruited their own teams. It was 98% volunteer labour, with people donating tractors and collecting necessary tools and so on. The plantings occurred mostly in parks where it was likely land that had been farmed at some point in time, as there were usually few to no trees in these areas. In one case, a field that had been donated previously to the township for use as a park by a family whose son had died, was planted by that family. 'You know, it was very special'. In reflecting upon this event, Alice remarks

I think one of the wonderful things about a smaller community is that you know the people who might be interested or have any kind of environmental interest... or inkling to improve something. We also had a local individual who was a horticultural specialist. So she really was tremendous in terms of knowledge of species, which we couldn't have done without.

When asked to explain how she got involved in such a project, Alice, a Municipal councillor at the time, says that she had read about it happening in other communities and got excited about it so invited the organizers over to their community to share what had worked and ‘what they would never do again’. ‘It actually snowballed in the sense that it got bigger than we ever had anticipated’.

Interestingly, their municipality is now part of the City of Ottawa so the organization of the plantings has changed somewhat. The City provides the stock *and* they provide the labour. Upon discovering that the City wasn’t requesting that anyone from the community plant the trees, Alice said to them, ‘Well, you know...I think there’s a real benefit to having the people involved’; to which the City replied that they could work with them on it but that it seemed like more of a hassle than anything else. Alice explained how this was something people really enjoyed doing in their community - that they felt really good about it and that if they could participate they would enjoy doing so.

She says to me that while some people like to sit around in meetings, there are a whole lot of other people ‘who want to be out there digging the hole’. They like to be able to go past their tree and say, ‘I put that in’. She explains how one woman said, ‘I hope you don’t mind that I pruned the tree a bit because it needed it’.

They watch it and tend it and think that’s really important. I think it gives people a sense of ownership. There was another fellow who...one of the branches was quite split and it was almost hanging off. He brought a splint, taped it up, and I wasn’t too optimistic that it was really going to make it but it did. I don’t even know from a scientific point of view if that’s the right approach but at least someone had cared enough to make an effort.

Alice remarks how community clean-ups are important but that ‘actually putting things in the ground... kind of takes it another step’. I believe what she is referring to is that

planting gives people an opportunity to feel connected to what is a part of them – the earth. And this in itself, I argue, has the potential for facilitating the conceptualization of – and emotional and spiritual attachment to - less tangible or immediately visible connections, thereby building a greater social nature perspective. Being involved in hands-on environmental projects in urban spaces, where people live and dwell, contributes to building social natures.

Liz echoes Alice's beliefs that while there are those who enjoy working on committees and discussing issues, there are many more who would rather be involved in concrete projects where they can see progress being made. For example, the Guides along with a couple of other community groups initiated a program whereby they once painted a yellow fish next to all the storm grates throughout the city to alert people that what they dump into the sewers ends up in our streams and rivers. The new grates are now made with a fish molded right into the metal of the grate. Liz remarks that, 'I think the more times people are told something, it must make them think. People do a lot of things without being aware of them'. She cites another example of a project that was community led that became mainstream and run by the City. The Guides ran a plastics recycling depot for a few years before curb-side recycling had begun and it was a huge success, indicating that people wanted to participate. When asked what she thinks the priorities of our society should be today, Liz remarks

You can't go making parks of everything. We have to live here, you have to have industry, you have to eat, we're going to have cattle lots – but it's to find *better* ways of doing things – to balance the economics. It becomes a political decision. Which one of these ten issues after the same buck are we 'gonna go for now? That's why the more people that know, the better-informed are their decisions.

She is happy to see so many task forces with the City and government, in general, but she feels that they are going to do what they had intended to do in the first place, regardless of any public input, not unlike what Alice expressed. Liz poses the question, 'Do you trust these guys in power?' She impresses again that the more informed people are, the better. 'We have to have the facts to make decisions and then they have to get out'.

Paul describes a pilot project that the City implemented in 1999 called Water Alliance – the goal being to reduce the quantity of storm-water run-off into the system and to improve the quality of the run-off by reducing pesticide use, for example. Rain barrels were introduced, as were other water-reduction initiatives that not only reduced run-off, but consumption as well. He stresses the economic incentives that were used to 'sell' this program. He explains how kits were available for ten dollars that included a timer that could be attached to a gardening hose, which made watering lawns more convenient, and less costly. Paul remarks how the program was a huge success with 'a ton of people' participating in the incentives that were offered, including accepting the trees and shrubs that were delivered at no cost. He indicates that if it makes both economic sense and environmental sense to the home-owner, then this is where the City is going to achieve its highest levels of success in reducing environmental impacts, generally. Unfortunately, according to Paul, there is still a big disconnect between pesticide use on lawns and human health.

Interestingly, Paul reveals how the City wants to increase its tree-cover from 28% to 30-32%, suggesting that the reasons for the desired increase are aesthetic – that trees provide great street-scapes. When I suggest that they also provide sinks for carbon

dioxide gas, he replies, 'Yes, exactly, they have that *added* benefit but they also improve property values. I mean, barren parking lots, lots of asphalt, are hot, sticky places but you look at a community that is covered in trees... it has a tremendous economic... multiplier to it. We have a very aggressive tree policy'. Of interest, also, is how Paul responds when I ask him to comment on what he thinks the roles of the volunteer advisory committees are and how important he believes these committees are in contributing overall to environmental initiatives in Ottawa.

I'm 'gonna give you two answers. We have the Forest Advisory Committee and we have the Environmental Advisory Committee. . I'm not convinced that the Environmental Advisory Committee has performed as a tremendous value... they may, I haven't seen that yet. However, on the Forest Advisory Committee, I can tell you ...they've got it, they understand. They're looking at innovative ways to deal with tree issues.

Paul's commitment to the City's tree policy is clearly founded in economics. As such, he values the work of the Forest Advisory Committee over that of the Environmental Committee. Perhaps, if the City becomes more aggressive with their pesticide policy, the work of the Environmental Advisory Committee will be of more interest to the City councillors, generally. Regardless, the City's aggressive tree-policy is contributing to the building of urban natures within Ottawa. How this policy has been conceived is of importance when considering the overall objective of social natures and sustainable futures. If City councillors' access to nature is through aesthetics and economics, then respecting this might prove useful when developing eco-socialist strategies that contribute to a politics of dwelling. Paul remarks that one of the City's greatest shortcomings has been their ability to acquire land or provide incentives for the conservation of easements, especially in rural areas. Longer-term planning then becomes

increasingly important when establishing what urban natures might be considered desirable in the future.

6.3.3 Placing Value in Urban Forests

Don, the environmental planner introduced in the previous chapter, describes the Urban Natural Features Study, an inventory and evaluation process that began in the former Regional Municipality of Ottawa-Carleton and twelve local municipalities. Evidently, eighty to ninety thousand hectares of area were looked at and, at the same time, the former City of Ottawa did a similar study for the 'remnant bits and pieces'. Kanata, Nepean, and Gloucester did not have an equivalent piece of work so those are being analysed now. Don describes the study as having a social component, either directly or indirectly, even though the study they are doing now is purely an ecological and environmental evaluation of those areas. 'But the reality is that in an urban area, the value of those areas is as much social as it is environmental.' When asked if he thinks that it is difficult to separate people out of nature, he replies

Sure it is...depending on the urban context. In the rural area it's a little bit different because you can look at an area like the South March Islands and say, 'Boy, you've got 95% of the breeding birds that you'd expect to find in that environment...' And you don't have this in the urban area because they are small and they have been beat up, you know... So in those areas, it's a challenge that we constantly face... and the environmental point of view is trying to be explicit and separate those two things. Quite often we get people trying really hard to find an environmental justification for 'haphornering' [claiming] the land or saying *no* to development when, in fact, the *real* value is that it is just a nice piece of open, possibly wooded land in the middle of what is otherwise a solid community of houses.

Don's view is that, if you say you're trying to protect the area for environmental reasons then, in theory, no one should be in it. But the reason that the community is arguing to protect it, whether it is privately or publicly owned, is that they are inside it.

This suggests that the environmental planning policy for the City of Ottawa is founded in a preservationist perspective and that local communities, who are themselves embedded in the environments in question, cannot use biodiversity as a counter-argument to development. And if these environments, such as community forests or parkland, are not considered as having any significant ecological value, then they come at a high price to anyone interested in purchasing them. While it would appear that communities that attempt to protect greenspaces are rendered powerless by employing essentialist politics, claiming these spaces are ecologically significant, it would appear also that arguing for and articulating a social nature in urban areas is considered a luxury. And if so, on what grounds can people engage in a politics of dwelling, thereby reclaiming their rightful place in nature?

Whether land is owned privately or publicly makes a difference. If privately owned, it is likely to be developed and there is little that can be done, short of a community purchasing the land outright, which is usually impossible. On the other hand, if it is publicly owned then the stage at which the evaluation process is in becomes important. The input of the community often comes late in the study or during the actual review of a development proposal. However, the former City of Ottawa did develop some form of social evaluation framework when they were looking at remnant woodlands that were getting a lot of use by the public. Don notes that, if publicly owned land is next to a recreational corridor then, without the need to do many studies, it is clear to the City that this land has social value and, therefore, this knowledge is incorporated into the planning process. On the other hand, if land that has been zoned residential for twenty years holds social value, it is extremely difficult to reverse that earlier planning decision. It is crucial

to be pro-active in protecting 'green-field' communities - land that has yet to be zoned and given a designation - early in the planning process and well before it might be viewed as holding any kind of value for a particular community. However, as Don points out, 'There is no one necessarily standing up and screaming about that woodland next to that farm field in that area which isn't actually going to have houses in it for twenty years, but this is the point in which you have to make a decision.'

The Greenspace Masterplan was in the process of being developed at the time of my interview with Don, which ties in all forms of land-use and natural features in the urban area. Alongside establishing this new, more comprehensive masterplan is an increased concern for public health and safety and the links to water, air, and soil quality. For example, there is greater respect following 'Walkerton' for the need to protect sub-watersheds and groundwater and water sources. While the City does not yet have tools for analysing these types of processes they are beginning to look for ways to incorporate this into their decision-making. Many would argue that it is unrealistic to expect municipalities to shoulder the burden of such expansive portfolios and that the provincial governments should be providing the necessary expertise to support these initiatives. As was evident in the narratives of the previous chapter, expecting municipalities to have the necessary resources and expertise to appropriately assess water quality issues is unreasonable and a product of our federal and provincial governments shirking their responsibilities and downloading them to the municipalities, due, in large part, to the effects of the globalization of a free-market economy. Indeed, Paelke argues that any policy or economic variable that significantly affects production costs, including environmental protection, is viewed as needing to be avoided by governments if a

medium-sized trading oriented economy such as ours is to remain competitive in the global market. (2000:165)

A concern raised by a couple of the participants regarding the planning for new housing developments and something that planners have not appeared to have taken into account are the movements of wildlife in an area. In zoning land as residential, it is likely the land will be developed. No longer considered ecologically significant enough to be protected, no further regard for the inhabitants of that space are given. Carol, whose genuine concern for the well-being of children extends to wildlife as well. She remarks

The first thing I would do is to try and figure out how wildlife moves around because it's very disrespectful to go in there... I mean, if they were *people* there'd be a flipping *war* if we tried to invade them! But because they're helpless and we can just push them out, we're *bullies*. We just go and *push* them off their land and they can't go anywhere else because they're very territorial and there's limited amount of food. So, we've started on unstable footing, right from the get go.

She describes what it could be like if we considered how we could move into an area without disturbing too much. A condensed cluster of houses that is not too large could be built. And the houses immediately next to the remaining forest could be car-less, with fewer roads required to service the community. A transit system could be built around the main wildlife arteries. When asked if she views us as ever going in this direction, Carol replies

When we put wildlife and nature *first*, we still put ourselves first. But when we put ourselves first without thinking of nature, we're putting ourselves last. Because you've 'gotta think of us all – we're all part of biodiversity, we're all part of the environment, so, if we try to put ourselves first, as separate from the environment, we're actually putting ourselves last.

In speaking about ways humans can meet their needs without compromising the needs of other species Carol explains that if the population goes up, you're going to have to build more homes. 'It's not, whether or not you build them, it's how you build them'.

Hannah's deep empathy for animals is closely tied to the way in which Carol values urban forests and urban natures. Hannah insists that humans need to have regard for the other species with whom we share our communities but that many people have the attitude that, because the city is a human-built environment, there is no room for other species. She remarks that human needs are always given priority, even if it means losing a species.

For me, that's not a particularly valid viewpoint. I guess part of that comes from my really close empathy with animals and knowing that animals have needs, and knowing that everything we do... if we destroy a wetland or a forest or whatever, I don't see that in an abstract kind of way. You can relate and say the trees are gone, the habitat's gone, but for me it's a much more intimate thing. It's feeling the *pain* and the *fear* of the animals who have been pushed out, who no longer have a home.

I asked Hannah what she believed the source of her deep attachment to other animals might be and if she knew of others who shared these feelings of attachment. She does not believe that many people spend a lot of time thinking about it. She feels that people take their empathy to a certain level but 'they don't go over the edge', remarking that people probably find such empathy unrealistic.

I can't help it. That's the way I am. And it's not easy being that way. I have to say that it's very difficult, in particular because the vast majority of people don't think that way and don't have any concept of that kind of *putting themselves literally in the animal's place*. Most people often don't think that animals have feelings...you know, or think intelligently, or show altruism to each other or, you know, all those things that they figure are human traits, for which we value human beings. If we understood that animals often show those too then we might value them more.

According to the narratives thus far, it would appear that people, in building a sense of place and attachment in their particular environments often privilege trees over

animals. Not having directly asked this question, I cannot fully respond to this observation. However, I do not believe this is the case, necessarily. What is perhaps true is that humans, in locating their place, do so in such a way that they displace other species, often less aware of the animals in their environments than the plants which are more stationary – and more, visible. In constituting their natures, trees are more easily reproduced (and managed), than are wild animals, which are more complex, requiring greater diversity in their environments. Loss of habitat often means an animal must move or die and reproducing this kind of nature becomes very difficult, if not impossible. Less understood by people, generally, non-domesticated (and uncontrolled) animals in a residential area are typically not as desirable as their plant cousins. Hence, it seems fitting that Carol and Hannah's call for a greater sensitivity to the animals living in our urban forests and spaces be given greater consideration, thereby providing a greater opportunity for a shared dwelling perspective.

In order that a greater understanding of and appreciation for other species be achieved in the spirit of building a dwelling perspective, forests and other spaces are being inventoried. While this is carried out by the City of Ottawa's environmental planning team, they lack the resources to complete this work and rely on the volunteer support in the greater community. In particular, the work of the Forest Advisory Committee has been essential in lending their expertise to the planning team. Janice, the bird-bander referred to earlier and who presently works on this committee, began honing her eco-socialist strategies upon establishing the Torbolton Forest Advisory Committee. When she learned that the Ministry of Natural Resources (MNR) had contracted someone to study the rare plants in the area, she wanted to get involved but learned that the MNR

prefers to deal with organizations, rather than lone individuals. Janice gathered enough people in her community to form a loosely organized group that continues to do an annual clean-up of the forest to this day. When the MNR ended their commitment to managing community forests, the responsibility fell to the local township, which had neither the expertise, nor the interest. With the amalgamation of the municipalities and townships into the City of Ottawa, the responsibility for Torbolton, Marlborough, and Cumberland Forests then became the responsibility of the City. Janice explains how she ended up being the 'corporate memory' for the entire project, being the only person with copies of a lot of the studies. She was invited to sit on the Forest Advisory Committee, to advise on Torbolton and rural forest issues, generally. When she started her work on this committee, the community forests were being managed within a forest-fibre management framework, but since completing the rare plant species and habitats inventories, the framework is shifting somewhat. It is interesting to note how, in this scenario, rare plants are being privileged over animals. However, it is likely that if the plants and their habitats are being preserved, the animals that dwell in these spaces are continuing to thrive as well.

When asked if she was representing purely ecological interests or whether, in her advisory capacity, she addressed other community values, Janice suggested that this was probably one of the most contentious points and that she 'very much believes that there is no real line between the two'. She argues that community values must be part of how the forest is managed, however, 'the community has been at least perceived as not understanding the full ecological value of a certain site'. The community tends to conceive of the forest as a site for recreation and this recreational perspective is not

always going to be congruent with ecological preservation. Whether a site is considered as having something of ecological significance or not will determine, in part, how much it will be protected *from* human use. Obviously, this type of forest valuation could be considered as preservationist, when rare plant species and habitats are being given priority. It is possible that this is not the only forest in the community and, if so, is it possible that another, less ecologically significant forest could serve a more recreational purpose? I believe that ultimately, how the community responds to their forest being preserved for rare plants will likely determine its ultimate usage. I argue that it is still possible to preserve some spaces where human activities are limited, or even prohibited, and still maintain a social nature perspective. It depends on how the individuals that make up the community view themselves in nature and what access they have to less-built environments, generally. Perhaps if we lived in a world where there were endless spaces within which all species could be given the chance to thrive, then preserving small pockets would be less of a concern. But spaces where other species are able to live are disappearing, as are the species themselves as a result. As such, if we are truly seeking to develop a more inclusive model of dwelling, then giving consideration to the other inhabitants in our communities can only serve to bring us closer to this objective.

6.4 Empowering Civil Society

6.4.1 Volunteers Call for a Social Nature

As has been illustrated throughout these last two chapters, many in this study have become active in their communities in response to socio-ecological injustices, inspiring many others to become engaged in a politics of articulation. When asked to comment on

why she thinks people get involved in certain projects, Alice suggests that it is the people who feel strongly about their community and who want to contribute. Having discovered that, often, people will respond to a call for help if asked to do so, therefore, it is important to know who is in your community so that you can tap into that. In particular, she recalls having the co-president from a local highschool get involved in organizing a team for a tree-planting event one year. With her enthusiasm and leadership, she was able to gather almost thirty students for a planting that took place on a rainy, Saturday morning. Alice comments, 'I don't know if young people realize the influence or the difference they can make in a community'.

Upon reflecting on her school ground tree-planting experiences, Gail feels privileged to have been permitted to take children out of school for several hours at a time to participate in tree-planting activities. She remarks, 'They all seemed to have a positive experience and there is a tree that they can look at afterwards [that shows] they've done something that alters their own environment'. Unlike Alice, however, Gail has felt that although she has been able to enlist some adult assistance from time to time, she has operated mostly alone in keeping her project going because she doesn't believe that she has what it takes to get a whole team of people 'fired up'. She remarks how it took her a while to get over the hurdle of 'sticking her neck out' in the first place.

It was not easy for me to go to the parent council and say, 'Give me money to do this'. It was really difficult for me to take that step from being a private and anonymous individual to being the 'tree-lady'. Some people think I was real 'whacky'. You know, that was a really hard step.

Although difficult for Gail, a private person, she was driven by a need to improve environmental conditions for her children and others. She has remained committed to her project claiming the importance of taking individual responsibility. 'I like the message

that however old you are you have the capacity to make a difference. I like the fact that I was making a change in my own environment and I was sharing it with my kids; I was making a change in my kids environment and I was going to be able to sleep with myself at night’.

6.4.2 Capacity Building: Essential

A message that was made clear with each successive interview and, ultimately, in the focus group discussion was that there are many individuals and groups in the Ottawa area, and elsewhere, who are working on behalf of sustainable futures, arguing for a politics of dwelling. Numerous socio-political obstacles are making it difficult for civil society to realize their dreams of living more responsibly within nature. For example, Carol, who is critical of governments that are not accountable to their constituents, argues that as people living in the community paying taxes, we are the employers of the councillors and everyone working in the city but that the employee is telling the employer what to do. She and others have expressed that there is an incredible willingness and capacity within civil society to make a difference but the lack of support and less than democratic processes are interfering with their efforts. They suggest that our social understanding and our psyche are the problem. ‘It’s just that the mind is in the way. It’s people who say, “I can’t”, instead of, “I can”’. As such, Carol suggests

I think that we have quite enough to be getting on with...I mean, lots and lots of stuff. It’s just a matter of having the right kind of *collective mentality*, at the local level, perhaps, and at the provincial as well, and even at the federal... to allow it to happen... to allow those ideas to be implemented.

Nick also argues that a collective mentality is necessary to further the argument for dwelling more responsibly in our environments.

Ultimately, I don't think that a big shift in consciousness is necessary to really grapple with the problems. It won't happen until there is a popular or *conventional wisdom* or understanding.

To facilitate this process, Nick and others argue that proportional representation is essential if we are to hear and address the concerns of people in communities who are arguing for living more responsibly in their environments. It is argued that proportional representation will facilitate a politics of articulation, thereby bringing about the paradigm shift in values that civil society is calling for. Also, the need to get people's attention through education and the countering of mis-information is stressed repeatedly. Another important point raised is how the efforts of the volunteer sector in society are not being recognized appropriately, if at all. There are individuals and groups within communities that work for years behind the scenes to effect positive change in their communities to then have governments take their projects into the last stages of implementation, with the volunteer community being given no credit for their efforts. This works against those who are trying to build social natures.

Paul, the city councillor, acknowledges that no one trusts government and, as such, he stresses how important it is to drive the inequities out of the system. For example, making people accountable for behaviours that put undue pressures on ecosystems and deny social natures is critical. Unfortunately, the opposite is often true. The Exxon Valdez oil-spill is cited by a number of people in this study as an example of how our political economy requires serious adjustment. Within our present paradigm, this disaster was considered a boost to our economy. As such, our economic system is 'all wrong' as it rewards negative events. Nick, who has spent his life studying this paradox, explains an

alternative to our Gross Domestic Product (GDP) indicator, called the Genuine Progress Index, situated in the Canada Well-Being Act.

Right now, the GDP is a measure of how well society is doing and GDP is just how much money is spent...and it doesn't matter what it was spent on. But there's really a difference in money spent on food and education and money spent on inhalers because the air is bad and people have asthma. The inhalers are a defensive expenditure because something has gone wrong and you have to repair it; whereas, education and food are a very constructive and a necessary thing. [Also], there's a lot of work that's done in families, in households, in communities for no pay. Because there's no pay slip, there's no entry in the GDP but we'd be much worse off if people didn't take care of their children or elders or maintain their houses and the community, actively... so this is a measurement for unpaid work.

Nick explains the Canada Well-Being Act 'which has made some distance in Parliament'. It asks Canadians what they are concerned about, the measurement and reporting, thereof, which is to occur through a non-political entity. Evidently, a resolution was passed in Parliament, 185 to 46, in June 2003, indicating that a minister now needs to bring this Act forward. Of course, this resolution was passed while Chrétien was still the Prime Minister of Canada. Nick comments that before Martin was to replace Chrétien as the leader of the Liberal Party and then as Prime Minister, had they moved on this Bill at that time, they could have returned after the election and had it in place.

Instead of having their little black and white monitor, they would have a full-colour spectrum of the country. They could go on with whatever they were doing but they would just have more state-of-the-art information to work with.

Nick re-iterates how we are 'stuck in a management process' that was designed in a very different time. In a discussion about how our federal government has relaxed its environmental responsibility over the past fifteen years, pushing the burden down onto the provinces and municipalities who have fewer resources and expertise to adequately enforce responsible behaviour, he suggests that one approach might be to implement simultaneous policy, whereby the same sorts of legislation has to happen in different

countries at the same time. More practical, he argues, is that individuals are educated and empowered to take action themselves. Nick believes that, as humans, we have the capacity to move beyond simple self-interest.

Anybody who grasps the need to work on the planet *like they want to stay here* – like we're part of the biological reality – will take [responsible] actions that co-ordinate with other people...and they will mobilize bunches of people. The *vision* grows and the *vision* can lead.

6.5 Conclusion

Across society there exist a great number of people whose efforts are directed towards building social natures and sustainable futures. How these are being articulated within communities such as Ottawa varies. The reasons for these different points of articulation are numerous and complex, beginning with an individual's own sense of place within nature, I argue. A concern for the well-being of children is a departure point for some, while the protection of other species is what drives others. And there are those who engage more readily with the need to make adjustments in our political economy and governance structures. Regardless of the means through which these people have engaged in their struggle for a politics of dwelling, all are articulating the need to give power back to people in communities – to give individuals the opportunity to produce their natures in such a way that both eco-systems and livelihoods are sustained.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

It has been argued that those in the Ottawa region are reclaiming their place within nature through a politics of articulation. Their politics have involved both the breaking apart or deconstruction of knowledge contributing to illusory notions of a universal nature that is separate and external to our human existence, and the production of knowledge that contributes to eco-socialist strategies and social nature discourse. In analysing how those in this study have challenged truth-claims that deny a social nature in Ottawa I have argued that this knowledge is decidedly embedded in the politics of power. As such, situating power is of critical importance to any discussion on progressive environmentalism and sustainable futures. In situating the power in these struggles to reclaim natures in Ottawa, it has been revealed that the power exercised through and on behalf of political economy is largely responsible for knowledge constructs that become privileged over other ways of knowing - most notably, those knowledges that make visible our human role in nature. (see Korten, 1996; Menotti, 1998; Paelke, 2000; and Suzuki and Dressel, 2002) As such, re-thinking political economy, governance, and the multiple socio-political processes that perpetuate a dichotomous vision of humans and nature has been an important focus throughout this project.

Political ecology and social nature theorizing underpin my thesis, as it is argued that these have provided useful tools with which to analyse environmental discourse, thereby furthering a more progressive environmentalism. Specifically, in deconstructing the narratives of participants in this study, I have attempted to 'ascertain the types of knowledge conducive to eco-socialist strategies'. (Escobar, 1996:48) Eco-socialist

strategies are facilitated by knowledge constructs that further a social nature perspective and have been the focus of this study. Social nature, as conceived by Castree and Braun (2001) and Braun (2002), is a nature that does not keep humans out; it is a political project that looks at how nature is made visible, both discursively and materially, through a diverse array of actors; and, lastly, it involves the situating of knowledges and the exposing and challenging of power that infuses all socio-political negotiations that enable certain discourses, knowledges, and truth-claims to be privileged over others.

This project has also been attentive to nature's transformations, recognizing that nature as a concept is a social construct. As such, the environmental knowledge produced in the narratives of this study has been approached post-structurally through discourse analysis, being deconstructed with a view to understanding how this knowledge is contributing to environmental discourse, overall, and social nature discourse, in particular. How environmental discourse has been, at once, constitutive of the knowledges and social realities of those interviewed in this study has been afforded consideration as well. (see Foucault, 1980 and Escobar, 1996) For example, the effects of global environmental change, earth science, and conservation biology knowledge constructs and how they have transformed the natures that are 'known' to people in this study are made visible. (see Robertson and Hull, 2001 and Buttel and Taylor, 1992)

From another perspective, situating people's early access to a material and/or conceptual nature has been germane to understanding why those in this study have chosen to work towards a politics of dwelling rather than accepting the hegemonic Western notion that humans exist outside of nature. To recall, for Ingold, a dwelling perspective involves one whereby '[we conceive] of the human condition to be that of a

being immersed from the start, like other creatures, in an active, practical and perceptual engagement with constituents of the dwelt-in world... [A]pprehending the world is not a matter of construction but of engagement, not of building but of dwelling, not of making a view *of* the world but of taking up a view *in* it'. (2000:42) And, as well as situating the role that a sense of dwelling and place attachment plays in the lives and work of those in this study, their discourse has also revealed how they respond to environmental degradation, from a psychological perspective. (see Uzzell, 2000 and Hartig, Kaiser, and Bowler, 2001)

In having analysed how people in Ottawa are building an awareness of social natures, it is evident that education and the sharing of their particular knowledges is being employed as a strategy in tandem with challenging the power operating through messages that set out to perpetuate the myth that human society is not an integral part of ecosystems and biodiversity. Their tactics are decidedly articulatory, however, eschewing any attempts at a representational politics - an outdated form of environmentalism that is essentialist and inherently problematic (see Barron, 2000 and Braun, 2002) Individual participants in this study, having approached their particular socio-ecological initiatives from different vantage points, have had the effect of making a show of solidarity - one whereby a common vision of a social nature is produced, both discursively and materially - albeit through multiple contingent, partial, and temporary practices. That they have remained active in their particular struggles for socio-ecological justice over a significant period of time - years in all cases - suggests that their positions have been open to some disagreement and their identities reflexive of the changing social perspectives and practices around them.

Given the opportunity to engage with each other in the focus group discussion, those in this study have argued that, in order to support a progressive environmentalism in Ottawa whereby living responsibly within our environments is the common goal, it is essential that those who are labouring at building sustainable communities be supported and given access to public spaces where their voices are heard. As such, I am arguing that political reform is essential if civil society is to be empowered and social natures realized.

If people in Ottawa are to move closer to a dwelling perspective, how then can they be empowered to do so? Is Ottawa addressing the need for political reform and, if so, how might this be taking shape? I had suggested earlier that I was working towards a framework to confront the socio-political challenges experienced by those participating in this study. Upon completing a discursive analysis of their particular struggles, it is clear that one of their greatest challenges, collectively, has been how to incorporate the volunteer work of civil society into mainstream decision-making processes that influence, ultimately, how people view themselves *within* their environments - their natures. As such, in an effort to further the project of reclaiming social natures and building sustainable futures, I would recommend that research needs to be carried out that poses the following questions. If civil society is articulating a politics of dwelling, why is it that we are still operating in a paradigm dominated by politics that deny our embeddedness within nature? How is the work of people in communities who are working on behalf of long-term well-being to be embraced? It is argued that a politics of articulation by those in this study has served them well in their particular struggles. However, the socio-political processes that systematically place obstacles in their paths,

thereby diminishing our capacity to live responsibly in all the places with which humans interact with the world, require examining.

APPENDIX A: INTERVIEW QUESTIONS – A FRAMEWORK

Note: These questions were used as a guideline only throughout each interview. An attempt was made to touch upon each of the key concepts outlined below, however, the emphasis was different in each case depending on a participant's experience and knowledge. Many of the questions I posed were in response to what people said. In this manner I was able to cover most, if not all, of these concepts.

Describe the work you do with the public/community as it relates to nature/the environment. Describe how you came to be in this role/position? What kinds of life experiences led you to this job/work?

Do you have any formal education and/or training that is related to the environment? If so, why did you choose this course of study?

Can you describe your own personal experiences in nature? How important are these experiences to your overall understanding and beliefs about environmental issues? How have they shaped your views/values of nature? What type of 'nature' or landscape do you view as something society should value?

Are you familiar with the term sustainable development? Please describe what it means to you? Do you think this is the direction we should be taking? Explain why or why not.

What do you believe should be the priorities of our society with regard to the natural environment, economy, and social justice?

Are you familiar with the term biological diversity (or biodiversity)? Please explain your understanding of the term? Do you believe that the loss of biodiversity presents a challenge to human survival?

Do you believe that we should be concerned with environmental degradation in general or do you believe that, no matter how much humans intervene in the earth's dynamics, the life support systems will always respond in ways that support human life? Explain

If concerned, what do you see are the greatest environmental problems facing us in the 21st century? Do you think that we are equipped to deal with these problems and, if so, how do you think we should deal with them? For example, what role should government play? Business? Individuals? Educational institutions? Religious and/or cultural institutions?

Do you think environmental legislation is adequate, too restrictive, not restrictive enough? What type of information do you think is necessary to make informed decisions? As an individual, community member, policy maker?

Do you think the natural sciences or the social sciences are better equipped to deal with today's environmental problems? Explain.

Do you think that the ecological knowledge of aboriginal peoples is important to consider in environmental decision-making? Of farmers? Of woodlot owners? Landowners in general?

In your own experience, what types of community activities do you view as contributing to sustainable futures? Detracting from them?

For landowners:

How long have you and your family lived on this land? Please describe what this land means to you? Would you have difficulty selling it? (emotionally, psychologically) Explain.

Do you think modern societies add, subtract, or retain the same amount of usable energy available on earth? For example, do you think that more energy is put into food production than is taken out in the form of food? Is modern agri-business sustainable (it won't reduce the ecosystem's capacity to feed humans and other life-forms)

Do you feel that as a farmer you are expected to respond less to the needs of your local/regional community and more to the demands of global markets to remain competitive?

Do you feel that you must use pesticides/herbicides to remain competitive with other forms of agri-business? Have you considered/do you use genetically modified seeds/feed for livestock? If so, explain why? If not, why not?

Are you participating in organic or pesticide-free/GMO-free farming practices? If so, please describe these practices.

How do you feel about institutional policy and control regarding the environment as compared with your own views about your land and nature in general? Are they different? The same? Is there some overlap? How do you feel when others tell you how they think you should manage your land?

Discuss what you feel should be the rights and responsibilities of private landowners with respect to the natural environment.

Do you believe that if each individual makes an effort to adopt more sustainable practices that collectively we can improve environmental conditions that will ultimately improve the likelihood of human survival on the planet?

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