On the Illusory Nature of Sustainable Development:
A Case Study of a Montreal Suburb

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ABSTRACT

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Peter Graham

An apparent paradox attaches to the concept of sustainable development: as general levels of education, technology, and scientific knowledge have increased, so has the ecological impact of humanity and the likelihood of large-scale anthropogenic catastrophe for human populations. This paradox can be at least partially explained as the result of perceptual and cognitive illusion. Human perception, cognition and meaning systems are always to some extent "inherited" as a path-dependent "traditionality". This difference between the world "as it is" and "as we know it" creates an illusion and a false sense of impunity to act in the world.

Instrumental measures to implement sustainable development thus ignore important contextual information. Making this information perceptible, comprehensible and meaningful thus requires recognition and understanding of the functioning and consequent illusion inherent to the workings of the social mind. Such a learning exercise would seem inherently transformative and enabling of a more deliberative and democratic way of being in the world.

A specific suburban community, Pointe Claire, is examined as a case study to illustrate the illusion and suggest various potentially remedial pathways. A reflexive balance model is also proposed as a partial remediation for the illusion.

Acknowledgements and Dedication

This thesis is dedicated to Tutti, John, Martha and our precious time together at the fishing camp.

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Chapter 1 - The Research Problem

"The power of education is almost boundless: there is not one natural inclination which it is not strong enough to coerce, and, if needful, to destroy by disuse." (Mill: 1998, 82)

"*This* is the era of hunger unprecedented." (Sahlins: 132)

1.0 – An Inherited Traditionality

This thesis addresses the apparent paradox that attaches to the concept of sustainable development: as general levels of education, technology, and scientific knowledge have increased, so has the ecological impact of humanity and the likelihood of large-scale anthropogenic catastrophe for human populations. Ulrich Beck has aptly described this state of affairs as the "*Risk Society*" where risk becomes an inherent aspect of modernity (see Beck: 2004). According to Scott Lash and Brian Wynne, the paradox can be explained as follows: "…components of a *traditionality inherent in industrialism* are inscribed in varied ways within the architecture of industrial society – in the patterns of 'classes', 'nuclear family', 'professional work', or in the understanding of 'science', 'progress', 'democracy', - and their foundations begin to crumble and disintegrate in the reflexivity of modernization (Ibid, 14 italics in original)". The illusion of progress in the direction of sustainable development generally takes such forms as ecological or steady-state economics, alternative energy sources, recycling, fair trade labelling protocols, and any number of other instrumental small gestures and grand schemes. To date these efforts have failed to even keep pace with the increasing scale and rate of destruction of ecological, cultural and social capital and consequent growing risk to human populations. It may be tempting to simply blame the whole conundrum directly on human demographics. The rate of population increase however is certainly not a variable that is entirely outside of human control. Birth rates vary partly in accordance with cultural

norms and epistemologies. Regardless of population however, the problem is essentially one of a declining capacity of the Earth to provide the totality of humanity with the necessities of life. Erosion, desertification, salinization, toxic contamination and other anthropogenic processes leading to a net loss of agricultural soils, depletion and contamination of potable water supplies, global climate change, collapsing global fish stocks, losses of biodiversity, and increasing ubiquitous toxicity have all contributed to a loss of long-term aggregate healthy food production capacity. The process of industrializing agriculture has also provided only short to medium term gains in food production capacity at the expense of longer-term production capacity. As currently configured with a heavy dependence on fossil fuels and non-renewable chemical fertilizers, our modern food production system is clearly not sustainable. Aside from the issue of production capacity, lack of access is also increasingly institutionalized at every scale leaving roughly one billion or more than one in seven humans currently without access to adequate food and water.

The capacity for the continuance of human life itself is being threatened on other fronts as well. Biological reproductive capacity of not only humans but also many other species dependent on sexual reproduction is now under assault as a result of the ubiquity of artificial hormone disrupting agents. The heavy weight of "first world" per capita ecological impact or "footprint" so far remains a seemingly unsolvable dilemma and a problem with deep historical roots in western culture and western epistemologies. These same patterns of thought normalize what are now routine experimental dalliances into fields such as bioengineering or nanotechnologies whose risks are simply incalculable and consequently unknowable. The philosopher George Grant and later the institutional

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economist Douglass North have both identified and labelled this apparent cognitive "trap" our "historical inheritance"[1]. According to Grant, "It is difficult to think whether we are deprived of anything essential to our happiness, just because the coming to be of the technological society has stripped us above all of the very systems of meaning which disclosed the highest purposes of man, and in terms of which, therefore, we could judge whether an absence of something was in fact a deprival." (Grant: 1969, 137) In other words, apart from endangering the Earth's capacity to provide healthy food, air and water, we may also be foreclosing potentials in terms of healthy *psychic* environments. Richard Norgaard echoes Grant's sentiments: "While a consensus is emerging that modernity is in shambles, most of the designs for its reconstruction rely on many of the same materials, the beliefs of modernism." (Norgaard: 1994, 28)

1.1 – The Context of Illusion

The reason that instrumental measures to achieve sustainable development have generally failed and continue to fail is of course because they do not account for context. They do not work on expanding the boundaries of what George Grant called "the tight circle…in which we live" but rather manipulate whatever is already inside the circle. As John S. Dryzek explains, "…intelligent action must be reflexive. Reflexivity is by definition sensitivity to the degree to which actions themselves help create the contexts for action…"(Dryzek: 2006, 84-5)

> "The tight circle then in which we live is this: our present forms of existence have sapped the ability to think about standards of excellence and yet at the same time have imposed on us a standard in terms of which the human good is monolithically asserted. Thus, the university curriculum, by the very studies it incorporates, guarantees that there should be no serious criticism of itself or the society it is shaped to serve." (Grant, 131)

And as Eviatar Zerubavel explains: "The ability to help determine what others consider relevant and what they basically disregard is an important aspect of social power." (Zerubavel, 51) Furthermore, the determination of what is relevant may begin from a shared metaphorical understanding that first requires some thought but eventually it will become fossilized in symbol and evoke an automatic behavioural response (see Tuan: 1978 for example). The problem is compounded for humans as such coding systems become reified to form an important part of one's identity. As Dryzek illustrates with the culturally specific example of female genital mutilation:

"One inter-civilizational approach to this issue involves condemnation of female genital cutting as either a violation of universal human rights or as an extreme manifestation of patriarchy. Approaches of this sort are likely only to raise the stakes and help make the practice a marker of identity, so generating resistance to its abolition." (Dryzek, 42)

In this example group identity is the critical aspect of context that is ignored in the instrumental remedial attempts made by the international community. An example that could be considered as the North American equivalent would be to argue the fundamental injustice inherent in retail gasoline prices of less than $4.00 per gallon. The "logic" of gasoline taxes are also seen as a threat to American identity as ritualized in a consumerist "way of life" (see Huber: 2009). Instrumental appeals to an imaged universal "ethics" or learned bio-centric "ethics" therefore cannot be expected to provide a panacea and may in some cases even be counterproductive. Of course, the idea of educating a global identity into existence, a global citizen with global values, ethics, sense of propriety and shared aesthetics presents a whole other set of difficulties to be dealt with later in chapter 4.

In his essay, *The Utility of Religion,* John Stuart Mill made the fascinating subconsciously reflexive observation on the productively coercive powers of "education"

cited at the beginning. Historiographers of course would advise caution in our interpretation of Mill's words, underscoring the historical specificity of "thought communities". To come close to the meaning that Mill had intended, we would today need to substitute the word "training" for Mill's word "education". Such a clearly positivist stance assumed by Mill situates him in a slightly different "thought community" or even epistemological universe from the contemporary conventional way of being (notwithstanding the fact that Mill was in some sense a maven or even a firebrand and thus not entirely representative of his specific era). Nevertheless we refer to him here precisely because the many narratives and discourses that he put into words continue to inform the sustainability problem today. From our current perspective, with the benefit of hindsight, even the nascent germ of western civilization's dalliance with eugenics or scientific management might be detected in the optimistic sentiments expressed by Mill in this one sentence: "The power of education is almost boundless: there is not one natural inclination which it is not strong enough to coerce, and, if needful, to destroy by disuse." (Mill: 1998, 82) The positivist, instrumental pattern is firmly established here and becomes self-fulfilling. A discernable pattern begins to emerge from this line of thought of the recursive process of the social construction of human identity.

Much has changed in the continuing direction of positivism since the time of Mill's death in 1873. People have walked on the moon, vast forests have disappeared to be replaced by the mowed lawns of suburbs and human life has become increasingly individualized, atomized and compartmentalized to name only a few of these changes. Yet much remains unchanged. For example, we still today breathe the same oxygen

previously breathed by dinosaurs, dodo birds, Moses and even Mill himself. Virtually all

of the physical matter (minus relatively minute amounts of hydrogen gas, volcanic ash,

and assorted "space junk") that constituted the Earth at the dawn of time remains integral

to the Earth's current physical composition, albeit in sometimes very different

configurations or "constellations". Apart from different configurations of the physical

matter of the Earth however, there is also a change in the way that physical matter gets

configured, the *coding* or *pattern* of the change process itself. The ontological nature of

this cosmological process, the creative workings of the "mind" of landscape, is far more

complex, ephemeral and illusory than the mere rearrangement of concrete physical

matter. Today we might refer to these powerful anthropogenic aspects of landscape

creativity as a socialization process, cultural evolution, or what Michel Callon might

even label as an "*economization process*". Mill's concern with education is after all

essentially about the potential for taking control of this process, essentially writing some

sort of "instruction manual" for the recreation of the cosmos.

> "Yet the fact begins to appear through the modernity which has denied it: human excellence cannot be appropriated by those who think of it as sustained simply in the human will, but only by those who have glimpsed that it is sustained by all that is. Although that sustainment cannot be adequately thought by us because of the fragmentation and complexity of our historical inheritance, this is still no reason not to open ourselves to all those occasions in which the reality of that sustaining makes itself present to us." (Grant: 1969, 133)

1.2 – The Research Question & Methodology

The basic elements of the conundrum to be addressed in this thesis then are the

following. Are there identifiable characteristics or properties of particular models,

metaphors, myths and paradigms (patterns of thought and systems of meaning) that

prescribe and reflect resilient, sustainable landscapes into being? If so, how might these

patterns of thought be implemented or rather how might they dislodge and replace the current dysfunctional conventional wisdoms? Is there a more effective "entry point" into the seemingly circular process connecting meaning system to artefact/landscape and back to meaning system? If such a process involves a number of "étapes", if the process is recursive and path dependent, then is the sequence of change-events critically important?

To shed light on these questions, a sustainable development case study has been undertaken to examine and describe the social and landscape "minds" of a Montreal suburb and also to interpret as closely as possible the suburban landscape "as it is" rather than "as we know it". The evidence examined includes a general description of the landscape and processes (both anthropogenic and non-anthropogenic) taking place recurrently to produce that landscape. Particular attention is given to the process of establishing a nature park in a particular suburban community. This historical event provides an interesting window into the configuration process. In many ways the issue is about which "knowledge" will assume control of the configuration process. In this sense, the insights and conceptual formatting provided by Fikret Berkes on traditional knowledge and resource management are helpful:

> "1. There exist different actors who relate in different ways to the resource in question;
> 2. The actors define knowledge, ecological relations, and resources in different ways and at different levels of geographic scales;
> 3. They bring to bear on these definitions their culture and their experience;
> 4. They will use different definitions in pursuit of their own 'projects' or political agendas (Berkes: 2005, 165)."

Also examined are current examples of discourse in the local media or what might count under John Stuart Mill's implied definition of "education".

In addressing these questions it is important to recognize the commonality or over-lap with the interest expressed by John Stuart Mill. This concern and emphasis on understanding, if not always taking control of, the configuration-of-materiality process has also been taken up many times after Mill. It has in fact become a part of that configuration process, an integral component of the context to be accounted for.

"Our survival depends on our understanding that not only are we coupled to how we conceptualize ecological order but also how we have embodied in our patterns of relationship our epistemological ideas of nature." (Harries-Jones, 123)

As researchers then (whether in social or natural science) it is necessary to recognize that we are not separate observers dealing at arms length with a distinct and unitary objective reality. The researcher's focus, mediated by perceptual, cognitive and cultural lenses specific to the researcher *and* the landscape, always creates a *recursive relation* that escapes the boundaries of the inquiry to constitute the missing part of objective reality. At best we work with a particular aspect or facet of the reality we are focusing on. The mapping of the human genome for example included attention to neither the resultant change in self-perception nor to the change the research implied for the relation between human and non-human others nor (and this is especially pertinent) was any consideration given to the change that the resultant "knowledge" would have for human behaviour within an ecological context. While we may never fully know the whole impact of the questions we pose as researchers, without striving to at least acknowledge the role of the context, our role as researcher may end up resembling that of Pavlov's dog more than the deliberate, purposive explorer imagined at the outset. A research project that included the whole *context* of the research itself would represent a monumental task and always remain incomplete. For example as Matless explains about

the century-long process of coming to apply the designation "Nature Region" to a specific place, "Care for nature, joy in environment, laborious drudgery, local identity, the making of money, all come together in and are woven through the conduct of bodies in landscape (Matless, 142)." That one of those bodies is a researcher already says something about the place (as it also does about the researcher and about the relation between the two), including the habitual processes (such as economic institutions, rituals, nutrient cycling, soil formation or weather patterns and so on) embedded in that place. This research project represents an attempt to focus our attention on the contextual and the recursive, rather than seeking (or pretending) to know and speak about even an isolated aspect of the objective reality of the suburb. The book, Mapping Invisible Worlds edited by Gavin Flood, provides a sort of template for this type of research. The book was the result of a conference organized around the theme of mapping cosmologies. Thinking about the meaning of "the greenwood" to a pagan for example is a useful exercise to prepare us to think about the meaning of "the market" to a contemporary suburbanite.

"Freedom", "Democracy", "Progress" and "Nature" represent just some of the other concepts or images that are reified in specific ways within specific times and landscapes as iconic ideals that influence and steer the social mind. "Freedom" is always paradoxical. Life inside a vacuum is not a possibility. Freedom thus always entails responsibilities toward one's context although this integral facet is not conveyed in the vernacular meaning of the word. The reification of "Democracy" has undermined its performance as a system of governance. The system, democracy, becomes conceptualized as a performance maximizing mechanism that is thought to be sufficient

in and of it-self to ensure optimization. The ritual of voting presents a symbolic image of freedom and democracy but that image is false. The behaviour, voting, is the enactment of the *myths* of "Freedom" and "Democracy" and completes the self-deception. The same could be said of the "Market". During the modern industrial era these images reflect and reinforce an increasingly pathological epistemology. The foundational, historical assumptions and resultant perception and interpretation of the cosmos are illusory and incorrect. That is to say that they are not "compatible with the world around us".

> "I do not think, you see, that an action or a word is its own sufficient definition. I believe that an action or the label put on an experience must always be seen, as we say, in *context*. And the context of every action is the whole network of epistemology and the state of all systems involved, with the history that leads up to that state. What we believe ourselves to be should be compatible with the world around us." (Bateson & Bateson: 1987, 177)

"The whole network" of course includes an anthropogenic narrative but it also includes many other elements constitutive of the landscape: such as ethics, architecture, language, pollution, media, fashion, logic, identity, economic institutions, eroding topsoil, declining populations of fish, birds and other forms of life, superstitions, to name but a few. Each of these separate elements has been imbued within the community with various shared (and thus comprehensible) meanings. As Smircich explains, "Much of this commonality is developed through and sustained by such processes as rituals, myths, ideologies, stories, and specialized vocabularies." (Smiricich in Morgan: 1983, 170) Essentially to be human is to require meaning and meaning is always constructed through groups.

Georg Simmel for example penned the following lines in the early years of the 20th century on the theme of fashion.

"The feeling of shame is eradicated in matters of fashion, because it represents a mass action, in the same way that the feeling of responsibility is extinguished in participants in mass criminality, who if left to themselves as individuals would shrink from such deeds." (Simmel, [1905] 1997).

This distinction, made by Grant as well as Simmel, between the individual mind and the social mind has since been addressed by many other social scientists, notably Ruth Benedict, Gregory Bateson, Raymond Williams, Yi-fu Tuan, and Mary E. Clark. Each of these writers' work reflects (with apparent increasing self-awareness) those feelings of responsibility and shame as prescribed by the social mind of their time. Mary Clark has defined the social mind as "the ability to see the world sufficiently similarly so as to be able to think and act *as a group* in highly coordinated ways (Clark: 2002, 124)".

Sustainable development then can be viewed as the metaphorical fly in the ointment of the social mind, as illustrated by Marshall Sahlins in his now classic 1972 essay *The Original Affluent Society*. "*This*" said Sahlins (emphasis in original) "is the era of hunger unprecedented", implying that the 1972 social mind had somehow deceived us, failed to trigger responsibility in the context of want, and failed to trigger shame as the global economy was overtaken by mob rule and "mass criminality". "Now, in the time of the greatest technical power," Sahlins continues, "is starvation an institution. Reverse another venerable formula: the amount of hunger increases relatively and absolutely with the evolution of culture (Ibid.)".

1.4 – The Proposed Research Model

In this thesis sustainable development will be presented through the metaphor of a pair of reflexive symmetries, much like the symmetry of the right and left sides of a human brain and the human body (see figure 1.1). This model is introduced here and will

be developed more fully later in this chapter (figures 1.4 and 1.5). One of the two sides of

the first symmetry is the human social mind and the other side is the "mind" of

landscape. Clearly we are not using the term "symmetry" here in the sense of an exact

correspondence but rather in the sense of an imperfect mirroring or mimicry. The right

and left hemispheres of the brain are symmetrical but certainly not identical for example.

This symmetry of organizing principles (or "mind") must act upon while being informed

by another symmetry of physicality: the landscape. Landscapes are similarly

codetermined, co-prescribed into being by "natural" forces (such as gravity or the

physical properties of water) and anthropogenic forces (such as fashion, regimes of law,

religion, and education as well as other consequences of human cogitation).

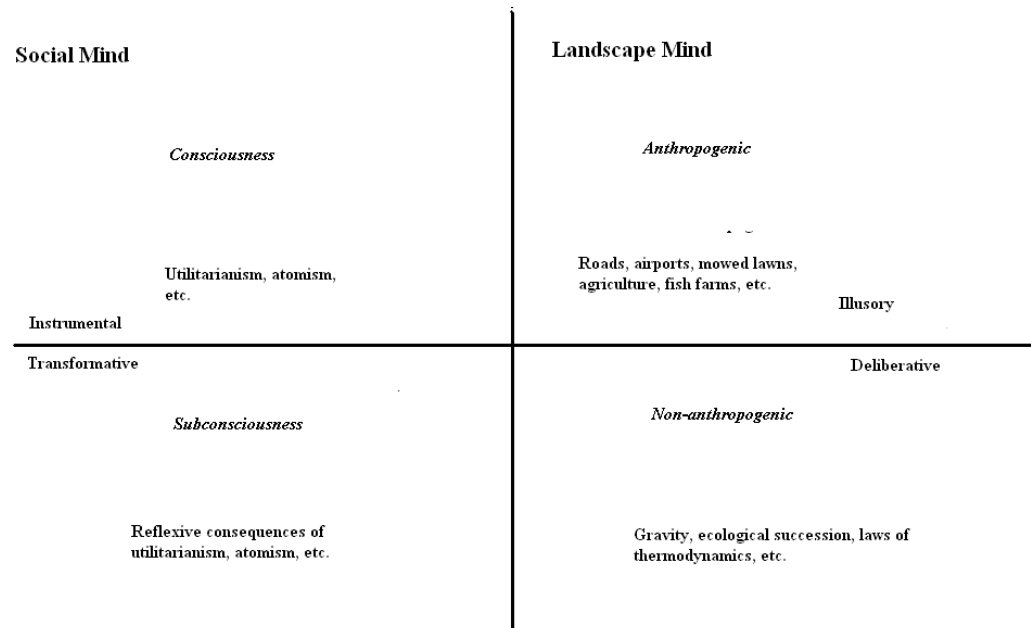| Social Mind	Landscape Mind
Consciousness	*Anthropogenic*
Utilitarianism, atomism, etc.	Roads, airports, mowed lawns, agriculture, fish farms, etc.
Instrumental	Illusory
Transformative	Deliberative
Subconsciousness	*Non-anthropogenic*
Reflexive consequences of utilitarianism, atomism, etc.	Gravity, ecological succession, laws of thermodynamics, etc.

figure 1.1

It will be argued in this thesis that an instrumental approach to sustainable

development (perhaps by means of hybrid cars, fair trade coffee and carbon taxes) could

succeed only by sheer chance. These types of measures generally end up reinforcing the

meaning system of the status quo. [2.] Such instrumental actions do not account for their

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reflexive aspects (their resultant context). The argument to be put forward here is that the

essence of sustainable development involves the balancing of these two symmetries by

means of deliberatively transformative and empathetic processes, a specific type of

"education". The mind always finds its reflection and support in the physical structure of

a codetermined landscape that forms and is formed by these (social and landscape)

"minds". In this model then the sustainability dilemma is primarily the result of an extra

layer of human cogitation or perhaps more accurately *ratiocination* that has worked itself

into a spiral of organizing processes acting on landscapes that in turn reinforce the

evolutionary direction of those processes. The four component parts of this model will

more productively fit into the structure of a medicine wheel than that of the more linear,

cause-effect, Cartesian types of models familiar in the mainstream discourse of

instrumental sustainability. Sustainability will be more directly achievable, according to

this model, if actions can be designed to work in the lower, transformative region instead

of being confined to the instrumental region. Likewise, on the side of the landscape

mind, it must be realized that the actual whole landscape (anthropogenic and non-

anthropogenic) is far more democratic and deliberative than our usual instrumental vision

perceives. Unfortunately, these deliberative consequences manifest in the now familiar

problem of "surprise" and unintended consequences. They can also often be

imperceptible within "human time".

The example of an academic discipline such as economics or biology will serve

to illustrate the usefulness of the model. The instrumental aspects of economics or

biology are well understood (Quadrant 2). Public policy and public opinion rely on the

conclusions of these believed-to-be objective disciplinary excursions into (and

manufacturers of) "reality". The transformative consequences are much less apprehensible (Quadrant 3). How have the "ideas" brought forward and disseminated via the processes and structures of these academic disciplines changed the *context* of the social mind? What role have they played in the determination of my identity, my relations with other people and other life forms, or my own thought processes? Quadrant 1 then represents the materiality of these disciplinary approaches: genetically modified organisms; rail, road and air transport systems; and so on. Quadrant 4 might be considered metaphorically as the "anchor" or the "reality check" of the model. Over time genetic engineering and pharmaceutical medicine will have biological, evolutionary consequences. Likewise the "economic perspective" will play a role in evolutionary ("organism in environment") potentialities for humanity and any future human habitat.

1.5 – Modeled Dysfunction

This phenomenon can also be clearly demonstrated by comparing Abraham Maslow's hierarchy of needs model with a medicine wheel model. Thomas Prugh and Eric Assadourian have adapted Maslow's "hierarchy of needs" model to discuss the meaning of sustainable development in their 2003 article, "What Is Sustainability, Anyway?"[3.] The layers or dimensions of their pyramidal model moving from bottom to top are "human survival", "biodiversity", "equity", and "life quality". This hierarchical *idea* of sustainable development prescribes and is prescribed by a positivist, monist, and especially a reductionist and atomistic *relationship* between a conscious and deliberate manipulator and an "environment". The idea presents sustainability as an array of levels or grades. The lowest level of sustainability is seen as that which merely ensures human survival and the second level entails "preserving as many species as possible and only

permitting one to go extinct after the most profound reflection and debate, and for the most compelling reasons (Ibid, 4)". The model thus implies that human survival can be achieved by a separate prescription than the one needed to preserve the rest of life, that somehow humanity constitutes a different class of life. Such reductionist models as the Maslowian Prugh-Assadourian sustainability model (see figure 1.2) devalue the fact that not only is our survival dependent on other life for food, but that we could not even digest that food without colonies of bacteria in our intestines. Diversity and even redundancy are critical to maintaining healthy ecological functioning and thus the health of *all members* of the ecosystem including humans.

figure 1.2

(Adapted from: Prugh, Thomas and Erik Assadourian. "*What Is Sustainability, Anyway?*" In World*Watch, Vol. 16, No. 5, September/October 2005, page 11.)

Beyond ecological functioning however, we need to recognize that a polar bear in a zoo is not the same as a polar bear in the wild. They don't think the same way. Their brains are not wired in conjunction with the same sensory input. Richard Louv discusses the "last child in the woods" and the consequences of children's decreasing interaction

with "natural" places as "nature deficit disorder" but there is a more disturbing threat on the horizon that might be called the "last woods in our collective imagination". What it means to be human will change in a world without lions, tigers, bears and (perhaps someday in the not too distant future) trees - even if few of us today ever encounter these as constitutive of Self. The same synapses will not fire in our brains. There will be a physiological difference. The idea of "utility" in connection with diversity, that diversity can be viewed as a rung on the ladder to our own self-fulfillment, is thus totally absurd when compared to our relationship with the world as we find it. Self and landscape forms a single unity, destruction of one component part for the benefit of the other is a non-sense. Anthropocentrism may be impossible to completely overcome. That does not mean however that its worst aspects need to be incorporated into each and every one of our mental constructs. The medicine wheel model applies equally to and incorporates all elements of the landscape whereas the Maslowian Prugh-Assadourian sustainability model is strictly anthropocentric, instrumental, *and* utilitarian.

As Richard Norgaard states, "'Rightness' necessarily has different meanings in different conceptual frameworks" (Norgaard: 1994, 91). There is in fact nothing essentially wrong or misguided about the need to pay attention to the particular dimensions or component parts of the hierarchical ladder as proposed in the Prugh-Assadourian sustainability model. It is the modelling of the configuration of these dimensions or the relationship of each to the other that becomes problematic. The reflexive "context for action" that this model creates is one of dependence on linear formulism. Each of the component dimensions in this model is nevertheless clearly prerequisite to the establishment of a social-ecological system that would demonstrate

characteristics of sustainability or resilience. At least three problems however, three

obstacles to sustainable development, arise from this model: First, the propensity

inherent to western ways of knowing that claims one and only one "correct" perspective

of reality actually forecloses the possibility of forming the sort of broad, multifaceted

perspective required for the task. The model acts very much like a map in this respect. By

choosing what to map (a linear step-by-step recipe) and what to omit (a more complex

circular relationship), certain perspectives and kinds of knowledge of the "territory" are

foreclosed. These missing dimensions absented from the model lead to a distorted

understanding of the problem. This problem is in some respects unavoidable and

rectifiable only with openness to other models and perspectives. Second, the underlying

structure of the model leads to the impression that the hierarchical sequence or

positioning represents the actual relationships between the component parts. Such a

normatively ordered, hierarchical cosmology constitutes a clear departure from the

model's pretensions of realism. Thirdly, the way that the structure communicates a

particular conceptualization becomes prescriptive and reflexive. Positivist purpose (step

one, step two…) is inherent in the model; the structure communicates anthropocentric

instrumental utilitarianism. Missing from the model is any hint that there could be

emotional or spiritual dimensions to the problem of sustainability. Even "life quality" is

tacitly understood within a quantifiable materialist metric such as GDP or GPI

(Assadourian & Prugh, 17-19) for example. The step of "equity", viewed as a range or

region on a progressive continuum, is also problematic even though equity itself must

form an integral aspect of an eventual social-ecological system if that system is to

function in a healthy and resilient manner over the long term. The problem arises from

the reductionist conceptualization of equity as something that can be dealt with in isolation. The structure of the model forms a pattern of thought that is then translated into behaviour, behaviour into artefact and prescriptive technology that is then fed back into perception and cognition to reinforce the original pattern.
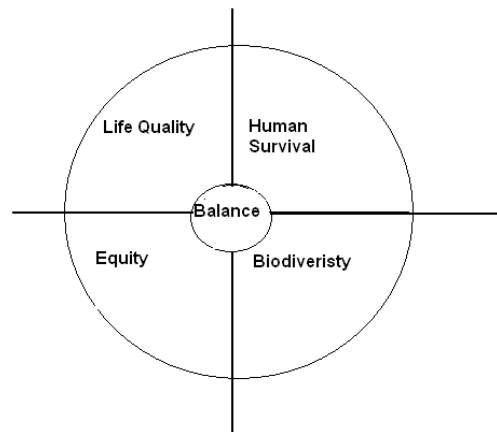

figure 1.3 - Medicine Wheel

Source: Adapted from presentations made by Alberteen Spence at Concordia University in 2005.

The medicine wheel model better captures this circularity of causation (see figure 1.3 above). It acknowledges and incorporates into the model structure that the whole is more than the sum of the component parts. It communicates the idea of a continuous quest for balance as opposed to a linear runaway progression that can only ultimately end in collapse. As a metaphor it brings into focus the relationship rather than the objects in isolation. These two models are essentially two different metaphoric representations of the same reality. They lead to a process however that creates or enacts two very different physical and psychic realities over time. The atomistic, western way of constructing reality involves a linear, action-reaction type of affair. This form of positivist, cause-effect, Newtonian or "billiard ball" way of being discounts any values other than those based on materialism. What speaks or communicates then is also limited to a face-value,

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an indicator of meaning that is strictly quantitative. Just as the "art" of cost-benefit analysis involves the decision of what to count and what not to count, the "art" of everyday life inside the western "iron cage" is also limited to mere calculations.

1.6 Metaphoric Lunacy

Modern science of course now proclaims "that all life is one; seaweed is your distant cousin and anthrax one of your advanced relatives. The unity of life is an empirical fact." (Ridley, 22) But obviously human beings are now also adept at the conceptualization of the self as merely that little box in the input-output model labelled "labour". We picture ourselves as another generic ingredient in the productive-consumptive process we call life. The process in question, the way we arrived at such a view, was the same way, the same process, by which the moon became viewed and "known" as a small stray planetoid to modern suburbanites, or as grandmother's head to the pre-invasion Iroquois peoples: runaway metaphors transformed into shared patterns of thought, a common folk theory of cosmology that acts like the script in an ongoing dramatic narrative.

These biases have become systemic and permeate more than just our perception and understanding of the world that contains and constitutes us. The biased systemic process also eventually alters the objects that we perceive and understand as they acquire the characteristics we imagine and impart to them. These are then reflected back to the individual and social minds, and the cosmological "mind" reinforcing and perpetuating the perceptual and cognitive neuroses. At one time the local residents of Turtle Island would have considered the moon to be "grandmother's head". Their creation story involves the first terrestrial human falling from the sky and surviving that fall only with

the help of a variety of animals, plants and soil. The grandmother's face can still be seen looking down through that same hole in the sky. The contemporary scientific view on the origin of the moon is that it (or she?) "condensed as a separate planet, moving in its own orbit around the sun. Then, when the separate paths of the Earth and moon brought them momentarily together, the Earth's gravitational pull may have plucked the moon from its path, causing it to move into a new path and to orbit the Earth endlessly (Skinner & Porter: 1987, 650)". Each of these two ways of "knowing" the moon depends on and reinforces a different relationship to the moon including different perceptions and different socially constructed meanings. If we accept that the moon had an impact on the Earth's orbit around the sun, that it also continues to play a central role in the phenomenon of the tides, then given the incredible odds working against the establishment of life anywhere in the universe, it becomes entirely plausible that life could not have arisen on Earth in the absence of this ancient communion with the moon. Thus the aboriginal label "grandmother" may be an entirely appropriate metaphorical understanding of our relationship to the moon. It may actually better capture the essence of the moon than any scientific understanding could alone. Like our grandmothers the moon gave birth to that which would give birth to us. Like our relationship to our grandmothers, the relation is timeless. The atomistic metaphor of the moon as a small stray planet on the other hand, best understood through the application of reductionist models, all but ignores this important relationship. The scientific perspective clearly precludes the possibility of "knowing" the moon as "grandmother". Once a flag is planted in grandmother's face, once tire tracks scar her skin, and she becomes the object of lust for her resources or as a tool in the utilitarian quest for individually profitable

knowledge, then she can no longer be a grandmother. We can no longer maintain the relationship that made us her grandchildren. The transformation changes her and it changes us.

The anthropomorphic idea of "grandmother" also contains notions of experience and wisdom, affection, and caring, perhaps from a relatively greater distance than the active direction received from a parent, (Mother Earth). Such essentially human notions must have some impact on social behaviour, on the construction of what is "right" when they are embedded in an object that is regularly visible, that acquires a culturally enhanced *vividness* and *resonance*. Contrast a religiosity based on the idea of readily visible and physically, spiritually, economically and emotionally interacting and ever present familial relatives with one based on the idea of a God who cannot be seen, felt or heard, supposedly existing in a separate cosmos (heaven) directly accessible only after death. These two different "knowledges" of the moon result in very different relationships.

Obviously, to understand the moon as "grandmother" is not a type of knowledge that one "chooses" to acquire, nor is it an entirely complete and accurate understanding of the moon. Nevertheless, the culture-specific emphasis on the familial nature that imbues this conceptualization results in a way of being in the world that clearly favours resilience. Albert Schweitzer's "reverence for life" model, Bateson's "Ecology of Mind", Fikret Berkes' description of traditional knowledge are each very similar in this respect. There are countless other potential models that could represent a step in the right (or the wrong) direction in this regard. Socialization into a culture based on utilitarianism, or scientism, or traditional knowledge or many other specific epistemologies, forecloses

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certain particular ways of being in the world for certain individuals and societies as it simultaneously opens other possibilities.

The idea that many different perspectives of the same reality can coexist and cooperate in the construction of a more deeply textured knowledge, that there is not one dominant and objective "truth" able to disprove and replace other perspectives is contrary to current conventional wisdom based on scientism. The "idea" of an accessible objective reality thus constitutes a clue to a more comprehensive abstract *pattern* of ideas, or what we could consider as a particular, culture-specific conventional wisdom. The pattern does not necessarily manifest in each of the constituent parts of society but the characteristic of atomism at the more general meta-level pattern succeeds in containing the contradiction. The general pattern or *gestalt* is able to persist at a subconscious level contained within all of the structures of western culture; language and signification, ideology, hegemony, base and superstructure, and so on (see Williams: 1977). The hegemonic pattern today dictates a specific way even to experience the cosmos. As Ursula Franklin explains, "Today scientific constructs have become the model of describing reality rather than one of the ways of describing life around us. As a consequence, there has been a very marked decrease in the reliance of people on their own experience and their own senses." (Franklin: 1999, 31) These culturally imposed blinders result in a collective deviation into fantasy and delusion and further compound the illusory distortion to be overcome in the quest for sustainable development.

1.7 - Social Aesthetics & Thought Communities

These formative forces of gestalt dictate what to pay attention to and what to ignore. Then the relatively narrow focus on those particular aspects of reality that our

dominant patterns of thinking draw our attention to is further restricted or narrowed down physiologically as well as cognitively and culturally. As Berleant explains, "Many factors shape our sensory awareness, from the physiology of the brain and other organic functions, to the formative influences of education and the other cultural institutions and practices that construct our belief system, affect our responses, and contribute to the many-layered complexity of perception (Berleant: 2005, 150)". What we are capable of perceiving has essentially been determined by what configurations have been useful within a dynamic and recursive evolutionary context, a context consisting primarily in our case of the survival imperatives posed by the day-to-day exigencies of hunter-gatherer communities over a wide range of historic landscapes. What gets through the filters of perception is then also filtered and determined by the application of a cultural meaning system. This becomes a sort of context of a context. Turkey at Thanksgiving or whale meat on the occasion of a successful hunt tastes "good" at least in part because of its associated social-symbolic meaning. Thus for humans survival and evolutionary development have been as much about the construction of meaning as about material existence per se. Adam Smith's view on this point was mistaken in that he did not recognize and understand the essentially constructed origins of propriety:

"That utility is one of the principle sources of beauty, has been observed by every body who has considered with any attention what constitutes the nature of beauty. The conveniency of a house gives pleasure to the spectator as well as its regularity; and he is much hurt when he observes the contrary defect, as when he sees the correspondent windows of different forms, or the door not placed exactly in the middle of the building. That the fitness of any system or machine to produce the end for which it was intended, bestows a certain propriety and beauty upon the whole, and renders the very thought and contemplation of it agreeable, is so very obvious, that nobody has overlooked it." (Smith, 257)

Smith had no conscious awareness that his perception, cognition, sense of propriety, in short his "metaphysical and epistemological suppositions", the same forces in fact which led him to author his *Theory of Moral Sentiments*, had been influenced, even constructed, by the same ubiquitous cultural forces that also led his contemporaries to construct the French formal gardens described by Albert Weiss as "Mirrors of Infinity" such as Vaux-le-Vicomte, Versailles, or Chantilly (see Weiss). This same pattern of metaphors applied culturally to perception and thought formed the basis for the reckoning that in the Garden of Eden the branches on trees were perfectly straight and perpendicular to the trunks and there were no hills whatsoever, just a perfectly flat plane. The shared understanding of the "way the world works" expanded beyond what was immediately perceptible and projected into the fields of what "must have been", what "ought to be" and so on. Arnold Berleant explains: "The siting of a building, for example, as much as its architectural design is a physical statement of personal cultural beliefs about the human place in the world. Indeed, buildings stand as the embodiment of such beliefs." (Berleant: 2003, 16) Such utilitarian-based feelings as those expressed by Adam Smith would have seemed strange indeed to someone accustomed to living in the shelter of a conical tepee that was always put up by ritualistically and symbolically connecting the tepee to Mother Earth. As Eviatar Zerubavel explains, "The more we become aware of our *cognitive diversity* as members of different thought communities, the less likely we are to follow the common ethnocentric tendency to regard the particular way in which we ourselves happen to process the world in our minds as based on some absolute standard of 'logic' or 'reason' and, thus, as naturally or logically inevitable." (Zerubavel, 10) The essentially constructed nature of perception is also

easily forgotten when inhabiting the suburban landscape and assessing its dominant characteristics. According to Virginia Scott Jenkins, "Man manages to dominate nature in order to create the lawn and thus makes a pet out of it, lavishing it with care and attention (Jenkins, 185)." To rationalize such behaviour requires a perception of the landscape through an interpreting lens that presents the land as being in need of instruction and guidance. Landscape as perceived and understood through this lens thus becomes another "prescriptive technology" defined by Ursula Franklin as a "design for compliance" (Franklin, 16). The institutionalized "idea" of the lawn or of the French formal garden, dictates compliance from both the social and the ecological systems. The important point here is that the "utility" and (thus historically inherited cultural construct of beauty, propriety or "rightness") has an ecological consequence that is excluded or filtered out by the lens of this particular cognitive model. The atomistic nature of that "idea" ensures that the act of creating and maintaining the lawn or formal garden also escapes the imagined boundaries of "rational" or "logical" behavioural analysis.

This dilemma is characteristic of human perception and thought, chronically confusing the map with the territory, and forms a major obstacle to achieving "ecology of mind". According to Peter Harries-Jones "…that which we classify as belonging to the natural world are not objects external to us, but rather an embodiment of an interaction between the natural world and sense organs. Properties are only differences and exist only in relationship (Harries-Jones: 2002, 171-2)." That relationship involves a human brain that attaches meaning and emotion to all incoming perceptual data. Whether raw whale meat tastes good or the moon looks like grandmother's head, or giving alms to the poor seems "right" are not significations that originate essentially "inside" the individual

human consciousness. Such significations are part of a code that transcends and unites the individual components of the total context: perceiver/cogitator, "environment", interpretative code, and connecting messages. As Gregory Bateson explains, "When a boy says to a girl, "I love you," he is using words to convey that which is more convincingly conveyed by his tone of voice and his movements; and the girl, if she has any sense, will pay more attention to those signs than to the words (Bateson: 1972 [2000], 418)." The hegemonic epistemology of modernity results in a behavioural coding that insists we act as a girl without "any sense… to pay more attention to those signs". This is reductionism writ large.

It is not simply a question of not paying attention however. That which is considered worth paying attention to is institutionalized by society. Structures such as schools, universities, media, religious organizations, corporations and so on, prescribe methodological templates that guide each individual's thoughts. One of the important assumptions conveyed within these structures is that naturally self-regulating mechanisms are ubiquitous. This assumption leads to overconfidence and an imagined ability to act within the world with impunity. When a social, ecological or economic system appears to malfunction, the preferred solution is often to free the imagined natural regulating mechanisms. Such a conclusion is consistent with a clockwork conceptualization of the cosmos. Thus the things that resonate within the meaning system get noticed and those that do not are ignored. Furthermore the parameters of our perception are to some extent socially constructed, so that the information that supports the dominant epistemology gets through these constructed filters and inconsistent information does not and is consequently ignored, as scomata.

1.8 – The "Sacred"

It is significant to note that what is dismissed as primitive imagination by dominant culture is to Indigenous traditions reality's only viable description. Any Indigenous culture assures this truth, be it Celtic, Hopi, or whale pod (Sheridan: 2006, 369).

From another perspective the "mechanism" required for sustainable development may be immanent in all thought and matter. Joe Sheridan's account of Haudenausanee imagination is one way to describe such a "mechanism". His view is in many ways similar to Gregory and Mary Catherine Bateson's account of the search for the "sacred". According to Bateson and Bateson "To believe and act in the belief that there is no mind distinct from the body and (of course) no body distinct from the mind is not to become free of all limits. It is to accept a new discipline, probably more stringent than the old (Bateson & Bateson, 181)." Sheridan also focuses on the need to overcome the mind-body dualism and adds that imagination (what Bateson might refer to as aesthetics) involves "…learning to think as the continent thinks." This is the same rub identified by Albert Schweitzer when he states that "…self-perfecting can consist of nothing but man coming into his true relationship to the Being that is in him and outside him (Schweitzer, 299)." Again the relationship is the key. Schweitzer is suggesting that it is the linkage between the self and the landscape that determines both. Bateson agrees with this prescription: "to 'believe in' the sacred, the integrated fabric of mental process that envelopes all our lives - and the principle way he knows that has allowed men and women to approach this (but not necessarily the only way) has been through religious traditions, vast, interconnected metaphorical systems (Bateson & Bateson, 200)."

In the remainder of this introductory chapter we will now focus our effort mainly on outlining the aspects of the landscape that by its nature prescribe the pace and

direction of change, that constitute what we might consider to be the "mind" of landscape. After developing these concepts we can then demonstrate them in the structures and operations of the actual contemporary suburban landscape-economy matrix.

1.9 – Developing a "Grounded" Theory

To begin this discussion we first need to outline what we mean by the term "landscape". One appropriate metaphor to begin with would be that of the landscape as a "systemized totality". The total system, landscape, would include physical structures (such as trees, buildings, roads, or the atmosphere for example), micro, macro, and meta-processes (such as cold and flu cycles, hydrological cycles, and tectonic activity for example) and also a broad range of interpretation templates and cognitive subsystems (such as symbols – the colour red to a humming bird, golden arches to a young suburbanite); aesthetics – (suitable nesting site, or the propriety of an essentially industrialized versus a pastoral panorama); sensations – (poison ivy, sunlight, humidity); emotions – (heartbreak, loyalty, reverence); as well as those meaning system templates specific to humans – (metaphoric organizing concepts, language, rhetoric, myth, paradigm, artefacts or technologies; for example).

Another useful metaphor might be that of landscape as a "community" or even a "family". Such a perspective would put more emphasis on the qualities of the linkages or relationships between the component parts of the whole rather than the individual parts per se. This type of reductionism that focuses attention on subcomponents or subsystems of the whole is to some extent unavoidable in view of human cognitive limitations. From this perspective the "knowledge" about the natural world is acquired for example by

children from watching Disney cartoons such as "Bambi" and "Finding Nemo" or playing computer games such as "The Sims" which requires setting low tax rates and only applying virtual decorative greenery as a way to enhance virtual property values in order to "win" the game. Such dynamics as this kind of "education" form a part of that total system.

In any system, (a water molecule, a watershed, a human body, or a solar system for example), there are many ongoing processes and much that is happening. There are elements of the system that communicate and make a difference to other specific parts of the whole and other elements that do not. Just because some elements do not seem important or even escape human perceptual and cognitive capacities altogether does not necessarily mean that they are unimportant. From the perspective of landscape as system, the job of understanding and becoming the landscape is never about something absolute but rather always contingent and incomplete. It is also important to remember that the "system", the apparent "order" and "boundaries", exist as much in the mind of the observer as they do in the physical landscape. A truer representation of the landscape mind must therefore include these conceptual tools: language, ethics, aesthetics, models, myths, metaphors, paradigms et cetera.

We could also think of the landscape as a brain. A brain has two sides as the landscape has two sometime competing and sometime cooperating and complimentary ways of thinking. As Gareth Morgan explains: "…the right hemisphere plays a dominant role in creative, emotional, acoustic, and pattern recognition functions…" while "The left hemisphere is more involved with rational, analytical, reductive, linguistic, visual, and verbal functions…(Morgan: 1997, 76)." One side of landscape "thought" is organized or

structured by what we might think of as "natural" processes: (weathering, ecological succession, and evolution for example) the other side structured by human imaginings: (atomism, Buddhism, industrialism or "technology as transcendence" for example). Morgan continues, "The brain as a system engages in an incredibly diverse set of parallel activities that make complementary and competing contributions to what eventually emerges as a coherent pattern" (Ibid. 78).

The problem of sustainability would be framed from this perspective in the following question: Is there a way to get the "right side" and "left side" of the landscape "brain" to work together? This perspective also draws our attention to the process of learning and the concept of intelligence. Given that infants can perish from want of affection and language, then could it possibly be correct to say that intelligence is located solely in the mind of the child? Is it not more accurate to conclude that intelligence has at least something to do with the type of sensory data provided by the landscape? Learning of course involves information flowing in loops so that each trial can be checked and corrected. The human part (at least the dominant western part) of the landscape "brain" involves the suppression of loops and thus little or no learning. Information flows from constructed ideal onto the landscape – one way, no return. Suburban playgrounds, for example, are generally constructed with the utilitarian goal in mind of being able to count heads. As much as possible cognitive clutter producing and distracting sensory data (like trees or shrubs) are thus removed.

The landscape has generally been portrayed and conceptualized within the western atomistic tradition of utilitarianism and scientism as a theoretical "isotropic plane", or a sort of artist's canvas. Such metaphoric representations tend to channel

thought, focusing attention on particularities, establishing "thought communities" and

eventually foundations of cultural identity. Mainstream neoclassical economic theory for

example begins from a set of simplifying assumptions including "zero transport costs"

implying that an entire "economy" could theoretically take place on the "head of a pin".

When the idea of distance is later introduced, it would generally be in accordance with

the following lines by Peter Dicken and Peter Lloyd:

"If all farmers could be located at the market, they would all get the same return. But this
is obviously impossible. Farms cannot be piled on top of each other in skyscraper
fashion. Farming uses a lot of land, and where this land is located with reference to the
urban market is the critical factor determining the net advantage that one piece of land
has over another. The greatest advantage belongs to land immediately adjacent to the
market center, and the advantage declines as distance from the market increases.
Precisely how this occurs in the case of a single crop can be calculated by using the
following simple formula:

LR = Y (m-c)-Ytd

Where LR = location rent per unit of land
      Y   = yield (quantity produced) per unit of land
      m   = market price per unit of product
      c   = production cost per unit of product
      t   = transport rate per unit of distance
      d   = distance of the unit of land from the market (Dickens & Loyd, 53-4)"

As the reader may well image there is also a "simple formula" to determine the best

economic use of any particular "unit of land". Using this particular mental framework of

metaphoric understanding turns the landscape into a sort of "paint by numbers" affair.

Absolutely no knowledge of ecology or geology is required within this mental construct.

The process flows only in one direction: from theoretical ideal to actual reality. No

information or "voice" originating in the landscape and flowing to the decision taker is

allowed for in this model: land, the female "creation" plays only the role of receiving the

instructional coding from the male "creator" (see also Merchant).

In contrast to the isotropic plane conceptualization, landscape can be understood as the source of all identity. If I should find myself in a landscape without enough oxygen in the atmosphere, my identity will be that of a corpse. Life on earth began in an atmosphere that would not sustain humanity today. Our genes reflect the more recent past atmosphere. Genes originate in the landscape; they are a response to the landscape. The atomistic perspective is that genes determine one's identity: the individual is self-contained and independent of "environment". This view does not correspond with observable phenomena. Genes always express themselves in a context. My genes might send the following message to the cells in my lungs for example: when the landscape crosses a threshold to contain more than x amount of cigarette smoke and y amount of ingested tuna sandwiches combined with z amount of mercury, PCB, DDT and other carcinogenic agents in those tuna sandwiches, then the cells in my lungs will become cancerous. They might also send a message that says if I find myself in a landscape of culture A then I will behave in an introverted way, whereas if I find myself in a landscape of culture B, then I will behave in an extroverted manner or if in a suburban culture C, then I will adopt an atomistic perspective and construct my perception of self identity based on my material possessions. In short, genes are merely one language that the landscape uses to send messages; the physical origin of those messages is never strictly "inside" the individual, but rather within a total landscape. From this perspective, what "speaks" and forms the origins of all identity, whether as bacterium, feldspar, ragweed, chimney swift, or Republican President, is ultimately the landscape.

We could also combine the isotropic plane perspective with the identity metaphor to form a "landscape as mirror" perspective. This is similar to the "landscape as brain"

perspective but also provides insights into cultural phenomena such as place-specific exceptionalism or environmental determinism. Here we have the idea of landscape as determinant combining with extreme egocentrism. American exceptionalism for example can be traced to Christopher Columbus who "believed he had discovered the Garden of Eden." (Arnold: 1996, 48 or Merchant: 2004, 57) This view did not prevail in a literal sense but the idea that a rational and divinely inspired man could recreate the original garden in America did. David F. Noble explains, "Here 'second creation' meant that it was made by man, albeit divinely inspired and ordained, rather than by God directly; that its result was artifice, a secondary elaboration upon and extension of the first creation, nature; and that it reflected the arrival or imminent advent of the millennium, which marked a new genesis, a restoration of perfection, a new creation (Noble: 1999, 90)". This perspective of a chosen people connected to an anthropogenic and co-created landscape also prescribed a particular relationship to God and a particular relationship to the land. That relationship was based on the idea or metaphoric template of a contract. Early European colonists in America organized their relations with God and with the land according to the same template: an accounting balance sheet or input-output model. Salvation and transcendence was based on a surplus of good deeds and penances (positives) over sins (negatives). A positive score was the price of admission at the gates of heaven whereas a deficit resulted in eternal damnation. The land also required additions of labour in the form of tree and stone removal, drainage ditches, and fertilizer additions and other "husbandry" (inputs) in order to maximize food production and aesthetic (expressed as "civilization") value (outputs). Colonists substituted fish for the traditional old world farm animal manure due to a shortage of domesticated animals.

Farmland thus symbolized the colonist's relationship to God. God would be pleased by diligent husbandry of the land and reward the farmer with a bountiful harvest. Poor harvests signified moral deficiency on the part of the farmer or entire colony and a failure to impart the required "improvements" to God's creation. This accounting model of "the sacred" obviously has a number of flaws that have formed substantial obstacles to sustainable development and ecological resilience.

We could also further develop this metaphor of landscape as a gateway to "the sacred". The term "sacred" here may be used in conformity with Catherine and Gregory Bateson's explanation as: "a unity of nature… [that] might only be comprehensible through the kind of metaphors familiar from religion…(Bateson & Bateson: 1987, 2)." The idea of sacredness goes beyond that which is merely "beyond questioning" or accepted as an article of faith. Bateson or Schweitzer's conceptualization for example can be understood as more than the common thread holding a piece of cloth together, but rather evokes the weft, warp and woof of the cloth: that is to say, "the pattern that connects". Even John Stuart Mill was correct in asserting that the needed pattern is not discoverable and not available to be lifted directly and in totality, "*prêt à porter*" so to speak, from nature.

It is important to stress at this point that any such metaphoric understandings of "landscape" do not constitute a "solution" to the enigma of sustainable development per se. Many different models, metaphors, myths and paradigms will be required in order to act resiliently in the landscape, in order to "think like a continent". Furthermore, it should be clear that these various other "lenses" used to perceive and understand the landscape form a component part of that same landscape. In other words, the logistical optimization

techniques of location theorists as much as mating instincts of caddis flies, seed dispersal

techniques of choke cherry trees, or ubiquitous soil formation processes, all represent

ways of "thinking" a particular landscape into existence.

Thought follows shared patterns in the form of organizing models, metaphors,

myths, (auto-) biographical stories, narratives, paradigms and so on. Those shared

thought patterns organize social behavioural patterns. These behavioural patterns result

in "prescriptive technologies" (see Franklin) in the form of artefacts as diverse as

skyscrapers, nature parks, or supply-demand models. Given that all living organisms alter

the landscapes they inhabit to some extent, humans being no exception, the impact of

those original thought patterns continue to structure landscapes in real time. Those

altered landscapes provide the sensory input, in conjunction with cultural interpreting

cues, to "hardwire" our cognitive processing equipment forming the circuit into another

spiral of dysfunction. As Meyer explains, "The way we shape the boundaries of human

life are political decisions that affect our understanding of what the natural world is and

how we as humans interact with it. Moreover, these boundaries affect the way that we

understand all those realms of human life within which our interaction with this natural

world occurs. Thus these boundaries themselves help to shape the natural world. This is

one side of the dialectic. The other side is the fact that this natural world shapes who we

are- precisely the "we" that construct the boundaries in the first place." (Meyer, 136) The

"idea" of an accessible objective reality thus constitutes a clue to a more comprehensive

abstract *pattern* of ideas, or what we could consider as a particular, culture-specific

conventional wisdom. It is important to remember that meaning systems are

geographically and temporally specific. Absolute faith that a piece of pyrite or "fool's

gold" can be properly understood as no more than a compound of iron and sulphur atoms (FeS_2) is specific to modernized cultures and not universal. The "idea" that a piece of pyrite might also contain an element of "spirit" that could not be detected with what we would consider to be the "normal" senses would have been closer to the norm over the entire history of human cultures. Such a relationship with a living fool's gold may be one of the "deprivals" that George Grant referred to as being beyond our capacity to verify.

We should also not limit our consideration of different ways of knowing a landscape to the epistemologies that humans are capable of, even if the resulting insights must remain tentative at best. By comparing the human and non-human way of knowing or epistemology it becomes clear that humans are in some sense disadvantaged by an extra layer of abstraction that separates them from objective reality. As Mark Winston points out for example, "Cockroaches prefer warm, moist habitats reminiscent of their ancestral home in the tropics. To us, a building in New York City is not at all similar to a rain forest in New Guinea; but to a cockroach, hot water pipes, moist sinks, drains, stoves, refrigerators, and shower stalls provide an ideal habitat (Winston: 1997, 45)." In some parts of the planet the ability to "think like a cockroach" is already becoming critical to survival of some human communities. To see a Cairo garbage dump as a source of food for goats and people as well as a source of marketable commodities for example has provided a livelihood for one people no longer able to continue their nomadic way of life (see Hautecoeur, 21-43). Such a perception would (so far) be unimaginable to the typical North American suburbanite.

Human beings are limited by previous evolutionary outcomes in their ability to perceive and cogitate. They cannot form mental images of specific aspects of objective

reality that are identical to the images formed by other species. Each species is perceptually and cognitively limited within these species-specific parameters in this respect. We can know however that those limits for the human species at least include countless versions of essentially constructed organizing templates. The most we can hope to achieve in our quest to "think like a continent" is applied empathic anthropomorphism, and some of the tools required may be culture-specific and thus beyond the capacity of individual achievement.

Perception and cognition are key evolutionary factors because they have such an important influence on the survivability of a species. "Fitness" for survival is always about the relation between organism and landscape. Perception and cognition mediate that relation. When we think of a tree from a western, anthropocentric perspective we normally forget or ignore the fact that there is a vast root system below the surface of the ground. That root system plays an essential role in soil ecology, conceptualized perhaps as "expert knowledge" and therefore of little or no importance to more generalized behavioural modelling. We tend to give priority to what we can see, to visual information. We do not normally consider the tree from another species' perspective, as a vast habitat for insects, nematodes, fungi or bacteria. We tend to ignore how the touch of the tree's bark or leaves feel to us or how the tree smells or what the wind blowing through the leaves sounds like at least relative to the visual impression that the tree makes on us. A bear for example would "know" the tree based primarily on the smell of the tree. We do not normally focus our attention on the continuous exchange of chemicals between the tree, the soil and the atmosphere. When we decide how to behave in relation to the tree, our decision is always based on information that is incomplete at

best. Even the way we decide which information is "worth" paying attention to may be subconsciously prescribed by past education, an advertisement, or other aspect of popular culture as well as the more obvious physiological parameters. And when we think of our selves, we tend to think in terms of imaginary membranes, able to be represented as spatial coordinates designating where the self (or the tree) ends and nutrients and atmosphere or more generally "the environment" begins (see Ricard & Tuan). We might consider such a way of perceiving and thinking as some combination of "nature" and "nurture" or we might recognize such distinctions as vacuous, a culturally specific illusion. The combinations and permutations are endless but for humans, they always will settle out into a pattern, something we might think of as a "physiology-culture-and-landscape-derived meaning system".

The important point here is that contrary to popular belief, we do not act as an individual "billiard ball" in isolation. The cockroach habitat that we create is not done with conscious, deliberate forethought on our part. It is an unintended and inevitable consequence of our epistemology and our folk theories about the "way the world works". The relationship between the bee and the flower or the human and the germ is not at all unusual. In fact it is a rule without exception. The cognitive template "survival of the fittest" does not reflect reality very well on this score. The process is in fact always a recursive business, always dependent on what existed before. Human epistemologies are also not "outside" of the process but form integral determining factors in the ongoing "enactment of the universe". Gregory Bateson sums this dilemma up quite succinctly as follows:

Let us now consider what happens when you make the epistemological error of choosing the wrong unit: you end up with the species versus the other species around it or versus

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the environment in which it operates. Man against nature. You end up, in fact, with Kaneohe Bay polluted, Lake Erie a slimy green mess, and "Let's build bigger atom bombs to kill off the next door neighbours" (Bateson: 1972 [2000], 491-2).

The consequences of "choosing the wrong unit" are more than just the original "epistemological error" but rather the potential magnification of the original error. Consider for example a building. As Arnold Berleant points out, "Sometimes, in fact, a building casts its character over an entire neighbourhood, for buildings are not self-sufficient objects but places for human activity, determining the patterns of movement toward, into, and out of them, as well as within them. This fact transforms our understanding of architecture from an art of physical structures into an art of complex social and environmental organization." (Berleant in Light & Smith, 29-30). Thus the illusion to be overcome is not restricted to patterns of thought but spreads as well into the structure of our feelings, our sense of propriety and aesthetics, as well as the various elements of the landscape painted with such meanings. Timothy Beatley builds on this insight concerning the prescriptive role played by the built environment. "Unsafe streets, stultifying schools, and a landscape of fast-food franchises and shopping malls, accessible only by car, collectively yield emotionally and ecologically impoverished places – not the sort of places that reflect, as David Orr observes, a society that loves its children (Beatley, 271)."

1.10 – The Importance of Perspective

"The instrumental rationality postulate of neoclassical theory assumes that the actors possess information necessary to evaluate correctly the alternatives and in consequence make choices that achieve the desires ends." (North: 1990, 108)

Before we turn to the specific example of a suburban case study, we need to say a few more words on the importance of perspective in a reflexive world. In a sense,

perspective cannot be separated from "a place to stand". [(4.)] This realization in turn makes everything political, even the cognitive models that form part of our "historical inheritance". Where we stand, whether by informed choice or passive acceptance, determines the particular lens or model through which we view the world and thereby establishes the nature of our relationship to the cosmos. Models are necessarily selective simplifications of that which they are designed to represent. A model that did not simplify the object it is intended to represent would essentially be useless because in such a case the object could be better dealt with directly. Models thus attempt to isolate and capture the "determinant mechanisms" of the object represented. All examples of human perception and human cognition comply with this description of a "model". As I look at the computer screen in front of me, what I "see" are those elements of reality that have already been physiologically and psychologically "modelled" by the processes of biological and cultural evolution. My perception of the computer screen in relation to its surroundings for example will be somewhat different from the way a person from a very different culture or historical era would perceive it. What I "think" about the computer screen, the meaning and value that I attach to it, has also been "modelled" by a similar process. From one perspective then the accessible version of reality is determined by the results of this modelling process. From another perspective however, the organism perceiving and or cogitating is also "determined" by the "models" inherent in the organism. In other words, if I "scratch" it is because the organism that I "am" has modelled an "itch". F.G. Bailey explains this idea of the "model" as follows:

"Models, which are also known as conceptual frameworks, disciplinary matrices, paradigms, regimes, discourses, epistemes, discursive formations, and other exotic signatures, are intellectual devices for making sense of our experience in the world. They are used to explain what happened, after the event, or, a bolder claim, to predict what will

happen. Where human conduct is concerned, metamodels are constructed to access the models people use to construe their world, and to describe how they put understanding to use. In everyday terms, metamodels make sense of the notions (articulated or taken for granted) that people have in their minds (conscious or unconscious) to make them behave the way they do." (Bailey in Parkin, Caplan and Fisher, 1).

This is not an argument in favour of an environmental or cultural determinist perspective. Surely John Dryzek does not claim that a reified "discourse" exercises an anthropomorphic agency. Yet an equally inert building acts to control the location and direction of certain pathways. It structures daily routine and equally significant, it provides the physical building blocks for a system of meaning. A discourse exerts control through its structure in the same way a building does. Where does the "mind" reside in this type of control process? Certainly it resides exclusively neither in the bricks and mortar, nor the blueprint of the building nor in the words or language of a discourse. The mind resides in the coded response, the relation between structure (building or discourse for example) and active social actor. That coding is historical in that it is established based on previous templates or patterns of actor relating to structure. The goal here is to underscore that rather obvious yet in modern times almost completely ignored circularity. The particular cultural evolutionary path (meta-modelling process) constituted by and constituting into a "Suburb People" is in the process of forfeiting the very same characteristic claimed as its *essence*: scientific realism. A couple of examples should make this clear. The first example is provided by Pauline von Bonsdorff's discussion of buildings (in both senses of the word, verb and noun). As Bonsdorff explains:

"Modern housing typically demonstrates an attempt to master existence in a formal and abstract way. But often the attempt fails, facades crack, apparently because what Ralph Waldo Emerson called our first environment, nature, has not been taken into account. As a result of the inability of buildings to meet the challenges of the actual local environment, of changing seasons and weather, temperatures and humidity, buildings begin to look awkward, uncomfortable, "out of place." Building is thus easily

experienced as alienated and alienating already on a prereflective level, for the knowing it denies and the human import it denigrates is dependent, to a considerable degree, on our tacit acquaintance with very basic conditions of life: how it feels to walk on the earth, to act and move in a body that is itself subject to natural forces." (Bonsdorff in Light & Smith, 84-5)

Thus, the model, what for Adam Smith constitutes the nexus of "utility", "conveniency", "propriety" and consequent "beauty" of a building, is prescriptive not only of the object of its focus, but also of the one doing the modelling. The creation of a habitat based on an abstract model simultaneously creates a habitant abstracted and isolated from the world "as it is". The "myth" of human mastery of "nature" is embodied in modern housing buildings as physical structure (artefact), in the action of construction and use (ritual), and in the resultant prescribed essence of the habitant, especially as a dealer in symbols and symbolic meanings. Again the words of Bonsdorff enlighten: "Even if this kind of building is not independent of nature, nature is present only as the laws of nature, as articulated in the natural sciences. Nature in the natural sciences is an object of knowledge, 'brute' nature, mute material that is controlled and manipulated according to the demands of technology. Seen in this way, nature indeed has little cultural significance, and its significance for building is reduced to technical demands of construction, for example, in calculations of durability (Ibid, 75)." The pattern is not limited to anthropogenic structures of the landscape but also includes anything perceived because the simple act of perception includes the attachment of a corresponding culturally legible symbol for the object perceived.

.   In our second example, we expand these insights from the "building" to the "economy". The mainstream view of the "economy" is that it can be adequately described in quantitative terms such as the equation: GDP= C (Consumption) + I

(Investment) + G (Government) + N_x (Net Exports). Although this formula for calculating the Gross Domestic Product (GDP) and its use as a meaningful indicator have been much criticized and debated, proposed replacements such as Genuine Progress Indicator (GPI), Happy Planet Index (HPI) or Ecological Footprint all share this same general quantitative formulaic approach and more importantly, the same reflexive consequence. Missing from these formulas are the resultant "images" of "building" or "economic model", the reflexive aspect that moves from social mind to landscape materiality and back. This dynamic can be visualized in the model below (see figure 1.4 below).

Notice the relationship between a social mind that recognizes a quantifiable "economy" and the common identity of the members of that society. In the same way that Paul Robbins explains lawns creating "Lawn People" an economic system that defers decision making to "markets" creates "Market People", essentially commodities in a labour market. Figure 1.4 depicts this process of becoming a "Lawn Person", a "Market Person" or potentially a "Sustainable Development Person".

In this model (figure 1.4) then the words, "myth", "ritual" and "artefact" must be interpreted and considered as symbols for much broader meanings. For example, the meaning of the symbol "myth" includes folk theories of cosmology, systems of ethics, propriety, aesthetics, creation stories, meta-narratives, ratiocinations of all descriptions, human physiology and brain function or in short all of the explanations, reasons, excuses, and alibis for why we think, feel, and behave the particular way that we do. [5] Likewise the symbol "ritual" should be understood as the enactment of "myth" and "artefact" as the embodiment of "myth". Jay Appleton adds insight to these notions as follows: "To

describe something as 'myth' does not necessarily imply that it is false; merely that its

validity ultimately depends more on faith than on proof, while the term 'priesthood'

implies a commitment to a *corpus* of related ideas analogous to those embodied in a

religious creed (Appleton: 1990, 16)". Here I want to argue that western scientific

knowledge falls into this category of "myth" because it is incomplete. This

incompleteness becomes obvious if we compare this type of knowledge with traditional

or indigenous knowledge. David Newhouse explains as follows, "As is all relationships,

agreements must be made and obligations and responsibilities entered into with the

spirits. Thus, when a person comes into relationship with certain knowledge, he or she is

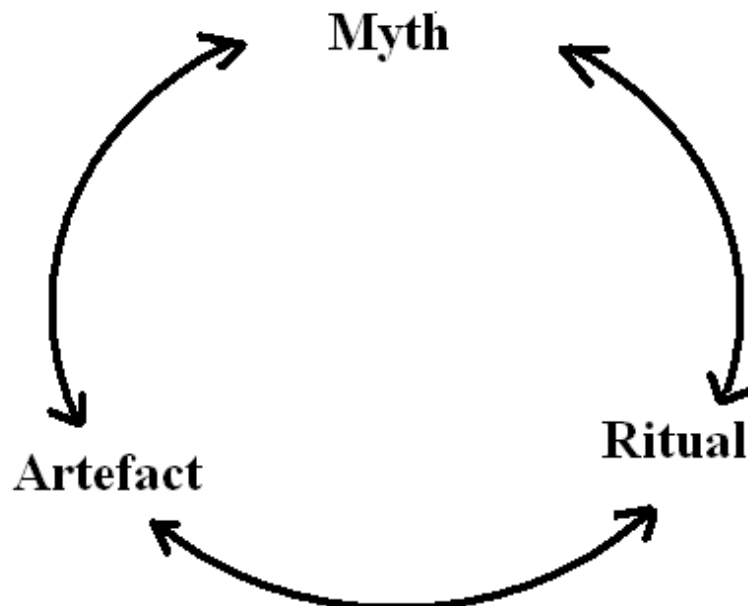not only transformed by it, but must assume responsibility for it (Newhouse: 2004, 151)."
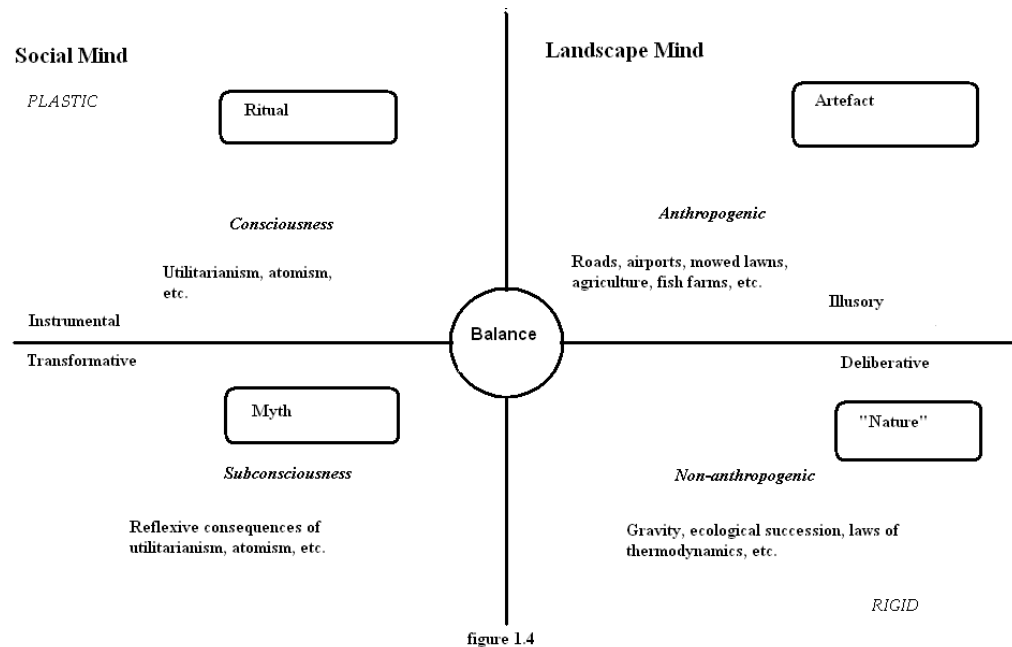

Figure 1.4 - Reflexive Model

A few examples should make this proposed framework clear: If I awake and look

at my alarm clock (artefact) and it reads 7:00 AM (myth) and my calendar (artefact)

reads Monday, May 25, 2009 (myth) then I will take a shower (ritual), applying soap and deodorant (ritual). Thus mythological "ideas" such as that 7:00 AM, Monday and May 25, 2009 designate the *real* time are enacted through predetermined, repetitive, standardized rituals using artefacts to embody the essence of those ideas. If in a given society a consensus arises that a certain type of building "feels" correct, then this idea will be enacted in the construction of that type of building. Not only the construction, but also all of the routine behaviours associated with that type of building are to be considered as ritualistic: cooking food in the kitchen, religious devotion to the television, mowing the lawn, and so on. Furthermore, cosmological "ideas" such as that poor people in some sense "deserve" to be poor are clearly also "myth". A supply and demand model on a chalkboard is the reinforcing embodiment of that myth (artefact) and voting for a conservative politician would be the enactment of that myth (ritual).

"People who do not know 'the time' or have absolutely no idea what day or year 'it is' may very well be considered cognitive deviants, but they certainly remind us that thinking in a social manner is by no means natural (Zerubavel, 110)."

We can now combine these first two models (figure 1.1 & 1.4) into a more comprehensive model (see figure 1.5) in order to decode and understand from a new perspective the processes and structures of a suburban community to be discussed in the next chapter. This model clearly suggests that the usual tools, currently being employed in the quest for sustainable development, are inadequate and their real consequences illusory. To illustrate this let us consider the development of steady-state economics as an improvement over economics or the development of the disciplinary field of ecology from the main branch of biology. The "ideas", steady-state economics and ecology, can be considered as artefacts. As artefacts they reflect a degree of dynamism at the level of

the dominant myth system. They privilege human creativity (enacting the "myth" of humanity's "rightful role" as "creator", "manager" or "steward"). These are the type of metaphors that belong to a class of cognitive templates with a tendency to spin into a positive feedback loop, described by Gregory Bateson as an "ecology of bad ideas" like an "ecology of weeds". For a clearer parallel example, consider the outcome of past efforts to escape the forms of inherited traditionality of industrialism as it had been applied to agriculture and food generally. The genesis of an organic food industry is in many ways similar to the genesis of ecology and steady-state economics. This "industry" can be considered as a nexus between economy and ecology. As Julie Guthman so poignantly demonstrates in her article, *Fast food/organic food: reflexive tastes and the making of 'yuppie chow'*: "The growing disconnect between new forms of provision and the meanings organic farming originally embodied surely calls into question the positioning of organic farming and organic food as antidote to industrialized agriculture and fast food." (Guthman: 2003, 47) These new disciplines (steady-state economics and ecology) emerge, in other words, in response to this changing attitude of the social mind but as they emerge, they are simultaneously captured and contained by the "tight circle" identified by George Grant. This is not and should in no way be construed to say that these efforts are a waste of time or should not be continued. They do after all represent movement and that movement does work to destabilize the foundations of hegemony even as forces simultaneously work to incorporate the products of those efforts into that same foundation (see also Smith: 1998). The point here is that theses efforts *alone* should not be expected to achieve "sustainable development".

figure 1.4

Now pertinent questions arise therefore as follows. Where is the "critical mass" or "centre of gravity" in this model? How might some form of balance be permitted to attain? In other words, to speak of balance implies a balancing of "power" and "control". There is clearly some question as to whether humanity as it presently exists could find the capacity to cede such power and control or even whether humanity could find the capacity to construct a "second nature" that could consciously formulate "myth" to be subconsciously enacted and reflected from one quadrant to the next and back. The question of how humanity might recognize such a "balance" nevertheless is critical to the achievement of sustainable development. Sustainable development from this perspective becomes a matter of escaping a social, cultural, economic and ecological hegemonic *modus vivendi* imposed by a shared meaning system. For example, might we be able to foresee and avoid a state of affairs where ecology merely reinforces a collective faith in expert knowledge? Does steady-state economics forestall or even foreclose a way of being that includes notions of "sacredness"? Do these new types of "knowledge" allow

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Quadrant 4 to "speak", to have a voice that can deliberatively "balance" the other three quadrants?

Notice also that within this model, ritual is the most flexible and most susceptible to change. The "laws" of "nature" on the other hand may be considered as fixed and unchanging. "Myth" and "artefact" constitute an intermediate zone. This would suggest for example that suburbanites might recycle or even compost, perhaps in response to municipal regulations, for a very long time before their theories about the "way the world works" actually escape the hegemony of atomism, industrialism, positivism and so on. They may in fact never achieve that "freedom" as a result of such instrumental changes alone. On the other hand, new insights about the "way the world works" coming from such fields as quantum physics or a sociology of mind may be expected to eventually work their way into the dominant mythos, be reflected in artefact, and ultimately institute new rituals *from below* to enact this new perspective.

These questions are more clearly dealt with by using concrete examples and so we turn now to our examination of a modern suburban context to further illustrate the illusory nature of sustainable development before returning to this more theoretical discussion and recommendations in the final chapter. In Chapter 2 we will specifically examine some elements of the context of an actual suburban community in the early 21st century, mapping out the territory of the reflexive balance model. In Chapter 3 we will continue with our reflexive model of sustainability (Figures 1.1, 1.4 & 1.5) and apply them to the case study in order to suggest a more productive (or at least more realistic, less illusory) approach to the problem of sustainable development. In Chapter 4 we conclude with some thoughts on how to proceed.

Chapter 2 – A Case Study of Suburban Epistemologies

2.1 – Introduction

In this chapter, concrete illustrations of the four dimensions of sustainable development as structured on the reflexive balance model (figure 1.5 above) will be conceptualized, described, and assigned to a position on the model. This exercise will provide us with an illustration of an imperfectly perceived and understood, (inter-subjective), historically structured (recursive) contemporary suburban (geographically-specific) context. From the outset it must be stated clearly that pretensions of realism are to be abandoned in this exercise. The degree of correlation between the following narrative and some theoretically accessible objective reality will have no bearing on the legitimacy of the argumentation. The model is intended merely as a dialogic tool rather than an instrumental prescription. The particular stories or perceived and interpreted realities assigned to each of these dimensions (myth, ritual, artefact and nature) could be anything. The interpretation offered is only one possible perspective which constitutes a way of seeing and understanding a particular context. This "place to stand" has been chosen because it might lead to a sustainable development perspective. Such a hypothetical stance is justified by the realization that the reflexive loop between "myth" and "reality" is inescapable. There is no "natural" way for humans to be in the world if by "natural" we mean culture-free. Take for example the case explored by Matthew T. Huber of the price of gasoline in the United States. Any number of one or a combination of cognitive models may be employed in coming to "understand" the price of gasoline in the United States: economic, superstitious, geological, organizational behaviour, sociological, religious, communications theory, and so on. Each of these models may at

any given point in time *seem* to accurately reflect the reality of the price of gasoline on the ground so to speak. Yet none of these models can legitimately pretend for example to go beyond the mere description of the mostly subconscious link between gas prices and a highly internalized "way-of-life" as evidenced in the fairly ubiquitous "pain at the pump" discourse in the United States (Huber: 2009). As illustrated in chapter 1, perception and thought focus on specific aspects of reality only by systematically ignoring other aspects. Modelling gas prices in terms of supply and demand for example creates a type of knowledge that merely acts much like a transitional object, in the same way that a child's teddy bear mediates the transition between "self" and "other" (see Berman). That particular "knowledge" about gasoline prices becomes a sort of cosmological anchor, a cognitive chalk line or map of the world. (See Newhouse also). This process then becomes self-reinforcing as perception and thought back up the particular models, metaphors, paradigms and myths that initially produced that same peculiar pattern of perception and thought. In other words all of these models treat gasoline prices as something that is "out there" without considering the symbiotic relationship between a largely constructed American identity and the price of gasoline. As Karl Polanyi points out, "If, for example, you single out whatever motive you please and organize production in such a manner as to make that motive the individual's incentive *to produce*, you will have induced a picture of man as altogether absorbed by that motive. Let the motive be religious, political, or esthetic (sic); let it be pride, prejudice, love, or envy; and man will appear religious, political, esthetic, proud, prejudiced, engrossed in love or envy (Polanyi: 1977, 11)." At present, the "rational economic man" guided by the invisible hand of the supply-demand model embodies the dominant myth system and the resultant

"knowledge" is ritualistically enacted on a global scale. Keeping in mind then that our stated goal is the achievement of sustainable development, a large degree of imaginative creativity is certainly warranted in the search for such a reflexive universalizing pattern of sustainable people in sustainable landscapes. Putting the horse back in front of the cart means searching first of all for what is authentically human (as organism ecologically, culturally, socially and economically balanced within a particular landscape), and building our perception and "knowledge" from that platform instead of letting the platform itself determine what it ultimately means to be human and what knowledge becomes socially acceptable, if not altogether hegemonic. It must also be recognized that no single cognitive version of reality can suffice given the current context.

In any case, the two important points that need to be made in this chapter are the following. First, these stories, whatever they are, matter – they operate reflexively. Secondly, these reflexive contexts must be accounted for in some sort of social, deliberatively dialogical, educational process if sustainable development is ever to be imagined and enacted on a scale that could have real positive consequences for the human family. In section 2.3 we will begin with "Nature" followed by "Artefact" (section 2.4), "Ritual" (2.5) and concluding with a discussion of the role of "Myth" (in section 2.6). The reader will undoubtedly be struck by the impossibility of completely untangling these largely artificial (and therefore somewhat arbitrary) categories. This can be understood with the help of the metaphor of a mirror to represent the boundaries on the model. At some point it does not matter which side contains the object and which side contains the image as the "image" becomes increasingly concrete. This should not be taken as a weakness of the model, but rather one of its more apparent strengths. As

Gregory Bateson explains, "The ideas in a civilization are (like all other variables) interlinked, partly by some sort of psycho-logic and partly by consensus about the quasi-concrete effects of action (Bateson: [1972] 2000, 508)." "Nature" is one example of such an "idea" and is generally encountered through daily rituals both personally and socially creating and being created by a lens of anthropogenic constructs (artefacts) such as language, fashion, metaphor or ideology. As noted in chapter 1, we can only experience nature as humans by engaging and involving the operation of a recursively constructed meaning system, so that some blurring of the cognitive boundaries between these four categories is inevitable. Acknowledgement and better understanding of this blurring should hopefully become helpful in the deliberative creation of more *flexible* and *authentic* cognitive and perceptual templates. The interpretive explanation put forward here is therefore overtly tentative and partial, perhaps one particular facet of an eventually workable sustainable development "knowledge".

> "The natural world does not organize itself into parables. Only people do that, because this is our peculiarly human method of making the world make sense (Cronon: 1996, 50)."

It will also become clear that the reflexive balance model presents a temporally and spatially specific overtly inter-subjective image of reality, in contrast to the common models generally presented as temporally and spatially universal and scientifically objective. The model itself therefore works to transform not only the object but also initiates a process of deliberative transformation of the subject (researcher, reader) as well. As argued in Chapter 1, "Myth" is the region where changes would most directly and durably elicit the emergence of sustainable development people by prescribing various specific ritualistic uses of various corresponding artefacts, with a corresponding

degree of balance within a spatially and temporally specific ecological context. In contrast, conventional instrumental models are conceptual tools intended and designed for the perceptual and cognitive conquest and transformation of only the objects of study, (although the ritualistic use of these models unconsciously and incidentally design and manufacture specific identities as separate, atomized selves as well). The two primary advantages of the reflexive balance approach then are again first, the avoidance of relapse or being re-subsumed back into the hegemonic "logics" or coding of post-industrial, consumerist identities and practices normally encountered with such instrumental changes and second, the explicit recognition of a specifically historicized regional (time-and-place-specific) context.

It must be emphasized that any attempt to introduce and instrumentally impose an invented, rationally optimized grand narrative or instrumental master plan of sustainable development will remain ineffectual at best unless and until it can be fully enacted in ritual and take structural form as artefact with corresponding shared meanings. The relationship must, in short, become *fashionable.* (There is also a danger of backfire: witness the unfortunate demise of the Liberal Party of Canada's carbon tax proposal during the 2008 federal election.) This involves much more than just good marketing skills (see especially Irwin & Wynne). Such a grand scheme would also raise two obvious further questions. The first question concerns the ethics of such a proposal insofar as the dimension of authenticity would be absent from such an imposed prescription. Secondly it is difficult to imagine how such a project could achieve the degree of resonance needed to be successful. The proposal's assessment would after all be presumably undertaken using current mental constructs (paradigms, models,

metaphors) and "psycho-logics". In accordance with Jack Mezirow's Transformative

Learning theory then our interpretation is intended to challenge the assumptions upon

which the hegemonic perspective rests. This deconstruction of reality exercise will

subsequently force a reconstruction of reality, hopefully in a more sustainable balance.

2.2 - Pointe Claire in Context

The community we will examine, Pointe Claire, is a suburban community on the

western end of the Island of Montreal, within a larger region know as the "West Island".

A comprehensive history of human settlement on this territory would begin several

thousand years before present, but for our purposes we will be focusing primarily on the

post-invasion settlement by people of European origin.[1.] This settlement began around

1700 and involved the deforestation of the shoreline and the building of roads along the

river primarily for military and commercial purposes. The contemporary suburban

community should be considered as a continuation of this same "lineage" defined by

Humberto Maturana Romesin and Gerda Verden-Zöller as follows:

"…a lineage is defined and constituted by the reproductive conservation of an
ontogenic phenotype, or manner of living, through a succession of generations. The
ontogenic phenotype is the particular configuration of dynamic relations between
organism and medium that an organism lives from its inception to its death. That is, the
ontogenic phenotype is the manner in which an organism happens to live its life as a
configuration of dynamic structural changes and relations that entail what happens in the
organism, the medium, and their relations, rather than the succession of particular events
(Maturana Romesin & Verden-Zöller, 17)."

Making sense of this settlement process would of course be possible using any

number of various models, such as economic models, (growth pole, etc.) geographic

models, (core-periphery), sociological, (Hegelian), political, (social Darwinian),

environmental determinist, (see Jarad Diamond for example), ecological, religious,

anthropological and so on. The model used here is primarily ontological in that it seeks to incorporate these various other models as component parts of a particular lineage and as such they are understood as active co-constructors rather than impassive lenses acting only instrumentally on a separate pre-existing "reality" – that is to say that the "mechanism" in this model is socio-epistemological.

The defining idea of nature that we use in conjunction with the reflexive balance model should be context-specific but this of course would somewhat negate the need for the model in the first place. It would also presuppose God-like access to an entirely objective reality. In other words, the model works to establish the dimensions of an idea of nature that will in turn work to create an actual ecological context in balance with that idea. For example, generally speaking crows and raccoons in Pointe Claire are considered as "pests" whereas cars and airplanes are not. These "ideas" work as a positive feedback loop, amplifying the resultant ecological dysfunction over time. The idea of nature as automatically equilibrating is an example of another idea of this same category. These "ideas" are again temporally, spatially and relationally (context)-specific notwithstanding their perceptible historical "lineage".

In part these dimensions are not testable or verifiable because they are so deeply subconscious. Why for example do people put so much effort into mowing their lawns? Any number of excuses and alibis might be given including aesthetic, economic, sociological and so on. In the end, we have no idea really why they do that. Symbols such as lawns, coca-cola logos, antibiotics, space shuttles, or television sets contain historically accumulated social meaning. They resonate in part because of the historical continuity and consequent legibility that they represent on one level. Yet on a deeper

subconscious level there must be something else connecting (see Appleton for example).What then is the point of offering here the following admittedly tentative interpretations? In a sense these hypotheses act as a challenge, a confrontation or even what Peter G. Brown and Geoffrey Garver refer to as "bearing witness" (Brown & Garver: 2009). These hypotheses are intended to trigger self-reflection on the part of the reader, to ask what part of the meanings embodied in their daily encountered artefacts and enacted in everyday ritual is authentic and what part is blindly inherited? How do these meanings correspond to the current ecological context?

To begin tentatively fleshing out these various dimensions, we should perhaps begin by pointing out that today there is a sense in this community that there are essentially no big "land use" questions left unresolved. Any folkloric notion of a "frontier" as a dividing line between "wilderness" and "civilization" (however defined) is at this point essentially historical and "civilization" is generally if only subconsciously and symbolically understood to have vanquished the last square centimetre of unruly "wild" space. The land has in other words been completely transformed into "property" and assigned to the various tutelages of its respective "owners". The establishment and enforcement of the various municipal zoning by-laws, dictate acceptable land use parameters which are otherwise subjected to the wisdom of a reified "market mechanism". For this reason in chapter 3 we will focus extensively on one historical event, the creation of a nature park, and the development of a resulting class of new shared meanings arising in conjunction with that event. The evidence examined, historical archives of positions taken for and against the proposed creation of the nature park, can be considered as artefacts in the sense that they are concrete written records

providing hard evidence of the dimensions of a system of myth or a folk theory of cosmology, a conventional wisdom about the "way the world works". The tactics employed, rhetorical debate and the use of "logic" and argumentation, can be traced historically to the time of the ancient Greek city-states (see Richard E. Nisbett's account in *The Geography of Thought* or Peter Bowlers' *The Earth Encompassed.*). Thus our focus here is not on a particular landscape configuration but on the "lineage": a characteristically atomistic "logic" (a thought process that deliberately and systematically removes the object from its context) and associated meaning systems that drive and are driven by that configuration process.

A return to instrumentality and the role of "education", addressing questions of optimal "entry-points" for overcoming the illusory nature of sustainable development, and implementation strategies based on for example resistance versus hyper-conformity will be addressed in the fourth and final chapter. Here we simply want to insert the proviso that the following discussion is intended to be limited to a strictly theoretical description, avoiding any inference of prescription until the concluding chapter 4.

The conceptualization of the essentially fixed or stabilized nature of the suburban landscape forms a central part of the following discussion. In comparison to central business districts of larger cities, the anthropogenic processes of manufacturing landscape and its subsequent direction and speed of succession are artificially temporally retarded in the suburbs. The cognitive models or templates that these two distinct processes are based on differ considerably. [2] In a central business district the concentration of the "creative destruction" of capitalist enterprise is maximized based on a competitive bidding war for the best "location, location, location". In contrast, suburbs

are deliberately managed for stability. This may in part reflect the following four considerations. First, the suburb is populated mainly with homeowners as opposed to renters or commercial enterprises. Second, the home represents a major financial investment and generally speaking a major component of financial net worth for residents. Thirdly, landscape stability makes these investments more attractive and secure. Finally, it may also merely reflect a dominant conventional wisdom or "rule of thumb" among municipal officials about the "right" way to manage the landscape. In more rural, agricultural settings ecological succession may be allowed some (relatively greater) degree of agency and the pace of change regulated accordingly. "Economic distance" may dictate the degree of active intervention. Farmers may rotate crops from year to year based on international market conditions or current soil conservation practices. Combined with the inevitable wind erosion caused by ploughing the fields or the impacts of domestic farm animal populations for example, these factors will result in some degree of landscape dynamism, albeit never approaching the scale and pace of change inherent in contemporary urbanized core business district areas. Industrial agricultural systems result in the globalization of these "landscape mind" processes as chemical fertilizers are mined and transported to the farm site and nutrients continually removed in the form of agricultural commodities. In the suburb the situation is quite different. The ubiquitous mowed lawn and asphalt of the typical suburb, although connected to landscape degradation elsewhere, in some sense arrests the "natural" forces of ecological succession at the scale of the suburb itself.

2.3 – Nature

"Space, for Descartes, is a projection of thought – idealized, homogenous, isotropic, quantifiable, clear, unambiguous, beyond all point of view – where every viewpoint can

be deduced or abstracted from the universal position of God, for whom all viewpoints are instantaneously accessible." (Weiss: 1995, 33)

We, as humans, are decidedly not Gods, and so our description of "nature" must remain somewhat less than entirely objective and by no means anywhere near complete. This does not mean however that nature must remain entirely inaccessible to all members of the human family. A mother's knowledge of an infant may be quite different from the father's knowledge of the same child, for example. Making such a distinction does not nullify either of these two very specific yet essentially partial and incomplete knowledges. This illustration can act in some sense to underscore the inherent aspect of relationship that contains any and all specific knowledges, including the unavoidably socially-constructed, objectified, and or "alienated" character of the suburbanite's knowledge of nature. The specific "knowledge" cannot be separated from the equally specific cultural lens that determines the paradigmatic perspective, the "place to stand" of the knower. In this community nature has often come to be conceptualized then essentially as forces acting to reintroduce dynamism and diversity into an artificially petrified landscape. From this perspective nature is learned and incorporated into the conventional wisdom in a negative sense – it is learned in confrontational relationships to something else. Nature can potentially also be culturally known as an essentially benign or even benevolent relation but that is not generally the case in this suburban community as evidenced in the continuous ritualistic practices of snow ploughing, lawn mowing, weeding and fertilizing, hedge-trimming, air-conditioning and heating systems, prescription, non-prescription, legal and illicit drugs ingested, pest eradication practices, antibiotic forms of nearly every product imaginable, and any of the various, nearly continuous repairs to and replacements of the multitudinous varieties of artefact such as

buildings, automobiles or roads understood as being corrupted and degraded by the natural effects of time and weather. Over the longer term we may also expect that the underlying ideational artefacts, such as neoliberalism or scientism will also increasingly confront a more natural, indigenous reality as it begins to "push back" even harder and these confrontations (finally understood as human cognitive failures) become more difficult to ignore.

The parameters of "Nature" are of course set to some extent by the size of the Earth, the Earth's relation to the moon and sun, the community's position in the Northern Hemisphere and that position's relation to land, water and air, and so on. The laws of thermodynamics or the chemical, biological or spiritual properties of water are more examples of what is included in the category of "nature". At any point in time some of these dimensions will be knowable to human communities and others will be unknowable or even unimaginable. Briefly stated, we might construct our model along the following lines. The contemporary natural landscape of Pointe Claire exists over bedrock of mostly limestone that weathers to a clay based substrate soil in a relatively humid and temperate climate. As a result of past glacial forces and subsequent water erosion since the last ice age, followed by increasingly anthropogenic processes such as deforestation, resource extraction, industrialization, and construction of various landscape artefacts, the landscape now assumes its present form. The fauna and flora consist of both remnant indigenous species (mayflies, skunks, catbirds and elderberry bushes, for example) and introduced species (flu viruses, house cats, house sparrows or lilacs). The positioning of these various species is highly controlled and even weed or pest species exist only according to the level of tolerance held within the human realm.

"Nature" then could easily be understood as a force that primarily *responds* or *works to counteract* anthropogenic forces rather than as, for example, a reified agency that is antecedent, coexistent, and transcendent of the continuing large-scale post-Enlightenment project known as suburban development. It is at this point in time impossible to fully discuss what might properly be considered natural forces of landscape formation without also describing those anthropogenic forces being reacted to. "Pests" are one natural response by the landscape mind to the context of increasing anthropogenic landscape transformation. Mark Winston explains this dynamic process as follows:

"Beginning about 10,000 years ago, with the advent of agriculture and denser human settlements, our relationship to pests began to change. Increasing urban populations, compact crop plantings in fields and orchards, herds of domesticated animals, and stores of grains, vegetables, cloth fibres, furs, and dried meats all provided concentrated food sources for organisms that previously foraged widely for sparse food sources. In addition, we began to disrupt entire ecosystems and their inhabitants, transforming diverse natural habitats into cultivated, single cropped fields and dense, sprawling cities. These changes induced the populations of a small number of species to explode into pest status (Winston: 1997, 3)".

The pest-ridden ecological context then is a result of these ritualistically enacted cognitive and material artefacts, in conjunction with a new culture-based (originally agricultural) folk theory of cosmology or "myth". In the contemporary suburban context, nature becomes evident to humans as an opposition to these artefacts but this result is due entirely to the competitive if not outright combative character of these artefacts in the first place. The mowed lawn for example is cognitively posited as being overtly in direct competition with nature (having ragged, imperfect shapes, untidy, uncivilized species such as dandelion or white grubs, and so on). That so many suburbanites now associate the idea of a manicured green lawn with "natural green space" underscores the degree of cognitive dissonance, alienation, and surrender to a "second nature" that has taken place.

Popular ecological knowledge in the suburb is generally characterized as formulaic and mystical. (An especially poignant example of this was the state of panic widely expressed a few years ago when a fisher was sighted in a nearby municipality). Detailed regimens prescribed by experts may be followed but bewildering problems inevitably arise. The monoculture of grasses generally cannot be sustained without interregional communication of material inputs and outputs. It requires such heroic measures over the short to medium term in order to present the illusion of stability. Grasses in a monoculture each have the same chemical nutritional requirements and the same chemical waste bi-products. The reduction of leaf surface due to mowing results in the shortening of root structures and compacting of soil at a relatively shallow depth. This results in decreased water drainage and water storage capacity of the soil, requiring regular water importations. Without diversity there can be no balance, no learning, and little or no "intelligence" achieved by the landscape "mind". This pattern has become nearly ubiquitous in the Western world and especially in the suburban context. Large scale globalized human food systems have resulted in a genetic impoverishment of food crop species. Globally corporatized food production processes have led to a reduction in the diversity of food products available to average human and domesticated animal consumers and a resultant rise in health problems such as obesity in the North and hunger and malnutrition in the South. The globally standardized use of antibiotics in human and farmed species can be expected to ultimately bring about similar results: antibiotic resistant pathogenic species.

Such observations about the routine human-risk-producing machinations of nature do not present as an epiphany. They do however lead to an interesting and salient

observation on the working of human "nature" in the suburban context. The human species is clearly more than capable of self-inflicted blindness in the cultural process of constructing a *modus Vivendi.* That is to say that the processes of human evolution have resulted in the widespread trait of privileging culturally constructed, "virtual" or "alienated" versions of reality over direct sensorial data easily accessible at the temporal and spatial scale of the individual. This tendency establishes itself as another pattern of "nature" especially in the suburban landscape.

Any survey of the various structural forms of "nature" contained in this suburban community might do well then to begin with the human species. The total human population of the community was 30,160 people in 2005 when the last census data was collected by Statistics Canada [1.] This number was up from the 28,480 who lived in the community five years previously, making a 3% population growth over five years compared with 4.3% for Quebec as a whole. The median age of the population was 43.2 years old, compared with 41 for the Province of Quebec. Many of these households will also contain various species of animal pets including dogs, cats and many other mammals as well as fish, birds, reptiles, amphibians, invertebrates including insects as well as various houseplants. By global standards these populations are generally well fed, relying mainly on food and nutrients imported from distant ecosystems. Alien plant and animal species such as plantain, dogs or buckthorn tend to do well in a suburban context in part because of their longer co-evolution with a landscape mind wired according to the same lineage.

The simple act of describing "Nature" necessarily involves choosing what to focus on. In some cultures for example the obvious place to begin might well be foods

harvested from the landscape. Certainly there is an element of "Nature" embedded even

in a plastic wrapped, antibiotic laden piece of factory-farmed, genetically-engineered pig

found in a Pointe Claire supermarket, but that is not generally what comes to mind when

a suburbanite is asked to describe the local "Nature". Their model is closer to that of

John Stuart Mill. His concluding thoughts in his essay on "Nature" are as follows:

"The scheme of Nature regarded in its whole extent, cannot have had, for its sole or even principal object, the good of human or other sentient beings. What good it brings to them, is mostly the result of their own exertions. Whatsoever, in nature, gives indications of beneficent design, proves this beneficence to be armed only with limited powers, not by imitating but by perpetually striving to amend the course of nature—and bringing that part of it over which we can exercise control, more nearly into conformity with a high standard of justice and goodness (Mill: 1998, 65)."

Such an ideological, reified conceptualization of "Nature" becomes then a component

part of the total context within which nature must operate. In the suburb examples of

nature manifesting include dandelions infesting lawns, feral housecats exterminating

birds, caddis fly larvae feeding on sewage in the river, and smog triggering respiratory

disease.

Such a realization leads us to an examination of an aesthetic approach to nature as

apprehended by the senses – focusing on what gets perceived and the *meaning that is*

attached to those perceptions. While the source of sensory data may not be strictly of

"natural" origin, certainly its reception will in some way constitute the manner of

nature's operation. In other words, whether a given sound is made by a cicada or made

by a chain saw, that noise then becomes part of the context within which nature operates.

The sonic geography of this community includes many sources of both natural and

anthropogenic sounds. In this particular community the proximity of a nearby airport and

centrally located highways ensure a nearly continuous background of motor engine

sounds sometimes punctuated by high decibel roaring of landing or taking off jet aircraft. This is quite variable depending on prevailing meteorological conditions. Yet a few naturalized back lawns and a centrally situated nature park ensure the sounds of cicadas, crickets, and various species of birds also play a role in the sonic context of this suburban community. Occasionally, families of merlins or crows can dominate the soundscape. Robins (and feral cats) also often sing long before sunup and become the dominant aural aspect in the landscape, especially because aerial and vehicular traffic is minimal at these times.

We could also speak of a geography of smell in this community. Some species rely heavily on their olfactory capacities to operate successfully in the landscape. Foxes, raccoons, skunks, mice, squirrels, crows and turkey vultures are just some of the more obvious examples of animals that find their way into Pointe Claire by smell. A rapid snowmelt in the spring will inevitably result in a strong aroma of thawing dog feces. It is actually quite a rare occurrence when no anthropogenic odour can be detected. The ritualistic practice of masking or erasing natural body odour with deodorants and perfumes or indoor odours by various air "fresheners" also testifies to this general cultural preference. It is important to realize that these normative evaluations of sensory data are not in any sense "natural" but rather are again cultural constructions that nevertheless form part of our lineage.

Real nature is omnipresent, without boundaries. The mythologized, reified, suburban Nature, on the other hand, is omniscient yet imagined as accessible to a competitively, scientifically, potentially equally omniscient human intellect. Real nature is seen as perhaps necessary yet intrusive. Nature intrudes and is recognized mainly

through these many forms of intrusion-related discomfort, both psychic and physical: the fear of death, the discomfort of a common cold or flu, the leaky roof, bird droppings and squished insects on the windshield, a demanding lawn, or the aches and pains associated with normal aging for example. The belatedly recognized more positive aspects of nature; the smell of a forest, the source of healthy nourishment and socially important food sharing rituals, psychological and health benefits associated with place attachment and rootedness, and so on; are systematically removed from the suburban landscape and replaced with various commercial points of access to these benefits presented as a range of commodified nature experiences or pharmaceutical substitutes.

In summary then our experience of nature is always to some extent mediated or filtered through a partly constructed meaning system. We have no direct access per se. In modern societies systematic measures are taken to remove our day-to-day (ritualized) existence from direct awareness of nature. This removal is perhaps most developed in the artificial experience of the affluent modern suburb. In such a context it should not be surprising that a vision of sustainable development never comes into focus. Existence takes place entirely within the individual's control – from house to garage to office and back. When such a mythologized existence solidifies into a suburban aesthetic, it should come as no surprise that the ability to "become" a sustainable development person presents as nothing but illusion.

2.3 – Artefact

For the purposes of the reflexive balance model, the term artefact (the embodiment of "myth") can be considered as two subcategories or classes. One class refers to the physical anthropogenic structuring of the landscape (a pocket watch or a

highway for example) and the other refers to the cognitive anthropogenic structuring of the mindscape (modern chemistry or Presbyterianism). Obviously these go hand in hand, the construction of the pocket watch or highway in turn requires the corresponding cognitive artefacts associated with the required technology: economics, physics, metallurgy, geology, civil engineering and so on. In the next chapter we will turn our focus to the creation of one particular artefact, a nature park, and the social cognitive artefacts that enabled that creation. The nature park can be seen as the symbolic containment or taming of mythologized Nature, the embodiment of certain aspects of the dominant suburban myth system. The nature park and mowed lawn are human society's way of symbolically marking off and cognitively bounding its territory against what is imagined as a hated rival: nature. The underlying folk-theoretical cosmological foundations of the modern consumerist thought modelling process are essentially dualistic and dialectical: civilization versus wilderness, historical past versus inevitable future progress, etc. While the mowed lawn is self-enforced at the level of the household by a number of social policing mechanisms, the nature park is a strictly optional artefact in the suburban landscape and generally requires a significant level of consensus within the community to bring the creation process to fruition. This level of consensus, as we will see in the next chapter, however is built on a premise of differentiation. As Eviatar Zerubavel explains "In a world where eye and ear doctors may no longer read the same professional journals, it is hardly surprising that even young children choose their own electives at school (Zerubavel, 18-19)". To some extent then artefacts such as nature parks may be a concession to this increasing cognitive individualization and an implicit recognition that different thought communities will enact different legitimate landscape-

as-artefact configurations. In so far as the nature park is conceptualized as providing utilitarian benefits to a class of consumers, the nature park can be made to fit into the dominant suburban cognitive modelling process.

More generally, the transformation of landscape into artefact in Pointe Claire as well as other suburbs is generally accomplished by first performing a pseudo-sterilization of the area by removing all plant matter and topsoil (wilderness) and then constructing and configuring a "built environment" of artefacts such as houses, shopping malls, hospitals, schools, roads, parking lots et cetera (civilization) on top of this "blank slate". Screened (civilized) topsoil may then be returned and domesticated species introduced: Kentucky blue grass and Norway maple (both non-native and invasive species) are characteristic in this community. For this "civilizing" process Norway maples have the added attraction of being "strongly allelopathic; that is, they suppress the growth of other plant species through the release of toxic substances in the soil." (Sauer: 1998, 53) Such a symbolic and ritualistic "taking control" process of course has consequences when it hits against the natural world. As explained above, this process inevitably results in the creation of an ecological context favourable to those species generally labelled as "pests" by suburbanites. From an allergy sufferer's perspective for example, this community could be considered as the ragweed capital of Canada. In such a context the seemingly "natural" ragweed becomes artefact in the sense that it is the physical manifestation of human mythologized perceptual and cognitive processes and consequent ritualistic actions. Ragweed is a native species that thrives in areas of ecological disturbance. Ragweed pollen sediments have been used for the purpose of dating archaeological findings in North America because although it is an indigenous species, it only began to

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thrive with the arrival of European settlers and the transformations they introduced and imposed on the landscape. That sudden pulse of ragweed pollen that accompanied the initial "clearing of the land" is thus discernible in the sequentially layered sediments of lakes and swamps. This municipality manages a fairly considerable expanse of its territory as mowed lawn around municipal buildings, roads, and parks. If the height of the mower blade is set too low and the mowing is too frequent, it will favour the propagation of ragweed. Ragweed is an aggressive annual that will put out a new stem and leaves from an intact root. When ragweed is pulled out of the ground it will die but there is a good chance that another opportunistic ragweed plant will take its place in part because extricating the roots constitutes a disturbance. Much of the mowed areas managed by the municipal government are consequently either ragweed monocultures or ragweed mixed with non-native invasive species such as plantain, once known by aboriginal peoples as "white man's footprint". Globally, there is also a tendency underway for wind-pollinated species such as ragweed to replace flowering species such as dandelion that require pollinators for their propagation. This is thought to be due to a decline in the numbers of pollinators because of increasing numbers of pathogens attacking these species, widespread pesticide use, and other losses of safe and secure bee and other pollinator species' habitat.

The allergenic potency of ragweed and other pollens increases significantly in combination with industrial pollutants such as the exhaust from diesel engines. The incidence of "smog alerts" has also been rising over the past several years primarily from increased exhaust fumes from vehicular traffic and wood burning in the winter months. The winter of 2008-2009 set a record for the number of winter smog alert days. This of

course is good economic news for pharmaceutical companies such as Pfizer whose

Canadian headquarters are located in this community and produces a number of allergy

and related asthma and respiratory disease medications. This becomes an important point

in a societal situation where the world is generally perceived and understood through

economic (as opposed to say ecological, spiritual, cultural or social) metaphors and

paradigms. It should be noted also that linearly progressive increases of pollution would

not produce a linear progression in human mortality or pathology, but rather a more step-

like progression as thresholds are crossed triggering immune-deficiencies on a more

collective scale. It is also an important point to make that the artefacts of choice

(pharmaceutical medicines) do not address the root cause (ragweed and pollution) only

the effect (hay fever) at least in part because there would be less potential for profit.

The landscape as artefact contains much contradiction then. Artefacts both

material and cognitive often embody extreme differentiation consistent with a

consumerist paradigm. As Julia Corbett explains, "If you identify strongly with the social

group of wilderness advocates, the unstated 'rules' of that group hold that you will own

backpacks but not dirt bikes (Corbett, 100)." Furthermore, "While it is true that

consumerism is a culture in itself, it is a sad commentary to assert that we express and

come to know ourselves best through shopping. Ubiquitous consumerism is arguably *the*

religion of the late twentieth century for it has reached far beyond the mere provision of

material goods to the fulfillment of a pseudo-spiritual life; we look to the marketplace to

provide answers to our problems and a sense of fulfillment (Ibid., 94)". At the same time,

as Timothy Beatley points out, "The challenges of growing centralization and

consolidation in our society, which manifest in a marked shift away from a

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neighbourhood and community orientation, are considerable indeed (Beatley, 8)". Thus, for consumers differentiation is the general rule, but as producers the tendency is to consolidate and make uniform on a global scale. The differentiated suburban experience of atomization is in other words an increasingly globally uniform way of being.

These examples of artefact illustrate an epigenetic pattern or lineage that is neurotically dysfunctional at best. In a word, these processes are not *sustainable.* The pattern is repeated in the majority of material flows taking place in the community such as the removal of leaves, lawn clippings, vegetable scraps and other organic material from households, the various rituals associated with conspicuous consumption, or the spatial organization of the economy more generally.

2.4 – Ritual

> "I think mankind is more than waist-deep in daily routine. Countless inherited acts, accumulated pell-mell and repeated time after time to this very day, become habits that help us live, imprison us, and make decisions for us throughout our lives. These acts are incentives, pulsions, patterns, ways of acting and reacting that sometimes -more frequently than we might suspect- go back to the beginnings of mankind's history. Ancient, yet still alive, this multicenturied past flows into the present like the Amazon River pouring into the Atlantic Ocean the vast flood of its cloudy waters." (Blaudel: 1977, 7)

We begin this section with a very brief statistical description of the "daily routine" and "inherited acts" in the community where the research was undertaken. Of the 30,160 residents of Pointe Claire in 2005, about 20,000 spoke English in the home, 5,785 spoke French and the rest spoke one of a number of non-official languages in the home most of the time. Less than two hundred of the residents of this suburban community self identified themselves to the census takers as "aboriginal". Over 28,000 were Canadian citizens although 6,830 were immigrants, meaning almost 5000 were naturalized, first generation Canadian citizens. The average household size was about 3

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individuals. The median annual household income was $66,065 compared with $46,419 for Quebec and the median income for families in the community was $81,385 compared with $58,678 for Quebec. Median personal income for persons 15 years and older with an income was $31, 116 compared with $24,430 for Quebec. The housing stock consisted of 12,608 private dwellings. Median monthly rent payments were $883 and median monthly mortgage payments were $899. Only 26,835 (89%) of the residents lived at the same address one year prior to the census taking. 1,090 changed address within the same community. 1,310 moved into the community within the last year from another municipality within Quebec. 140 moved into the community from a different province or territory and 235 arrived from a different country. The land surface area amounts to 18.8779 square kilometres (Ibid.). These statistics provide some insight into the daily routines of these residents.

The labour force participation rate was 63.8% at the time of the census and the unemployment rate was 6.2%. Of those employed, 2,300 were in management occupations, 3,025 were employed in business (finance and administration), 1,810 were employed in natural and applied sciences and related fields, 815 were employed in health care occupations, 1,630 were employed in occupations in social science (education, government service and religion), 815 worked in art, culture, recreation and sport, 3,475 were employed in sales and service jobs, 950 worked in trades (transport and equipment operators and related fields), 165 worked in fields unique to primary industry and finally 460 worked in fields unique to processing, manufacturing and utilities (ibid.). 22,235 also reported performing hours of unpaid work, caring for children and seniors and doing housework (ibid.). Of the employed labour force of 14,725 workers, 12,785 worked at a

usual location. 1,000 worked from their homes. 2,860 worked in the same municipality

and 8,830 worked in a nearby municipality, 765 worked in a different census division,

125 worked in a different province and 105 worked in a different country. Of the 13,615

workers who commuted to work, 10,115 travelled in a private automotive vehicle, 2,480

took some form of public transit, 865 walked or rode a bicycle and 165 travelled by some

other mode. This statistical sketch of the community provides some clues about the

"cloudy waters" of suburban life. Although they say nothing directly about the

construction of meaning or the way it "feels" to live in suburbia, they do begin to outline

the obscured obstacles that people are likely to bump into if a map to sustainable

development can ever be drawn and *if* these residents decide to follow that map. Even the

questions asked in a census and the level of willingness of residents to respond can

provide some clues about "what matters" and what does not in this particular cultural

context.

2.5 - Myth

"Regardless of the nature and derivation of a mental experience, spiritual or otherwise, once we have access to the computational processes that give rise to it, we have the opportunity to understand its neurological correlates. With the understanding of our mental processes will come the opportunity to capture our intellectual, emotional, and spiritual experiences, to call them up at will, and to enhance them (Kurzweil: 1999, 151)."

"In the extended present, the past becomes commodified and perceived to be effectively powerless and forgotten. In contrast, the ascetic inhabits a world that looks both back to the past and to a future that reinstates that past purity, and his or her life is oriented towards reconstituting or recapitulating the past which is also a construction of the future (Flood: 2004, 12)."

Gavin Flood, in his otherwise most excellent book, The Ascetic Self, overlooks

one important point: that modernity is experienced as a series of "deprivals" (to borrow

George Grant's apt descriptor). Modernity can now be understood as a universalizing

asceticism. Hunger, obesity, phobias, isolation, cancer, infertility, respiratory diseases and countless other metabolic, cognitive, and spiritual dysfunctions experienced both personally and socially today escape realistic recognition in the collective conscious as a sort of suffering endured willingly as an ascetic devotion to the "religion of technology" (see also David F. Noble and Robert H. Nelson for examples). The only proviso needed is that this inherited religiosity is not followed *consciously*. What is Ray Kurzweil's vision of the future for example if not the typically ascetic annihilation of the Self?

All of the above mentioned features of the suburban landscape obviously are considered as "normal" to residents born and raised in this universalizing context. If the tap water did not have a strong smell of chlorine, then something would probably seem to be awry for the average suburbanite. Tap water is taken from the St. Lawrence River, filtered, chlorinated, and fluoridated before being distributed to households and businesses in this community. The process is largely invisible to community members unless an underground pipe bursts due to ground frost or weathering. This underground "out of sight" municipal water system has a correspondingly "taken-for-grantedness" on the cognitive side of what is to be considered as landscape "mind". Likewise the ecological impact of taking water from the river and discharging wastes back into it has a corresponding invisibility on the cognitive side. Awareness is not universally suppressed however. Nature "as it is" rather than as we are conditioned to perceive it seeps in occasionally. Spring snowmelt is inevitably accompanied by several days of the horrendous odour from thawing dog excrement. In the summer, when the dog excrement would be more readily biodegradable into compost, it is normally packaged in plastic and sent to a landfill.

The point here is not to make a prescriptive statement about building and engineering codes, the water supply or pooper-scooper by-laws in this suburban community. The goal is to describe this recursive cognitive/aesthetic aspect of the total landscape. Ultimately knowing a landscape involves more than a visual awareness but also includes some knowledge of the experience of being in the landscape. In the suburb, people are conceptualized even from infancy as automatons, responsible for their own self-management and the acquisition of marketable skills that attach directly to and form a component part of the individual alone (see also Özel). This absence of cognitive connective interplay between self and other is maintained to the grave. According to Harrison, "The *domus* loses its limits, its definition, its meaning, and for the first time in cultural memory an increasing proportion of people in Western societies are not sure where they will be buried, or where they should be buried, or even where they desire to be buried (Harrison, 198)." To say then that water from a tap without the odour of chlorine would be perceived to be abnormal, is like saying that walking into a room with all of the furniture turned upside would normally raise an eyebrow in this community. The driver of a new BMW would generally be assigned a higher social status, ceteris paribus, than if that same person was in a ten-year-old Toyota. It might normally be assumed that an un-mown, dandelion-infested lawn signifies laziness on the part of the owner, or preferably incapacity. This is not to claim the universality of such a "rule" rather merely to note it as a general tendency, an outline of the complex of values, beliefs, norms, aesthetics, folk theories of cosmology and so on that we denote here as simply "myth". As Tanner explains for example, "This matrix, or symbol system, can

well be unconscious to most actors, since their interest is in the goal of the ritual action, not in how that particular formula arose (Tanner, 89)."

It is especially normal in this community to consider the individual as the centre of the universe. If you buy organic vegetables for example, they normally have been imported from several thousand kilometres away. The primary focus of the marketing of organic vegetables in this community is on the health benefit to the individual who eats them and not for any benefit to the "environment" or any notion of food democracy. There is a horrendous high school dropout rate not only in this community but also across the province. Few recognize this problem as a major societal problem. Success and failure are ideas that generally attach to individuals and not to the community as a whole. This is true in this suburban community as it is in western culture generally. In modern western cultures this atomistic perspective is socialized from birth.

The idea of "natural" mechanisms is also an important aspect of the suburban landscape. The management of the nature park for example is based on the phrase "let nature take its course". Of course there are several problems with this strategy but the faith in a regenerative mechanism is a clear example of widely shared religious-like "faith". In reality "nature" lacks however the "level playing field" promised by free-market capitalism. Air pollution causes "higher rates of mineralization of nitrogen" (Sauer, 81) in the soil as well as changes to qualities of the soil ecology generally. Foot traffic compacts soil and over time eliminates spring ephemerals. Even as the Boy Scout volunteers perform their spring cleanup to remove garbage from the park (mainly wind-blown into to the park from household plastic garbage bags opened by crows or hit by snow ploughs over the winter), it is done at the worst possible time for these wildflowers.

Ephemerals need to sprout leaves, produce flowers and seeds, and store annual energy supplies in roots and bulbs all before the mature trees shade them out with a canopy of leaves. This short time period is critical to their survival. The compulsive ritual of keeping "civilized" landscapes (symbolized by "garbage") hermetically separate from "natural" or "virginal" landscapes (symbolized by "nature park") is overpowering. The proximity of the park to residential areas decorated with non-native invasive species and the lack of communication with more viable indigenously populated areas also ensures a slow and continual degradation (the same feared symbolic corruption and contamination intended to be avoided) of this site. Nevertheless, faith in nature's ability to optimize continues unquestioned.

Normality is also solidified in the repetition of popular discourse. Institutions including the family, schools, governments, or the mainstream media act to establish the parameters of socially acceptable thought and action. The theoretically understood role of the media as facilitator for the exchange of ideas between rational actors in a democracy is merely a socially enforced fantasy. According to John Dryzek "A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them into coherent stories or accounts. *Discourses construct meaning and relationships, helping to define common sense and legitimate knowledge.*" (Dryzek: 2005, 9 emphasis added). Discourse in this sense is a prescriptive element of a specific landscape, providing structure that prescribes particular behaviours. A "suburb" involves more than a specific landscape type but also includes specific structures of "mental" human and cosmological discourses enacted and

embodied in those specific types of landscape, economy, philosophy, ecology and so on.

Paul Robbins illustrates this reflexive process as follows:

"…in gazing into their landscapes, responding to the demands of the grass, and answering these calls, individuals become new kinds of political and economic subjects. As the turf draws its demands from the culture and the community, it helps to mold (sic) the capitalist economy into specific forms, and helps to produce peculiar kinds of people-Turfgrass Subjects. It is only these sorts of subjects who can together constitute lawn communities and produce lawn chemical economies. And they do so, working by themselves, in an effort to purify, tend, and maintain an object whose essential ecology is high maintenance, fussy and energy demanding. The lawn, an object, helps to constitute the subject." (Robbins: 2007, 16)

"Myth" is what ties these meanings and behaviours together. It is important to

keep these ideas in mind as we continue to flesh out this path dependent process of

conjuring the suburban cosmos into existence. The person who mows their lawn cannot

explain that "myth" but only offer a pseudo-alibi connected somehow to property values

or the smell of fresh cut grass, the associated unconsciously inherited "feeling" of the

lawn. The "logic" of the inherited mythos is entirely lost to conscious thought. We do not

need to look very far in order to find more examples of these dynamics. Take for

example the discourse embedded in the following lines taken from the community

newsletter published and distributed by the municipal government:

"The main gains connected to these green spaces are an economy related to the costs of heating and air conditioning, the creation of employment and the increase of property values within the neighbourhood." – quoted from "Pointe Claire" a community newsletter published by the City Council, Spring 2009 edition, page 15.

Here we can see clearly that in the normal course of official communication from

municipal government to community residents that the tenets of utilitarianism and the

unquestioned priority assigned to purely "economic" considerations are foundational

within the assumed target audience, presumed to be members of the same "thought

community". The communication process is based on this assumed foundation of shared worldview. The communication begins from a premise that landscape and self are completely separate entities and that landscape exists solely for the benefit of the resident. These types of perceptual and cognitive distortions have perhaps especially in modern suburban culture become as ubiquitous as the material toxicity associated with modernity generally and "lawn people" more specifically. As Julie Corbett illustrates with this example: "…when the newspaper reports that an air inversion that traps pollutants is 'caused' by a stationary high pressure system, we tend to accept this version of reality that air inversions are in a sense natural and beyond our control – ignoring the fact that what makes an inversion a problem is the pollutants that people put into the air during this atmospheric event." (Corbett, 215)

The distortion becomes even more intransigent and pathological when the communication process is based on another layer of neurotic assumptions, perceptual and cognitive abstractions, born again from the same inherited traditionality, as in the case of the mainstream media. Corbett explains: "…advertisers and media programmers engage in a dance to fill each other's needs, each having a vested interest in constructing certain versions of the world and not others." (Corbett, 159). There is nothing sinister about these communicational and resultant cosmological processes. Raymond Williams is correct in his assertion that "The theoretical bourgeois concept of 'mass communications' and the tied radical concept of 'mass manipulation' are alike inadequate to the true sociology of these central and varying institutions." (Williams: 1977, 136) To assign intentionality is to misinterpret the event. That misinterpretation is consistent and in fact symptomatic of the same metaphorical tools of perception and

cognition that confines humanity to the realm of illusion in the first place. The media reinforces the pre-existing hegemony, providing a discursive structure metaphorically similar to the pathway travelled by the "Judas goat".

Following is an example provided by a newspaper article ("The crisis crisis") that appeared in one of the local newspapers widely read in the community where the research project was undertaken. The newspaper is distributed weekly to all the households of the community free of charge, meaning that most, if not all, of the publication's revenues come from sales of advertising. The raison d'être of the media company then becomes to provide a marketable platform for sale to advertisers to reach their respective target market for their products. This article, obviously written with that mandate in mind, provides another example of what passes for conventional wisdom as well as providing insights into the process of constructing that conventional wisdom. As Harries-Jones points out, "Like the educational system, the media represents a powerful influence over both attitudes and behaviour. As major transmitters of cultural standards, myths, values, roles, and images, the electronic and print media set norms, create stereotypes, and establish priorities (Harries-Jones: 1991, 82)." The following article appeared in the June 4th 2008 edition of "The West Island Suburban" in the Opinion section (page 19). The author, Ricky Blue is a well-known Anglophone comedian and regular columnist in this paper that advertises itself as "Quebec's largest English language weekly". While it is clearly intended to be tongue-in-cheek, the message and purpose are clear. The ultimate consequences of such a discourse are on the other hand anything but clear.

The crisis crisis

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We are living in a time of hyperbole and hysteria!! Never in the history of our planet has there been so much exaggeration!!!!

This is the century of crisis: the climate crisis, the food crisis, the real estate crisis, the monetary crisis, the garbage crisis, the oil crisis. Perhaps our Western world is going through a mass mid-life crisis. We are like the archetypal middle-aged man yearning for a little red sports car: we want to leave what we know and run away to another, better, different world.

It started with "climate change", the crisis formerly known as "Global Warming". They had to change the phrase when they decided that global warming didn't sound scary enough (Warming actually sounds attractive), and climate change could cover any weather event (I'm waiting for the inevitable announcement that earthquakes are also caused by climate change). How ironic that the political left, represented by the Democratic Party, surround themselves with signs advocating "Change" at the same time as they all are absolutely against this so-called biggest change they claim is happening to the planet.

We used to blame everything on the weather. Now we blame the weather on ourselves.

Instead of my daily commute, it's now my daily pollute. Hey, I would buy a Prius in a Vermont minute, if only they were the same price as in the States – instead of 50 percent higher up here – the rigmarole you have to go through to import it is incredible.

I must say, though, now that environmentalists claim to know what will happen 50 years from now I'm really looking forward to the weather channel finally giving me an accurate seven-day forecast.

The real climate change we're seeing is the new climate of ideological conformity. If you dare raise a doubt about the "climate change crisis" you will be denounced as a heretic. Or, worse still, as taking money from the oil companies. Does anyone know how I can get some? They've been taking my money long enough.

Many environmentalists advocate high gas prices as a way to discourage driving to cut greenhouse gas emissions. Now that they have their wish, food prices are going up because our food is all transported by trucks. So we have a food crisis. Duh!

Our media has attempted to persuade us that "the debate is over" – but it isn't. Indeed as I speak, John Coleman, the founder of The Weather Channel in the U.S. is suing Al Gore for fraud. He believes that "Global Warming Alarmists" are made to defend their science in court that their case will not hold up within a reasonable doubt. That will be an interesting case.

A neighbour of mine believes that global warming is caused by the absence of pirates. Since there are not many pirates left in the world and pirates are cool…the world is warming.

As someone who likes his environment, I am concerned that all this hype might be harming environmentalism in the long run, in the same way that fanatical Islamic Jihadism gives Islam a bad name. If, in fact, global warming is eventually proved to be caused by natural cycles and solar activity, environmentalism will be irrevocably tainted. Like when George Bush failed to find his Weapons of Mass Destruction in Iraq. (He'll never live that one down.)

And when people claim "the debate is over", aren't they just like GWB on the aircraft carrier claiming "mission accomplished?" It amazes me how the left and the right can often look exactly the same.

Blue, Ricky. *The crisis crisis.* in The West Island Suburban, St. Laurent, Quebec July 4, 2008, 19.

What can we surmise about the author's goal in writing this article? Malfeasance does not seem to be the root of Blue's motivation. He is probably sincere, although misinformed in putting forward his countervailing claim - "the debate is not over". The salient and narcissistic message coming through the rhetoric however is: the status quo is the best course of action. This turns out to be a convenient conclusion if your goal is to sell advertising. Furthermore, the article implies that if there really were something serious to worry about, then the price of a Prius would be lower than it now is. The implication being that the invisible hand does our worrying for us, if we just let it (see Daly: 2009). In other words the "idea" of an omniscient mechanism is accepted as fact from this epistemological viewpoint. This article is an attempt to defend what is "known" from competing knowledge claims. In fact the seemingly desperate threat of making matters worse with a "food crisis" is also invoked by the author. It is important not to overstate the importance of one article, advertisers lead the dance after all and not the journalists who must apply to their editors to get a dance card in the first place. This particular example is also more blatant than most. Nevertheless when we consider the

ease with which such a simple rhetoric can draw attention to elements of consistency as opposed to change and how this perspective then reinforces a socially convenient worldview, it becomes apparent just how illusory the idea of sustainable development can become. More recently this same newspaper appears to have lapsed into complete panic-mode as reality continues to seep in:

"Stop eco war on the vulnerable

All parties, and almost all candidates, in the upcoming municipal elections have considerable environmental agendas in their platforms. We do not want to debate here how much is too much. We have already written about the strangulations of economic growth and personal freedoms from what has already been enacted in this city. The war on cars, the bike paths, the parking meters. All hurting business and squeezing the poor and working families. What we want to do in this space today is warn politicians of the harm that excessive eco-theocracy can do to the poor and the less fortunate among us.

So much talk about the need to transform our economy and fill it with "green" jobs, "green" energy. Wind and solar yes; oil, gas, coal and nuclear no. So the mantra goes. Clearly support for conservation and alternative energy is important. But all informed citizens must recognize that our industrial complex has created health and living standards unprecedented in history. They must keep that in mind as rhetoric rages.

The policies of today's environmental activists wage an unintended war on the poor. They destroy jobs, erode civil rights, and force minority and elderly households to choose between food and fuel. In some cases even medicine.

Since 2006, the cost of driving a car 10,000 km has risen $600. Heating and air-conditioning costs — and the price of everything we eat, wear and do — continue to soar. While higher income families spend a nickel of every dollar on energy, families at the bottom of our economic scale spend up to half of their incomes on gasoline, heating and cooling.

This is dangerous. We have centuries' worth of oil, gas, oil shale, coal and uranium — and we can develop them without harming the environment.

But environmental radicals refuse to let that happen. The switch to renewable energy in a short time-frame is untenable. There is a giant gap between the 0.5 percent energy produced by wind and solar power — and the 93 percent produced with hydrocarbon and nuclear power.

The eventual switch to alternative energy is decades away. Wind farms with hundreds of gargantuan turbines have to be located where the wind actually blows, usually hundreds of miles from cities. That means long transmission lines, often through forests and scenic areas. And that means opposition, delays and lawsuits from the same environmentalists who "support" wind and oppose power plants that actually produce abundant, reliable, affordable energy.

As Nigel Innis of the Congress of Racial Equality has written — certainly no oil company lackey — "it's increasingly obvious that the major power environmentalist pressure groups and their legislative allies exercise today is the power to control our lives, and curtail our energy use and economic growth."

Their insistence that the greatest threat facing us is climate change is unfathomable. Not hunger, homelessness, AIDS, or skyrocketing energy and food prices. No, for them its Climate change. Something that has been happening for centuries. The same half a degree Celsius.

Lock up our energy, take away fossil fuel and nuclear power, impose cap-and-trade policies — all in a short time frame - and you drive prices even higher. You make heat and electricity less affordable. You force more to choose between heating and eating. You cause more to die. As dozens did in this province before Hydro-Quebec when the 12 "sisters" kept jacking up rates uncontrollably.

The policies of radical greens would reduce access to the fuels that produce 93 percent of our energy. That would increase energy costs. The greens call this "energy conservation." Innis called it "economic enslavement."

Moreover, global temperatures have barely risen for 10 years, even as global CO2 levels soared. Many experts say we are heading for a period of falling temperatures, because of declining solar intensity. More than 31,000 scientists say there is no credible evidence that carbon dioxide emissions cause climate change, much less global warming disasters. And China and India are not about to end their fossil fuel use.

Speculative climate chaos that punishes the poor and middle class is unconscionable.

We need to bring sanity and compassion back to our environmental policies. Radical eco-theocrats need to realize they are making war on the people. It's time to tell them to end it."

Source: downloaded from http://www.thesuburbannews.ca/content/en/2187 on September 11, 2009.

Chapter 3 – Illusion and a Nature Park

3.1 - Introduction

Neither the ritualistic enactment of a myth system nor the embodiment of that same system in the various artefacts of a given community is generally accomplished in a conscious, deliberate manner. In fact many community residents would be unable to verbalize the basic parameters of such a theoretical mythos. It is however these very same characteristics of invisible structure at the level of the subconscious and near absolute ubiquity that makes these historically inherited "logics" so overwhelmingly irresistible. Food, "daily bread" for example, available in the suburban supermarkets generally shows very little visible indication of its origin, aside from occasionally a printed label on the product's packaging. Certainly the suburban landscape provides few clues as to the origins of such human food supplies. Perhaps this cognitive removal of any physical manifestation of connectivity between human and "environment" is merely coincidental, but what are the contextual cognitive implications? Whatever the source, the reflected image in the looking glass is no less "real". This cognitive "distancing" still provides the foundational backdrop for the perceptual and cognitive development of "suburban" people. There are likewise few clues as to the origins of the plethora of consumer products available at suburban shopping centres. In fact, the production side of the material economy, the economy of material resource flows from "cradle to cradle" (farm through sewage treatment discharge and reintegration into photosynthetic processes or from mine, forest or other "resource" origin to landfill or "sink" to be re-subsumed into geomorphological processes such as rock formation and so on) is visually and cognitively removed from the suburban mindscape as it is from the suburban

landscape. There is generally very little thought involved in the purchase of peat moss, potting soil or fertilizer to be used in a suburban flower garden, no real recognition of implications, whether ecological, social, cultural or economic in a cognitively remote somewhere else. Efforts to address these distortions with fair trade or organic labelling schemes persist for now as a response to some gnawing collective memory perhaps but have made little real impact and may actually reinforce the comfort of familiarity encoded in everyday symbols acting subconsciously at the level of emotion and feeling but still manifesting materially as systemic ecological dysfunction (see Guthman for example).

Much ecological destruction clearly results from a seeming compulsion to symbolically take control of the physical world through the ritualistic sorting and classifying into closed categories. The sorting of people into school grades or labour "markets" resembles the arrangement of landscape into monocultures according to "ownership" and real estate values. Municipal zoning laws are also designed so that our world begins as a human "idea" and can then be manifested onto the physical landscape. Children born between this date and that date are to be placed in grade two for example. Land between this road and that road will be zoned "commercial" and have a strip mall constructed on it and so on. The taken-for-granted nature of this one-way process from abstract "idea" to concrete materiality is what makes it so noteworthy. Only under the most exceptional circumstances are humans or other particular aspects of landscapes allowed interlocutor status in the process of their own construction. Many residents are not even aware that there is a 37-hectare nature park in their community. Several of those who are aware of its existence would argue that it is "wasted" land. They would argue

that the park is not used by enough residents and should be converted to condominiums or a golf course in order to maximize the "utility" of the site. These sentiments, logics, or feelings are all examples of what we have labelled "myth" in diagrams 1.4 & 1.5 above. As ephemeral as the idea of what is socially, aesthetically, politically, spiritually or emotionally "right" may be, it is nevertheless discernible in any given time and place.

3.2 – The Evidence

In the late 1960s some residents of the community of Pointe Claire began to notice and discuss the seeming disappearance of natural green space in their community. One remaining natural space that was not "developed" consisted of a non-working farm, land owned by a railroad, other land owned by the municipality and the grounds of a former clay tile quarry and factory. Prominent among these early activists were Mr. Robin Cappuccino, who would become President of the John Rennie High School Students Council and Mrs. N. F. (Collie) Haden, who would soon become the president of the Terra Cotta Conservation Area Committee. There were many, many others who also played roles. For example, in 1972, in the very early stages, fifteen students from John Rennie High School applied for and received a federal grant under the Opportunities for Youth programme. Funding from the Secretary of State, Government of Canada in the amount of $15,038.00 was paid to undertake the study described as follows: "Main activities to achieve the project goals: Stages of activity will include: An initial public opinion survey, Collection and analysis of biological samples, Construction and labelling, Community and cultural activities, Evaluation, scientific and social reports" (quoted from the agreement found in the TCCAP archives). In 1973 about 200 canvassers surveyed roughly one third of the dwellings in Pointe Claire (3350 out of

about 9100). According to a draft report prepared by G. Bolger "Slightly over 2000

donations were received, totalling $5400.00." Concurrently individuals were soliciting

support for the idea of the nature park from the City Council, both during official

question periods and privately. Following are some of the archival records of the ensuing

struggle.

As a prelude to this story, consider the following proclamation that appeared in

the community newsletter published by the city of Pointe Claire during the mayoralty of

Arthur Seguin in 1966:

Province of Quebec
City of Pointe Claire
SURVIVAL DAY PROCLAMATION
(Earth Day)
WHEREAS in only two or three years the question of the environment has become one
of the most urgent social issues of our times;
WHEREAS it entails conservation, the use of resources, pollution and the entire gamut
of questions which concerns the direction and purpose of human existence in the modern
world;
WHEREAS it is a personal question because all of us must share the air we breathe and
the water we drink;
WHEREAS survival day exists to unify the divers activities of all organized groups and
individuals in Canada concerned about environmental issues and to raise the general
level of awareness about such issues;
AND whereas survival day exists to bring coherence into the fight against pollution and
other environmental abuses,
THEREFORE, we hereby proclaim May 14th and 15th, to be Survival Days and we urge
these days be dedicated by all citizens to specific actions and programs devoted to
environmental issues.
His Worship Mayor ARTHUR SEGUIN, City of Pointe Claire

Mayor Séguin retired as mayor in 1974.

We begin our examination of this "creation story" with a partial list of various

written reports and extracts from some of those reports that were prepared and presented

in connection with the establishment of the park:

-   An initial written proposal was presented to City Council in June 1971 – This included proposed boundaries with maps and a brief description of the concept of the conservation area.

        This initial report to the City Council lectured:

"These days we often see the results of poor city planning – the suburban sprawls which do not fulfill the need of people to be able to get away, if only temporarily, from the hustle and bustle of city life. The people of Pointe Claire have the opportunity to set aside an ideal spot, accessible to all, for their use and enjoyment."

About half of this initial report fell under the heading of "The Cost". The group

compared the considerable expense entailed in the proposed project with that of "the

arena and swimming pool". In subsequent reports the focus on financial considerations

persisted presumably because the main thrust of the argument against the project was

generally on this point as well. The following example, a flyer distributed by a citizens

group calling itself "Taxpayers Association" is worth quoting in its entirety as follows.

COMMON SENSE and taxes in Pointe Claire
        It is contrary to common sense to establish a bird sanctuary among our kids, our dogs, our cats, our poisons, our noise. Birds require the calm of isolated regions with lakes, unpolluted, where they can find their natural food, far from annoying airplanes.
        The promoters of a reserve in Pointe Claire are still continuing their efforts to have the citizens of Pointe Claire pay for expensive brickyard park. They are not thinking so much about the birds as about pocketing a profit at our expense. Experts and pseudo experts can always be found to say what they are hired to say, even if it is contrary to common sense. Bird sanctuaries are regional affairs and the cost of them must be born by the whole province or the federal authorities, not by a single city, as the benefit of such a sanctuary accrues to the whole of the country's population.
        Let us consider the taxes in Point Claire: In the last two years our property valuation for municipal taxation has gone up 15% and the valuation will still go up to satisfy the M.U.C. The tax rate in Pointe Claire went up 15% also. This is a very big increase for one year! In 1971 the M.U.C. imposed a tax on the whole island of Montreal to help Montreal pay for its police, not for our police department, which was quite adequate to our needs, but their own police, probably to prevent them from going on strike anew. M.U.C. imposed upon us yet another tax on properties valued over $100,000.00 (this will hit our industrial park and the rents in the Apartment buildings!) for a $300 millions sewage system.
        And now **MORE TAXES FOR AN UNNEEDED EXPENSIVE SANCTUARY?** We petition our civic authorities not to be influenced by a well-

orchestrated campaign but to ascertain the welfare of our citizens and not tax them for the birds-birds that will not come to a noisy, polluted, projected park.

As it is, the birds have plenty of place to live in our Town as, due to our building by-laws there is a green zone around every building and their numbers are getting smaller each year due to pollution.

CITIZENS! PLEASE WRITE TO THE CITY COUNCIL"

On September 3, 1971 a partial feasibility report was presented as requested by City Council.

The following letter signed by thirteen teachers at John Rennie High School was read at the council meeting of October 4th 1971 and received into the "central registry", the official recording of that meeting:

"To Whom it May Concern

We, the undersigned teachers at John Rennie High School, commend the Terra Cotta Conservation Area Committee for its study during the past nine months. As science teachers we are interested in maintaining an area within easy reach of our school for ecological studies. Most of us, signed below, have used the woodlot behind the city hall as an outdoor classroom in the fall and spring. The students have expressed surprise at finding there are many specimens that they thought existed only in the country.

We urge the City Council to further acquaint themselves with this area and to make plans, as soon as possible, to begin with the work necessary to acquire and improve the property for a nature reserve."

An excerpt from a letter from Mr. John A. Weeks, Director of Rogers Environmental Education Center in Sherburne, New York to Mrs. N. F. Haden, Terra Cotta Conservation Area Committee dated January 13, 1972 reads as follows:

"While maintaining the area in a natural state is the first step, it is also extremely important that a plan for its use be devised which will protect the quality of environment which you propose to maintain.

"City people don't really understand the value of wilderness. It is important that a program of interpretive devices and public relations work be carried on which insures that people understand the values, and particularly that they know how others whose ideas and life styles they respect feel about wild areas.

"One principle reason for problems in maintaining such preserves, including increasing and crippling vandalism, appears to be a failure on the part of nature lovers to communicate these values to others – due often to an erroneous belief that everyone should understand the value of natural areas."

Next is an excerpt from a letter from Mr. Roderick Clack, Assistant General Manager,

National Capital Commission, to Mr. Robin Cappuccino dated 23 September, 1971:

"One basic objective of the Commission has been the acquisition of land for improvement of the urban environment. This is directly related to your problem. In the past 70 years the Federal Government has found it wise to plan for and purchase land in advance of need. Land is a fixed resource. There is only so much of it and nowhere is its use more critical than within the urban area. The time to buy any land that is required for environment purposes is now. It will never be any cheaper, it probably will not be available in future.

"Another important fact is that the land will always appreciate in value, particularly that zoned for residential purposes and this will command premium prices on the real estate market. It seems inequitable that private owners would reap the benefit of what is essentially a public investment. To date, no acceptable way has been found municipalities to prevent land exploitation of this kind. It is a fact that in Ottawa properties adjacent to the National Capital Commission Parkways and Parks are more valuable and therefore are subject to high taxes. Yet even with these added taxes there is very little turnover in the properties because of the desirability of these locations (sic)."

Other reports and communications followed.

- An "Interim Report" was prepared by the "Terra Cotta Task Force" chaired by City Councillor, Wilf J. Eagle and presented to council on June 2, 1972 – A progress report of the activities of the Task Force

- On May 4, 1972 a report was prepared by Dr. J. R. Bider – An ecological survey and "expert opinion" on the suitability of the site for a nature park

- The "Final Report of the Terra Cotta Task Force, including Recommendation to Council" was dated August 30, 1972 –

- In 1973 an informal presentation was made to the then Minister of the Environment, Dr. Goldbloom

- A June 12, 1978 brief presented to Pointe Claire City Council references the October 23rd, 1972 Pointe Claire council meeting resolution of "support in principle…to preserve…the area…generally referred to as the Terra Cotta area."

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This brief states that the members of the Committee "feel deeply disappointed in Council's actions since that time. We [the Terra Cotta Conservation Area Committee] have seen no effective conservation of parkland legislation. We have seen no public purchase of land to be set aside for parkland. We have seen no City-owned land declared as natural parkland. Instead of preservation, we have seen instead a large segment of this natural park destroyed. Worst of all, this destruction has been done directly by the City or has been approved by the City…. Instead of plans for the conservation and preservation of Terra Cotta, we have been appalled to have seen City recommendations describing the area as a 'veritable developer's dream', expressing no intent whatsoever to save this land and suggesting only compromises such as the cheap purchase of the terrain which would be difficult for building, i.e. the immediate vicinity of the stream and ravine areas of the woods, the bluff and possibly the area that might be subject to landslides or be otherwise impractical for building around the edges of the Terra Cotta 'pits', and passing this off as our 'Natural Park' while the rest of the land would be used for building.

"If, as has been indicated by the letter from City Planning Department to the News and Chronicle earlier this year, these plans for future development of Terra Cotta have been approved by council and are still current, we would like Council to know that they are totally unacceptable to us. Far from being a natural park and green space, Terra Cotta would become a medium to high density population area, with all the attending stresses and strains, and as a natural recreation area it would be almost useless.

"It is not our intention to vilify this Council, but with the above record we are finding it hard to believe that ways and means of preserving Terra Cotta have ever really been studied in the visionary spirit of the 1972 Resolution. We realize that enormous costs and problems are involved but because of the huge amount of non-returnable money already invested in building the sports field and recreation chalet, not to mention the cost of the road in to the area, servicing, lighting, and landscaping, we cannot believe that cost is the true reason behind Council's apparent refusal to look at this parkland with an honest intent to purchase and protect it…

"We can only conclude, therefore, unless there has been a very recent change in Council attitude to and plans for Terra Cotta, that there has been a definite failure on the part of Council to meet the hopes and aspirations of a large number of Pointe Claire citizens who had clearly indicated their wishes to Council on this matter, were encouraged by Council's agreement and expected that something positive would be done about it….

"Signed on behalf of the Terra Cotta Conservation Area committee" by Margaret Ann Tillett, Acting Chairman

Many letters of thanks were sent to several organizations that allowed public tabling, membership recruitment and displays by TCCAP. The amount of work accomplished by these advocates for the nature park is absolutely staggering.

Researchers and notable supporters working for the establishment of the park included

the following:

- Mr. John D. Griffin, Researcher
- Dr. J. Roger Bider, Chairman, Department of Woodlot Management, MacDonald College of McGill University, Montreal; Director at Large, Province of Quebec, Canadian Nature Federation
- Mrs. Alice Johannsen, Redpath Museum & Gault Nature Centre – (provided contact names early in the research process. No written correspondence found).
- Mr. John A. Weeks – Director, Rogers Environmental Education – Sent: 1/03/72, reply: 1/13/72; Sent: 04/03/73, reply 04/25/73
- Mr. Murray M. Outhet, National Capital Commission, Ottawa – Sent: 08/23/71, reply: 09/09/71; sent: 10/20/71,
- Mr. Roderick Clack, Natioanl Capital Commission, Ottawa – Sent: 08/23/71, reply: 09/23/71
- Mr. Daniel Smiley, Mohonk Trust, New Paltz, New York – Sent: 01/03/72
- Mr. Charles J. Elliott, Regional Administrator & Mr. Robert B. Wakefield, Senior Conservation Educator, Thousand Islands State Park & Recreation Commission – Sent: 09/26/71, reply: 10/04/71; Sent: 04/03/73, reply 05/04/73
- Mr. John Ripley Forbes, President, Natural Science for Youth Foundation, N.Y., N.Y. – Sent: 01/03/72
- Mr. Mike Krebill, Director, Onondaga Nature Centers, Inc. – Sent: 01/03/72
- Dr. Kenneth Hunt, Director, Glen Helen, Antioch College, Yellowsprings, Ohio – Sent: 01/03/72

Examples of opposition to the establishment of the park came from individual

members of city council as in the following dissenting opinion submitted as an

addendum "D" to the "Final Report of the Terra Cotta Task Force" of August 30, 1972

"including recommendation to council". In it Councillor Marsh stated the following:

"While the wish to retain such an area in its natural state may be desirable and beneficial to the City from an aesthetic point of view, there are other considerations, certainly some of them financial, which one must keep in mind. Much as one may not like those facts, they are facts, and will not simply disappear because they do not prove to be palatable reading."

After a lengthy discussion of the financial considerations, Councillor Marsh then

considered the possibility of getting the same benefits without the associated costs:

"It appears at the moment that we are getting ever closer to some form of a West Island City. We have an area in the West Island, which according to many people, is admirable

suited for the purposes (particularly educational purposes) described in the report, as desirable. I refer here to the Morgan Arboretum as an alternative to the proposal for Terra Cotta. It is suggested that we, in Pointe Claire, in common with our neighbouring communities, view this area as one which could be used as a regional development, rather than a municipal development. The ideas of teaching the various subjects outlined in the report can be carried out on a regional cost sharing, and under whatever regional educational planning is necessary."

Councillor Marsh then concluded his submission as follows:

"Finally, the report suggests that there is such a measure of support for the purchase and utilization of this land, that the City buy outright all land, not owned by the City, or obtained by expropriation and negotiation.

I disagree with the statement that there is such support as to indicate that such action should be taken by the City. I believe that the majority of people who have indicated their support have, in reality, indicated their attitude toward pollution control in general, but would not necessarily be completely in favour of this proposal, were they aware of the costs involved.

The above report is one man's opinion – an opinion not taken lightly, and which has not been very easy to render. It has been obvious to everyone, particularly myself, that the people on the Terra Cotta Committee are tremendously dedicated, and it has been inspiring and educational to have worked with them, and to have listened to their viewpoint. It is my hope that they can respect my viewpoint in the same way."

The Terra Cotta Conservation Committee's own report was included under addendum "C" and focused primarily on "four criteria for the selection of an urban conservation area" and the high degree to which the proposed site fit this criteria:

"1. Maximum variety of ecological systems.
2. Proximity of a sufficient number of people to derive maximum benefit.
3. Accessibility to community schools.
4. Minimum development and maintenance required."

It is important to bear in mind that my discussion to follow below about the attitudes, sentiments, beliefs and values expressed in these communications will not be concerned with measuring the variance of these arguments from some theoretical, objective, calculable, technically optimized, ideal outcome. Rather we will look at the efforts by each camp to establish a "regime of truth" and to defend a shared

understanding of the "way the world works", a meaning system that is closely linked to the construction of ones own identity. What is at least partly in play here is what it *should feel like* to live in this community. The options would appear to be between the familiar simplicity of a one-dimensional, pretend-realist approach to the construction-of-materiality process and the comfort of historical consistency on the one hand or a shared perception, understanding, and derivative meaning system based on readily observable and comprehensible phenomena more consistent with an "image-of- man" as *more than mechanical automaton* on the other. Reductionism dominates the first option enforcing a self-perception as "rational, economic man" making selections from a basket of various paid-for "experiences" whereas the opposing view challenges the omniscience of the "market" to dictate the parameters of the human experience by engaging a metaphoric understanding of the self as part of a larger whole. This is a critical point because of its foundational position upon which any argumentation can proceed.

The argument in favour of the establishment of a "natural park" in Pointe Claire remained nevertheless carefully within the bounds of the dominant rational, positivist discourse and essentially strategically fought on the issue of what should be included in the calculation of the one dimensional metric. The goal of sustainable development being thus lost even before the discussion had begun. Take for example this excerpt from McGill Chemical Engineering Professor, Edward J. Farkas, in support of the park:

"a. Air pollution that is demonstrably increasing the rate of illness and demonstrably hastening death.
b. Water pollution that threatens the safety of drinking water supplies and has long since eliminated recreational use of surface waters near many large cities.
c. Traffic congestion, noise, and ugliness that add up to a dehumanization of the city with attendant increases in alienation and antisocial behaviour among all ages and economic levels of the population.

It is obvious that these things are happening and it should be as obvious as 1 + 1 = 2 that preservation of the undeveloped status of anomalies such as Terra Cotta area will arrest at least in some small measure the dangerous trends a, b, and c…

All the development that exists between Terra Cotta and Dorval airport is less than liveable due to noise from the airport. All of this area should have remained undeveloped. This chance now exists only with Terra Cotta…

It is a demonstration of the insanity of our times that it should be necessary to write tracts such as this to prove how valuable and important Terra Cotta is. It should be self-evident, as pointed out above, to everyone, man in the street, city councilman, mayor, member of the national assembly, etc.…

The cost per person of providing services such as trash removal, sewage treatment and breathable air, goes up exponentially with increases in number of people per unit of land area. This is the basic reason why we must have open areas like Terra Cotta."

By framing the issue in such narrowly utilitarian terms, there is no standing ground left on which to argue landscape as co-constitutive of self – that the landscape does not go quietly but rather infects the inhabitants who infected her. Metaphoric conceptualizations based on linearity, socially enforced denial as in this case of these loop structures or what we have referred to more generally as reflexivity, ensures, in other words, that even the construction of a nature park moves this community deeper into a world of illusion.

The next excerpt of a letter in support of the park is from the Montreal branch of the Zoological Society of Canada:

"It is surprising to find so large a piece of land in its natural state right in the centre of a well populated area. The woods with the stream, the meadows and the marsh support a substantial and interesting eco-system. As a natural habitat, as an outdoor classroom, as a source of pleasure and relaxation, and as a communal effort at conservation, it is of immense importance."

It should be pointed out here that it seems to have been quite common for high school teachers on the West Island in the 1970s and 1980s to take their classes to nearby wooded areas as part of the science curriculum. Mr. David Fletcher, vice president of the Quebec based "Green Coalition Verte" and former high school teacher in the

neighbouring community of Pierrefonds has for example often publicly lamented the loss

of woods in that community where he demonstrated to his students the concept of

humidity zones that could be accurately mapped based on the location of salamanders

found there. Today one would be hard pressed to find a single high school teacher who

could incorporate such a field trip into a meaningful learning experience for their

students. Even if they did, the museum-like character of the experience would certainly

constitute part of the "hidden curriculum".

The next excerpt of a letter, dated October 29, 1971, is from the Eastern Region

of the Canadian Wildlife Service, a department of Environment Canada:

"As much as we agree with the objectives of your committee we are unable to commit
Canadian Wildlife Service funds to the acquisition of the property. As was explained to
you the area has a low potential for waterfowl and consequently must rate low on our list
of acquisition priorities.

"However, if your committee is successful, and I hope it will be, in having the site set
aside by the City of Pointe Claire as a conservation area then the Canadian Wildlife
Service will endeavour to provide the expertise and some of the funding necessary to
develop some of the wetter sections for waterfowl."

The next two letters come from the Society To Overcome Pollution (STOP), the

first from the "Conservation Committee" located in neighbouring Beaconsfield and the

second from the Pointe Claire chapter of S.T.O.P.

"We feel that the increasing rate of urbanization in Montreal (as elsewhere) is
bringing potentially unbearable strains on the remaining stock of open land in areas such
as ours. The dangers of overdevelopment of green areas will only become apparent many
years after the fact of development, and actions such as yours in securing green areas for
future use are, w think, the most important in the current ecological battle.
    By your success we will demonstrate that:
1.   there is indeed popular support for the preservation of large wilderness tracts in
        the urban environment,
2.   there will be a significant natural habitat for wildlife in the centre of Pointe
        Claire. That the near-geographical centre of one of the wealthiest cities in
        Canada will have been dedicated to nature will serve as a benchmark in the
        creation of a balanced environment,

3.　　　the currently growing interest in the planning of urban communities will have strong support, and that this interest will extend itself to the preservation of the green areas surrounding our cities.

For these reasons, as well as the more commonly expressed arguments against air and water pollution caused by development, however well ordered, we extend our support and encouragement."

This letter was dated January 23, 1972 and the next, from the Pointe Claire Chapter, was

dated October 22, 1971.

"The executive of Pointe Claire S.T.O.P. is conducting a survey of members resident in Pointe Claire, inquiring as to their reaction to Terra Cotta Committee's Final Report. This Survey is, at present, being restricted to registered S.T.O.P. members, however, several members also indicate strong support from families, neighbours and friends.

"Pointe Claire S.T.O.P. has 173 registered members, 159 have been contacted to date.

"Results suggest overwhelming endorsement of the proposal with –
　　　87% giving unqualified support;
　　　8% requesting further information or time to study the Report;
　　　5% not supporting the proposal
"Reasons for non support were noted as follows –
i)　　　preference for a formal park
ii)　　　preference for the area to left "green" but fear that support of the proposal may result in increased taxes
iii)　　　that the area is large enough or sufficient environmental significance to retain as a conservation area.
"On behalf of Pointe Claire S.T.O.P. I express my hope that, when council study Terra Cotta Committee's final Report they will take into serious consideration the community's growing concern with the quality of urban environment and consequent changing values and attitudes towards land utilization."

We might also consider the role that the local media played in this process. On at

least two occasions, members of the Terra Cotta Conservation Committee composed

articles that were then run verbatim in local newspapers. One such article, "Terra Cotta-

immersed in history; a pageant of Lakeshore's past" written by Wendy Dathan and

published in October 26, 1978 edition of the News & Chronicle focused on the historical

significance of the site, and this 25 years before green urbanists such as Professor

Timothy Beatley would explain that

"The history of a community and region can be thought of as an important *place asset*, essential for nurturing connections between people and environment and place, and providing intertemporal connections - essential connections between the current inhabitants and the people who came before and those who will come along in the future. Historical connections, and having a sense of the people and events that have shaped the communities in which we live, are critical in making places meaningful to us, in casting the collections of buildings as home rather than just empty vessels for sleep and work (Beatley, 53)."

The article explained how the site was connected to the name of the community:

following the 1698 "Lachine Massacre" of French settlers by the Iroquois the hill side

was selected for settlement because from "La Pointe Claire…they could get a clear view

across the lake and be prepared for another Iroquois attack which fortunately never

came." Another article in the same newspaper, written by a reporter for that newspaper,

headlined "Terra Cotta project support continues" was published on November 2, 1978.

This article was written essentially as a chronology of events and a status report at that

time.

Finally, we look at the current discourse taken on by the City today, as evidenced

by this description of the park on the City website:

"Terra Cotta Natural Park is a natural green space of 45 hectares in the heart of Pointe-Claire. Preservation of this park has been of the outmost importance. Furrowed by 6 km of paths, it allows visitors to observe a diversity of vegetation and animal species. Altogether, this park is of great ecological value. An article collection on the natural aspects of the park is available at the parks and horticultural division.
Terra Cotta Natural Park provides a pleasurable area for walking, nature observation and bird watching.

 From 1912 to 1962, a portion of the clay deposit on site was exploited by the Montreal Terra Cotta and Lumber Co. Clay, mixed with sawdust, was baked on site to produce tiles used for the construction of walls and floors.

Since 1971, a citizens' association, The Terra Cotta Conservation Area Project (Pointe-Claire) Inc., has greatly contributed to the preservation of this natural site. For more information on this association, contact Mr. Keith Thompson at (514) 697-1514."

Source: downloaded from the City of Pointe Claire website, http://www.ville.pointe-claire.qc.ca/en_1163_index.php on September 18, 2009.

3.3 – The Interpretation

It might well seem strange from some cultural vantage points: this idea of attempting to imprison "nature" in a "nature park" (especially in a time and a community where "Earth Day" would officially be described using a sort of "legalese" language and celebrated as "Survival Day"). What we can notice being contested repeatedly in these archives of various discourses, is the shared "Image of Man" and his "right" relation to his "environment". That is to say the social meaning to be attached not only to the various elements of the landscape, but more particularly what is being defined, through this subconscious and reflexive process, is the specific "image of humankind" that will dominate in the social mind of this community. Clearly one of the underlying taken-for-granted assumptions employed in the rhetoric of both sides of the argument is the consequent permanence of the cognitive model once transferred onto the actual landscape. The mutually assumed sequence of events seems to be roughly as follows: 1) scientifically determine the quantifiably optimum land use, 2) demonstrate the "proof" of such optimization, and 3) implement "the model" permanently onto the landscape. The establishment of such a relationship to the land creates a particular kind of subject, a particular way of being that inevitably seeps into the conscious awareness of the social mind to be reflected in the vast array of modern suburban rituals and artefacts.

The idea that "nature" can be contained within the boundaries of a park for example, perhaps as a "tree museum", must be seen in some sense as an admission of

failure. If the various processes inherently producing "civilized" lifestyles require such failsafe measures, then they must clearly be flawed in some way, resulting in some imperfection, or at the very least an insufficiency when taken in isolation. The "nature park" can be understood in this sense as the manifestation of doubt; doubt in the human ability to assume the role of God in the ordering of materiality process. In other words, if human actions are believed to inevitably result in the creation of a habitat "too polluted" for birds, then perhaps something has gone wrong. If the linear boundaries separating "park" from "not-park" or more symbolically "nature" from "civilization" mean anything, surely that meaning includes differing codes of behaviour that attach to the respective delineated spaces. This is of course clearly characteristic of post-modern existence when, for example, decisions taken in one compartmentalized realm of existence (the office) directly contradicts welfare considerations in another realm (the home). Such prescriptive compartmentalization however does not lend itself to the definitive, one-dimensional, metric of the "invisible hand". The "value" of a "walk in the park" as located on a "map" of indifference curves, is alas completely detached from ecological and physiological reality. The absence of cognitive schemata, "maps of the world" linking commodified, fetishized, "products" to "place" and "place" to "mind" creates a type of subject as alienated from Self.

The evolutionary experiment then, conscious awareness linked to deliberate, instrumentally pursued purpose, appears, at least up to this point in time based on available evidence, likely to be a failure. This cognitive mutation as tested for evolutionary "fitness for survival" must be understood as the essence of what separates humanity from other species. Andrew Biro explains: "The historical event that

constitutes the dividing line between the human and the non-human is human beings'

self-conscious transformation of their natural environment. It is, in other words, the fact

of humans' alienation from nature." (Biro: 2005, 30).

What we find evidenced in the above discourses on the creation of a "nature

park" is confirmation of this alienation for as Biro continues to explain:

"Human alienation from nature is an ongoing process that transforms not only the external environment but ourselves as well. The shift from medieval villages to postmodern cities entails not only a massive transformation of the external environment, but also a transformation of our internal natures as well. The type of person who can thrive (or even survive) in a postmodern city is very different from the type of person who can thrive in a medieval village." (Ibid, 31).

This new type of "nature-park" person experiences the production and consumption of

the "nature park" much like the production and consumption of other "commodified and

fetishized products". According to Jeremy Rifkin "The changes taking place in the

concept of self found their counterpart in the weakening of property as an all-

encompassing metaphor for defining both the individual and social relations… The

property metaphor was further undermined by what scholars refer to as the fall of

historical consciousness and the rise of therapeutic consciousness (Rifkin: 2001, 202).

The "nature-park" is generally consumed (and designed to be consumed) as a therapeutic

paid-for experience. The community instead of the individual consumer pays for the

commodity, nature park experience. This merely reflects the large expense involved as

well as the minimal amount of destruction of the product involved in its consumption per

individual consumer.

Notice also that the configuration of materiality process outside of the nature park

is never contested throughout the above process. It would seem to follow, logically, that

if access to "nature" is needed, primarily for its therapeutic utility, that the area outside, if

not neurosis producing, at least fails to meet entirely the psychic and aesthetic needs of the population. While this point was often made either explicitly or alluded to during the contestation process, the only "solution" put forward at that time was the establishment of the "nature park". Today, of course, this problem is being addressed explicitly in the writings of authors such as Timothy Beatley, Ann Dale, Lynn Manzo, Douglas Perkins and Paul Robbins, to name just a few examples. There is, in other words, an increasing awareness of the mythological insufficiencies associated with compartmentalized conceptualizations of "self" and "landscape". If, for example, eighteenth century economists were able to dismiss their at-that-time purely theoretical misgivings about international trade based on a non-historical theory of human nature that would automatically ensure investment always remaining predominantly local (see Ricardo), the 21st century economic theoretician is pressed to assess such "ethical considerations" as merely quaint. Likewise, preindustrial European peasants lobbying for "rights" to collect firewood as well as non-timber products from nearby forests newly claimed as "property" by the monarch are not directly comparable to the lobbyists described here. Landscapes and their contexts are always temporally as well as spatially specific.

That is not to say that a conventional wisdom about the specific elements of what constitutes "the good life" is anything but historical. The point is that the temporal filtration processes, the mechanisms determining what resides and what is swept away, are anything but straightforward. Whether resistance would (will?) be more effective than "hyper-conformity" at bringing about sustainable development over the long run remains an open question. Obviously change is needed. Such change can potentially take several forms, falling into one of the three categories of myth, ritual or artefact. In the

case of the creation of Terra Cotta Conservation Area Project for example the strategy was to create an artefact. The creation of this particular artefact did not involve a meaningful challenge to the established meaning system (myth) nor were appreciable changes instituted to established rituals. Furthermore, the creation of the "nature park' has probably resulted in an attitude, at least in the minds of some residents, that sustainable development in Pointe Claire is now a fait accompli.

It almost goes without saying that the mention of "sacred springs" or "sacred groves" at a Pointe Claire municipal council meeting would be counterproductive at best. There are real limits to acceptable public discourse in this or any other community. This again brings us to the crux of the illusory nature of sustainable development. While it remains scientific fact that the genes of a human being "speak the same language" as the genes in any other living earthly being, at a deeper subconscious (western) level unfortunately "The belief in mankind's image-likeness to God, and hence his licence (sic) to perform godly acts, took two forms, the bold form of 'co-creation', or the somewhat more humble form of 'stewardship' (Noble: 1997)". The important point here is the pattern and not the individual specifics.

As a footnote to this tale, the most recent salient "land use" issue in this community involved the construction of a Home Depot store on top of a decommissioned rail line (the "Doney spur") that could potentially have been resurrected to provide commuter rail service between the community of Pointe Claire and Montreal's downtown core business district. On January 22, 2009 reporter Max Harrold wrote in the Montreal Gazette, "amidst all the sour news recently for West Islanders about commuter trains breaking down and being overcrowded, there is a prospect of relief down the track

that could really improve service a year from now if there is the political will. A letter obtained by the Gazette from a high ranking official with the Agence métropolitaine de transport indicates the regional transit agency is at a critical stage in the talks with Canadian National Railway to buy the Deux Montagnes train line, and that of the Doney Spur, a 9.7 kilometre freight line that linked to it, may be part of the deal." (Montreal Gazette) Unfortunately, it turned out that the owner, Canadian National Railways had already been granted a formal "discontinuance" by the Canadian Transport Agency in 1999 for a portion of the Doney Spur, clearing the tracks for the construction of a Home Depot store on the once rail bed. It seems that once a rail line is decommissioned, it is no longer considered to be a rail line for the purposes of land development. Such a system of rules acts very much to establish a particular official version of reality that is beyond questioning. The insistence that the rail ceases to exist with the stroke of a pen makes the possibility of stepping back from the culture of the car merely a falsehood, as impossible as water running uphill.

What we see then in each of these cases is a situation very similar to that of Easter Island as described by Carl McDaniel and John Gowdy. In that case the Easter Islander's interface between self and landscape was mediated by a meaning system (mythos) constructing and being constructed by giant stone heads (artefact) and all of the ritualistic daily routines needed to enact that specific lineage. The suburb entails a corresponding mediating meaning system characterized primarily by a number of equally ecologically and culturally dysfunctional perceptual and cognitive models (see for example Bateson, Clark: 2002, Dale: 2001, Hundert, LaDuke, Norgaard, Polanyi: 1977, and Zerbavel). The migration out of a dysfunctional paradigm was so difficult for the

Easter Islanders that they continued to enact the old paradigm by carving the stone heads even after the last tree, which would have been needed to put the head in place, was gone. The nature park as artefact, or ritualistically assigned priority to private automobile dominated transport systems fall clearly into this same category. Once established these rituals and artefacts inevitably act to reinforce the same meaning system.

Chapter 4 – Conclusion
"Education" and Sustainable Development

"It is only when we open our minds to paradoxes and the possibilities of new paradigms, myths, and metaphors that we will be able to implement sustainable development (Dale: 2001, 41)."

"Modern culture, convinced that problems have solutions, has granted scientific enterprise an authority and prestige that it could not claim for itself without violating its own epistemological premises." (Torgerson: 1999, 76-7)

And so we find ourselves now back at the beginning, with the same unanswered questions: Are there identifiable characteristics or properties of particular models, metaphors, myths and paradigms (patterns of thought and systems of meaning) that prescribe and reflect resilient, sustainable landscapes into being? If so, how might these patterns of thought be implemented or rather how might they dislodge and replace the current dysfunctional conventional wisdoms? Is there a more effective "entry point" into the seemingly circular process connecting meaning system to artefact/landscape and back to meaning system? If such a process involves a number of "étapes", if the process is recursive and path dependent, then is the sequence of change-events critically important?

Such an instrumental approach to the "education" of sustainable development people in landscape is overly restrictive and counterproductive. As I have tried to demonstrate and explain throughout this thesis, the inter-subjective process of becoming may be conceptualized as an essentially atomistic and self contained affair but it is never so simple in practice. Theoretically idealized values, ethics, sense of propriety, aesthetics or other aspects of identity can never be a one-way process and this is especially so if sustainable development is the ultimate goal. All of the elements of the landscape need to have a say in such a co-constructive process. Such a realization, that each action creates a new *context for action*, may at times become almost paralyzing. This paralysis is

connected, I think, to the love of permanence and the institutionalized fear of change so clearly discernible in the rituals of the suburb. As Deborah Bird Rose explains in her essay, *The Dance of the Ephemeral,* "A love of the immutable is, in Western philosophy, a lack of love for, or indeed a denigration of, the ephemeral world that lives through change (Bird Rose in MacDonald, 179)".

Furthermore in Western philosophy "change" has generally been collectively conceptualized as the proper domain of expert knowledge. The failure of this aspect of conventional wisdom is explained by Raymond McLain as follows: "…as long as these reflexive processes occur autonomously and beneath the level of reflective consciousness, as long as scientists and lay publics remain unaware of them, efforts to resolve problems produced by expertise will be limited to more of the same, more modernization, more science, more rationality, more technology, more rationalization, or, in other words, more polarization of science and everyday life, lay and expert knowledge, theory and practice (McLain, 258)." We have seen this continuity clearly illustrated in the creation of a nature park in Pointe Claire and in the desperate efforts to reinforce the crumbling structures of discourse in the mainstream media of that community.

> "Beliefs and values are functions of social relationships and patterns of moral and social identification. This stands in sharp contrast to the taken-for-granted (and hence rarely articulated) commitment underlying conventional approaches, in which values and beliefs are taken to be coherent, self-sufficient, and discrete entities, and where social identities are simply the aggregate of individual beliefs and values. In this perspective social interaction is recognized only as an instrumental device to maximise preferences and values, not as an activity with moral and social meaning in its own right (Brian Wynne in Irwin & Wynne, 43)."

All of the elements of this inherited traditionality can be traced to the ancient Greeks and the shift towards rational argumentation as a way of becoming (see Schama or Nisbett for example). It comes more clearly into focus with Adam Smith's prescription

for the making of a pin (Smith: ([1776] 2008, 11-20). Given that humans are so far unable to find a mathematical formula for maximizing more than one variable at a time, Smith's pin example was more or less decisive in the setting of that primordial variable as the efficient production of material wealth. The cognitive familiarity of this particular metaphor has become the most salient aspect of the prescription for the creation of socially, culturally, ecologically and economically unsustainable (suburban) peoples and their rituals and artefacts.

The challenge of overcoming the illusion of sustainable development is, in other words, a problem of overcoming the comfort of that familiarity. It is important to recognize that it is only within the supportive familiar web of a particular inter-subjective myth system that humans can find safety, security, or beauty. It should come as no surprise then that the transformation from one myth system of "wrong relationship" to another one of "right relationship" (see Brown: 2009) will involve a process of grieving with all of the normal blaming, denial and so forth associated with a normal grieving process (See Scott in Cranton: 1997)). Although grieving can sometimes lead to paralysing sadness, it is also recognized as a normal transitional stage that enables new personal development and maturity. Sue Scott makes the connection between the grieving process and the illusory nature of sustainable development as follows:

"Grieving for the loss of the old self occurs. Although the loss is painful and inevitable, there is a light at the end of the tunnel… We incorporate the world into our Self. When we grieve we glimpse that we are grieving not only individually for what we have lost personally but for what we are losing globally. We sob for the world; the emptiness we feel is being experienced globally among all people everywhere (Scott in Cranton 1997, 48-9)."

Given the fact that the current paradigmatic patterns based on a blind faith in rational argumentation are so foundational to the propagation of illusion, it is extremely

doubtful that more of the same will be able to guide humanity to safety. In this regard,

traditional knowledge shows some promise. As Fikret Berkes observes, "Perhaps the

most fundamental lesson of traditional knowledge is that worldviews and beliefs do

matter. Almost all traditional ecological knowledge systems may be characterized as a

complex of knowledge, practice, *and belief* (Berkes: 199, 163)." What is needed then is a

broad based process for deconstructing current hegemonic traditionalities and their

replacement with more authentically human myths, rituals, and artefacts. The reflexive

balance model used in conjunction with transformative learning (Mezirow) or civic

epistemology methods (Janisoff) is one possible lens to see through the illusion to a

landscape and mindscape of sustainable development.

NOTES

Chapter 1

1. It should be noted however that North's analysis mistakenly presents this representation, "historical inheritance", as depicting an essentially neutral and benign determining factor. The distinction between these two (Grant versus North) opposing normative assessments is more than trivial. They illustrate a key element of focus of this thesis: illusion. Hans Mol for example explains how in western civilization, "the system of meaning has become objectified" (Mol: 1983, 3-13) meaning that order is conceptualized, originally based on an omnipotent God, as a separate "thing". Mol sees this development as evolutionary "progress": "A more advanced technology, economy, polity, and science are not possible when the existing technology, economy, polity, and science are regarded as untouchable and sacred (p.)." Herbert Marcuse, on the other hand, opens his book titled One-Dimensional Man; Studies in the Ideology of Advanced Industrial Society as follows: "A comfortable, smooth, reasonable, democratic unfreedom prevails in advanced industrial civilization. Indeed, what could be more rational than the suppression of individuality in the mechanization of socially necessary but painful performances; the concentration of individual enterprises in more effective, more productive corporations; the regulation of free competition among unequally equipped economic subjects; the curtailment of prerogatives and national sovereignties which impede the international organization of resources. (Marcuse: 1964, 1)." Thus, even when the realization is made that we never experience the world "as it is", the problem of these normative "feelings" still remains.
2. For an excellent example of this see the article: Guthman, Julie. *The Polanyian Way? Voluntary Food Labels as Neoliberal Governance* in Antipode, June 2007, Vol. 39(3), 456-478, or see Toby Smith's book, *The Myth of Green Marketing*.
3. The shortcomings of this Maslow-style model and the merits of the medicine wheel style model were first pointed out to me by Dr. David Newhouse of Trent University
4. See for example *The Earth Encompassed* by Peter J. Bowler Chapter 1 – "The Problem of Perception"; "*The Original Affluent Society*" by Marshall Sahlins; or Chapter 9 – "The Eye of the Beholder" in Marilyn Waring's book *Counting for Nothing"*.
5. Objections might arise here that this definition fails to separate out purely "reflexive" actions whereby "genes" dictate a specific response to a specific environmental stimulus. Given that first of all genes always express themselves in a particular context, secondly that any such separation would necessarily be arbitrary, and thirdly such exceptions would be limited mainly to involuntary bodily functions, we will ignore this admittedly very real exception for the purposes of this analysis and for the benefit of the resultant comprehensibility.

Chapter 2

1. The ironic injustice of the imposition of a legal regime of land as "property" based on the dubious notion of *terra nullius*, or even the practice of attaching European place-names to traditional, aboriginal places is an important topic that has not been adequately addressed on Turtle Island to date. It is not my intention to sweep over the issue here, but space does not allow for such a lengthy and complex discussion within this thesis.

Nevertheless that the territory of Pointe Claire was expropriated forcefully and based on a devious and self-serving cosmological story is now a foundational component part of the total context of this suburban community. This should be kept in mind.

2. Statistics Canada. (2007). 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. http://www12.statcan.ca/census-recensement/2006/dp-pd/92-591/index.cfm?Lang=E

3. Michael Redclift has brilliantly outlined some of these landscape processes in his article, *Chewing gum in the United States and Mexico: The Everyday and the Iconic* (Redclift: 2002). This article provides an excellent illustration of the cognitive dissonance between regions of "production" and "consumption" in the context of a globalized economy. For another example of these dynamics, Merylyn McKenzie Hedger (in Guerrier et al.: 1995) clearly illustrates some of the difficulties to be overcome in the process of a landscape "changing its mind" in an examination of the aesthetics of windmills in the U.K. titled *Wind Farms: A Case of Conflicting Values*.

Chapter 3

1. By "conventional" here we mean correspondence with a monetary system, being counted in the calculation of Gross Domestic Product (GDP), and so on. Obviously much non-conventional economic activity in the simple sense of securing livelihoods does take place in the suburbs.

2. See Mezirow 1991 and 2000 but also Darlene Clover et al who have done considerable work on adapting Mezirow's theory to the issue of sustainable development.

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