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Natural Nonhuman Organisms Matter:

A Case Against Strong Anthropocentric Moral and Political Values

M.A. Thesis

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Handles are shining where my life has passed.
My fields and walls are aching
in my shoulders. My subjects are my objects:
house, barn, beast, hill, and tree.
Reader, make no mistake. The meanings
of these must balance against their weight.

Wendell Berry
Clearing

INTRODUCTION

Traditionally, the ethical enterprise has remained fairly constant, focusing on personal well-being or on principles for conducting harmonious social and political behaviour. The value frameworks underpinning ethical, and ultimately political, theories have traditionally focused on identifying principles which prescribe some conception of the "human good". Through conceptions of the individual, society, justice, and the "good life", different ideological perspectives have sought to delineate the value premises for relationships between human beings. What has been omitted, but has become evident within the context of our present "environmental crisis", is the need to question the value assumptions which underlie our relationship with the natural, or nonhuman, world. A common thread through many radical theories of environmental ethics, such as those advocated by so-called "deep ecologists", is that even liberalism's most treasured value assumptions must be subject to re-evaluation. In light of our growing understanding of the science of ecology, we are beginning

to redefine our relation to, and conceptions of, the natural world, our fellow citizens, our communities, and fundamentally -- our sense of "self". The exact nature and extent of this re-definition, and how it should be formulated, is driving a contemporary ethical debate with profound practical consequences for traditional interpretations of liberalism, and the liberal-democratic state.

The eco-political wars waged amongst environmentalists, resource-based multi-national companies and all levels of government reflect the conflicting and competing value theories underlying our various contemporary definitions of the natural world and humankind's place in it. The very term "environmentalism" has become ubiquitous in its use, and failure to define it within a particular context renders it almost meaningless. Unless otherwise specified, "environmentalism" will denote a broad social/political movement that, at some level, explicitly or implicitly, acknowledges a moral relationship between the human and nonhuman worlds. "Environmentalism", as defined by Mark Sagoff in *The Economy of the Earth*, makes the nature of this moral relationship more specific; Sagoff states that environmentalism espouses:

> on ethical grounds the political goal of maintaining harmony between people and their environment.[1]

Thus, whether emphasizing the conservation of resources for the use of future generations, or nature as a source of aesthetic beauty, or nature as a source of spiritual and psychological renewal, or

nonhuman organisms and/or ecosystems as intrinsically valuable in and of themselves, the environmentalist, directly or indirectly, sees herself as standing in **some** moral relation to nature. This is not to suggest that environmentalism does not seek to address the complexity of the relationships between humans, or between nations, or to further the quest for human emancipation. It is simply intended to indicate that environmentalists recognize and seek to substantiate, through various means, a moral relationship between humankind and nature -- a relationship which traditional ethical and political theories (e.g. liberalism and Marxism) have assumed to be one of justified dominion.

In all political theories value assumptions regarding a host of variables determine to a large extent the ideological nature and direction of political solutions. In the case of environmentalism wherein the political problematique is often presented in terms of environmental justice, and/or human survival, and/or a crisis of participation, and/or a crisis of culture, it is often contended that environmentally just and sustainable solutions require an alternative theory of value which may be antithetical to some of the fundamental principles of the liberal-democratic state.[2] Consequently, political philosophers and environmentalists from different ideological persuasions are left pondering whether a meaningful and substantive environmental ethic can be reconciled with liberal-democratic principles (e.g. participatory democracy, pluralism, individualism, and market autonomy). Or, whether a "new" post-liberal meta-ethic is required to create an ethic upon

which an environmentally sustainable society can be built.

So-called "deep ecologists" envision a new meta-ethic which advances a totalized world view.[3] Arne Naess, the contemporary founder and leader of the deep ecology movement, manifests this when he states:

> A total view, such as deep ecology, can provide a single motivating force for all the activities and movements aimed at saving the planet from human exploitation and domination.[4]

Other fringe movements, such as Jerry Falwell's "Moral Majority", also subscribe to a political monism in that they fail to make any meaningful distinction between the state, politics, and the religious/moral. As a consequence, this conservative perspective is also at odds with liberalism because as Sagoff points out:

> Liberalism is the political theory that holds that many conflicting and even incommensurable conceptions of the good may be fully compatible with free, autonomous, and rational action.[5]

Obviously, radical fundamentalist beliefs cannot coincide with this definition of liberalism because their political monism is based on a reductionism that seeks to realize their own conception of the "good" through state regulation of non-believers. Marxists, environmentalists, or any other group which believes the state's fundamental role is to prescribe "the good", or on the contrary, believe the state should be minimalized in a quest to maximize individual moral and/or material freedom (e.g. anarchists, libertarians), preclude liberalism understood as above. But sustainability becomes a difficult goal if one does not seek to realize one particular end-state, especially when one considers

that a healthy natural environment is a necessary condition for the possibility of any potential end-state.

Within the context of Sagoff's earlier quotation regarding the ethical basis of environmentalism, an enquiry into the proper political home for environmental values must commence with an analysis of the different value theories believed capable of grounding a unified and workable environmental ethic. Thus, the first chapter of this thesis will be devoted to an analysis of whether a traditional anthropocentric ethic can be sufficiently reformed to incorporate ecological understanding and sensitivity, or whether this "understanding and sensitivity" can only be accomplished through the biocentric or ecocentric ethics of deep ecology (i.e. non-anthropocentric conceptions of value). This analysis will be carried out within the larger aim of the paper which focuses on the need for an environmental ethic capable of supporting an "environmentally sustainable politics".[6]

CHAPTER ONE

Environmentalists' campaigning for wilderness preservation and animal rights campaigners have helped bring about radical philosophical challenges to traditional value assumptions, especially regarding the inherent superiority of humankind over all other natural life forms.[7] The growing public consensus around preserving wilderness and species has forced theorists within different disciplines to confront the polemic question of "value in nature" when pondering the relationships governing both intra-human behaviour and human/nonhuman interaction. The question as to whether value exists in nature, beyond its instrumental value for humans, is highly problematic and has become the basis for numerous "new" ethical theories and much impassioned debate. The debate can be broadly categorized into nonhuman-centred theories of value versus human-centred ones, or non-anthropocentric theories versus anthropocentric theories, respectively.

It will be the focus of this chapter to show that both traditional anthropocentric value theory and non-anthropccentric value theory provide problematic and inconsistent foundations on which to ground a workable environmental ethic. It will be argued that through extending the "interest-principle" to include natural nonhuman organisms, traditional anthropocentric value theory can be "weakened" and brought to incorporate both the intrinsic value of nonhumans and a greater measure of ecological sustainability. The development of a "weak anthropocentric" value theory, or "Greater Value Thesis" (GVT), allows one to avoid the metaphysically

problematic nature of many non-anthropocentric value axioms, while ensuring that the interests of natural nonhuman organisms receive more than instrumental recognition in the moral deliberations of human agents.

Theories seeking to reconcile environmental concerns with a traditional anthropocentric value framework often argue that the framework must be reconceptualized, and/or extended, to incorporate broader conceptions of environmental value (e.g. biodiversity, physical and aesthetic quality). It is argued that these theoretical revisions can sufficiently re-define the nature of humankind's relation to, and actions in, the nonhuman world, and thus can directly ensure the long-term physical and psychological survival of humankind and the survival of nonhuman organisms and ecosystems. This school of argument flags a form of environmentalism Arne Naess coined "shallow ecology". As defined by Naess, shallow ecology encompasses a wide spectrum of positions beginning with the strong anthropocentric position denoted in "conservationism", moving through "human welfare ecology", and into more progressive forms of weak anthropocentrism such as "preservationism".[8] Shallow ecology is premised on the traditional western metaphysical perspective that all value is subjective, and thus relative to an individual valuer.

Traditionally, within an anthropocentric value system something is conceived as possessing value only by virtue of the fact that concern for it enters into the deliberations of a moral

agent.[9] To the contrary, non-anthropocentric value theorists (i.e. deep ecologists) argue, at least indirectly, that this traditional conception of value is the very basis of environmental destruction. Thus, deep ecology holds that an anthropocentric-based ethic cannot in any meaningful way allow for non-instrumental value to exist in natural nonhuman organisms (biocentrism), or in the life-sustaining processes of ecosystems (ecocentrism), because by definition anthropocentrism precludes the existence of intrinsic value beyond experiences or entities of human concern.[10]

Exploring the preservation movement will help shed further light on the theoretical differences between non-anthropocentric and anthropocentric value theories. Robyn Eckersley categorizes what she believes to be the five major streams of environmentalism as: Resource Conservationism, Human Welfare Ecology, Preservationism, Animal Liberation, and Ecocentrism. As previously mentioned, the first four categories progress from the strongly anthropocentric "Resource Conservation" through to weaker anthropocentric formulations of environmentalism, as reflected in "Preservationism" and "Animal Liberation". Of these five categorizations, however, Eckersley states that only "ecocentrism" is synonymous with the deep ecological perspective. She presents "preservationism", commencing with John Muir, founder of the Sierra Club, as a precursor to the later and "deeper" ecocentrism, principly because Muir advocated we should "value nature for its own sake".[11]

Although preservationism is presented by Eckersley as "the

harbinger of ecocentrism", preservationism still operates within an anthropocentric value framework.[12] Deep ecologists avoid identifying with preservationist philosophy because it is premised on protecting nature from human intervention, and thus artificially segregates *homo sapiens* from the natural, nonhuman world upon which they are dependent. Hence, preservationism is taken to imply human superiority over the natural world -- a position antithetical to deep ecology's commitment to "biospherical egalitarianism". Biospherical egalitarianism is defined by Naess as "*the equal right to live and blossom*" (his emphasis), and adds that to the ecological field worker "it is an intuitively clear and obvious value axiom".[13] In addition, deep ecologists view anthropocentric value theory as far too narrow and restricting to accommodate the full-range of ethical obligations owed to the nonhuman world, and thus, as too often sanctioning its unbridled destruction.

This is not meant to imply that preservationism and deep ecology are thoroughly exclusive approaches to an environmental ethic. If one seeks a consensus in the form of a unified value theory there will be little if any convergence. But, if one focuses on actions at the social/political level, deep ecologists can be found working hand in hand with more preservationist-oriented environmentalists on various environmental preservation efforts across North America and around the world. Thus, one might venture to say that within the deep ecology movement "preservationism" manifests itself as a formal and thoroughly pragmatic political value. This "pragmatism" is the result of the

pervasive political control instrumental value exerts over environmental decision-making procedures within the thoroughly materialist nature of contemporary liberalism.

This certainly begs the question -- if both movements are working to realize the same ends, why don't the deep ecologists drop their polemic value theory and adopt a more socially and politically palatable position based on a weak anthropocentrism?[14] Eckersley makes this point in reference to "human welfare ecology." She states:

> ...defenders of this perspective can say to their ecocentric critics that human welfare ecology reforms would, in any event, directly improve the well-being of the nonhuman community as well. Why, they ask, should we challenge the public and lose the support of politicians with perplexing and offbeat ideas like "nature for its own sake" when we can achieve substantially the same ends as those sought by ecocentric theorists on the basis of our own mainstream anthropocentric arguments?[15]

Regardless of sharing many social/political goals with movements rooted in weak anthropocentrism, deep ecologists argue that an environmental ethic founded on an anthropocentric value system is not only ecologically unsustainable, but rationally unsound.

First, in reference to the ecological unsustainability of anthropocentric-based ethics, the ethical treatises espoused by biocentric theorists such as Paul Taylor or ecocentric theorists such as Holmes Rolston III and Warwick Fox, are premised on the belief that an ethic rooted in the principles of deep ecology implies very different and broader ethical obligations than can be invoked by an anthropocentric ethic.[16] For example, it would be logically inconsistent for a non-anthropocentric ethical theory

incorporating a biocentric or ecocentric egalitarian axiom to accept moral obligations being extended to **particular** nonhuman entities (e.g. the Lower Carmanah Valley, the Grey Spotted Owl, or even an ecosystem) while arbitrarily omitting others, perhaps because of poorer mass appeal (e.g. swamps or mosquitos). From the perspective of deep ecology, such a patchwork pluralism could, and arguably does, result in political actions with the propensity to save the cute and cuddly Newfoundland seal pup while doing very little for the equally threatened but less aesthetically pleasing Everglades' Alligator. Thus, the deep ecologist could argue that within an anthropocentric value framework particular natural entities (e.g. forests, wildlife, plants, and even ecosystems) tend to become valuable solely in proportion to their beauty and rarity, and not through recognition of their own non-instrumental value existing beyond human concern. A contemporary social and political manifestation of this can be found on Canada's East Coast where there is presently a complete moratorium on cod fishing. Very seldom, if ever, does one hear someone express what a travesty over-fishing has been for the cod population in and of itself. The destruction of the cod and the threat to its species-survival is defined solely in instrumental human terms, in other words, in terms of the economic devastation affecting East Coast peoples and Canadians at large.

Although the preservation of wilderness and rare species is regarded by deep ecologists as a step in the right direction, ecologically and philosophically, they argue it is both erratic and

morally inconsistent because it is founded on exceptions (i.e. protection for particular species). These preserved species and/or tracts of wilderness, are "exceptions" in two ways. First, they survive. And second, they are tolerated within the pervasive instrumentalism of an anthropocentric ethic, but remain susceptible to future human need. Consequently, for the deep ecologist - "liberal environmental ethic" - is an oxymoron because it precludes, by definition, the necessity of a totalizing environmental perspective premised on 1) a non-anthropocentric meta-ethic, and 2) a biocentric (or ecocentric) egalitarianism -- both of which are argued to be essential tenets for ecological sustainability and inter-species justice.

To this point I have attempted to set some of the principle ethical and meta-ethical axioms of deep ecology against a backdrop of more traditional anthropocentric conceptions of humankind's relation to nature. The resounding ethical contention that has emerged focuses on deep ecology's fundamental belief that an environmental ethic cannot be grounded within an anthropocentric value theory because of the inherent bias in favour of human welfare. But, before simply proclaiming the need for a meta-ethical shift, one must further explore the way both anthropocentric and non-anthropocentric value theories come to understand what is valuable.

Ethical theories in general seem to involve two different formulations of "value." First, we speak of "values" as things

people have or hold. Usually, we speak of people having a "value system" or an "ethic" composed of various values which, under ideal circumstances, are internally consistent and under constant critical scrutiny. In this sense, the values we hold are the first principles of our moral being (e.g. all people's basic needs must be met) because we often refer back to them to explain or justify our actions. A second way we use the term "value" is in regard to the value something has. This seems to imply value in an "other", and often if this thing, or experience, is valuable in and of itself we describe it as having "intrinsic value".[17] Regarding nonhuman entities, there are two interpretations of intrinsic value: 1) the value of an entity is not dependent on a valuer; or 2) the entity in question can be intrinsically valuable in and of itself without necessarily being independent of a valuer. In other words, some entities can be intrinsically valuable to people without being objectively valuable in and of themselves. But, in both the first and second interpretations, objective things are, to varying degrees and for different reasons, valuable in and of themselves for what they are.

We often speak of works of art as being intrinsically valuable in both the above ways. In applying the first interpretation of intrinsic value to a natural nonhuman entity, Val Routley draws an analogy between the destruction of a great work of art and the destruction of a species. She argues:

> That some of the 'immensely complex and inimitable items produced in nature' have a non-instrumental value, just as a great painting has value 'apart from the pleasure and inspiration it brings to human beings'.[18]

Although this analogy carries an intuitively strong appeal, animal rights theorist Peter Singer points out that the value of a great work of art (Singer uses Michelangelo's *Pieta*) cannot have value independent of its being perceived and enjoyed. Singer uses a variation on the "last person" argument to support his case. He states:

> If, as philosophers are fond of asking, I were the last sentient being on earth, would it matter if, in a moment of boredom, I entertained myself by making a bonfire of all the paintings in the Louvre?[19]

If one excludes the chance of a visit from inter-galactic travellers, and accepts his death as imminent, then Singer concludes he has done nothing wrong. Thus, he advocates that Routley's analogy between the intrinsic value of a work of art and some of the "immensely complex and inimitable items produced in nature" is faulty, because works of art fail to be valuable in the sense Routley needs if she is to confer intrinsic value onto species. Singer goes on to state:

> There are those who take the opposite view, and I would agree that if works of art have intrinsic value, then it is plausible to suppose that species have too.[20]

Thus, by defining "intrinsic value" in an anthropocentric and subjective sense, Singer infers a necessary relationship between a subject and the "experience of value" in the natural world. In essence, he is arguing that if it is possible for a single nonhuman entity (e.g. Michelangelo's *Pieta* or a species) to have intrinsic value in the sense Val Routley describes, then **any** nonhuman entity could be said to have intrinsic value. In other words, Singer is not implying that a great work of art or a species cannot be

valuable in and of itself, but that it does not make sense to speak of this "value" independent of a valuer. The value of a "species" as raised by Routley's analogy is also problematic in a second sense, because it seems illogical for a species of plant or animal to be considered valuable in and of itself without first presupposing to some extent the intrinsic value of each individual member of that species.

In summary, what Singer's critique of Routley does not rule out is the possibility of a meaningful conception of intrinsic value capable of reflecting the intuition of "beyond-human-value" we experience in and through nature. Although it is highly problematic assigning intrinsic value to nonhuman entities (e.g. a work of art), Singer's objection still allows for the possibility that natural nonhuman organisms can be conceived as having intrinsic value in a sense in which other nonhuman entities (e.g. works of art) cannot.

Following from this discussion is a sense of the metaphysical complications involved in deciding what has intrinsic value, what does not, and most importantly, the criterion on which such decisions are to be based. Two main theoretical perspectives will be explored, both of which postulate how natural nonhuman organisms can come to have intrinsic value. The first perspective is divided into two approaches, the first of which argues by analogy that the "interest-principle" can be reconceptualized to include natural nonhuman organisms and thus provides a basis for their having

intrinsic value. This approach is informed by two competing meta-ethics -- Taylor's non-anthropocentrism and Robin Attfield's weak anthropocentrism. The second approach argues that extending the interest principle to some sentient nonhuman organisms is potentially possible, but that extending it to include all natural nonhuman organisms is philosophically misguided. Theorist Joel Feinberg's arguments will form the basis of this second approach. The second perspective to be examined can be termed the "Love of Nature" hypothesis which attempts to ground the intrinsic value of natural nonhuman entities (e.g. trees, or mountains) in human love and altruism.[21] This perspective is advanced by Mark Sagoff and derived from Aristotle.

Traditionally within anthropocentric-based ethics, the "intrinsic value" something holds (e.g. trees) can be expressed as a direct correlate of the value of the human experience associated with that particular thing. Only human beings are considered intrinsically valuable, and therefore they represent the sole reference point for value in the world. For example, a human-welfare ecologist could argue that the human experience of a 700 year-old Sitka spruce is intrinsically valuable for reasons of cultural significance, biodiversity or aesthetic beauty, without necessarily accepting the more problematic meta-ethical statement that the tree is valuable independent of any valuer. From the perspective of a non-anthropocentric value theory this interpretation of intrinsic value is simply a veneered expression of instrumental value, because the value of natural nonhuman

organisms ultimately remains dependent on the subjective experience of a human "valuer". To the contrary, some non-anthropocentrists maintain that intrinsic value is actually a necessary precondition for human experiential value, and thus to some extent, intrinsic value must precede instrumental value.[22]

Value theories such as Taylor's biocentrism or Rolston's ecocentrism offer different approaches to non-anthropocentrism but both postulate that natural entities hold value in an objective sense, without the need for mediation by human valuers. Rolston states:

> The cardinal on the wing and the *Trillium* in bloom have grace, colouration, symmetry that are structurally related to flight, flowering, and life cycles. Is the beauty here only by our selecting, not in our sensing valuative overtones that go with biological function?[23]

Rolston's allusion to objective value in nature is perhaps more fully realized when he states:

> When we value a thrush singing in the wild, we have a sense of entrance into events ongoing independently of our subjective presence.[24]

One can venture to say that for ecocentrists like Rolston, intrinsic value exists in natural nonhuman organisms because they are participants in the all-encompassing value of the "whole", and thus are valuable independent of any human need and/or human perception.

Biocentrist Paul Taylor goes to great lengths to convey the importance of "value in nature" to the enterprise of deep ecology. In so doing, Taylor makes three distinctions within what I earlier defined more generally as "intrinsic value". Regarding his

understanding of "intrinsic value", Taylor states:

> When humans or other conscious beings place positive value on an event or condition in their lives which they directly experience to be enjoyable, in and of itself, and when they value the experience (consider it to be good) *because* of its enjoyableness, the value they place on it is intrinsic (his emphasis).[25]

Thus, Taylor's understanding of intrinsic value is anthropocentric, essentially psychological, and places value in the capacity of human beings to enjoy human experiences in and of themselves. Taylor creates a second category of human-based value, "inherent value", which distinguishes a more collective, socially-based sense of value relative to his more subjective "intrinsic value". Taylor defines inherent value as:

> ...the value we place on an object or a place (such as a work of art, a historical building, a battlefield, a "wonder of nature", or an archeological site) that we believe should be preserved, not because of its usefulness or its commercial value, but simply because it has beauty, or historical importance, or cultural significance.[26]

Both Taylor's conceptions of value, "inherent" and "intrinsic", are compatible with an anthropocentric value framework, and thus either could ground an environmentalism such as human-welfare ecology and/or preservationism. Although these two conceptions of value refer to different things (i.e. intrinsic- enjoyable human experiences based on events or conditions; and inherent- group experience of place or object of social/cultural value), they are both rooted in human experience and can be encompassed within my second interpretation of intrinsic value outlined earlier (i.e. "something can be valuable in and of itself without being independent of a valuer").

The first interpretation of "intrinsic value" I advanced earlier, and the sense implied by Val Routley in her analogy between a work of art and nature (i.e. "something is valuable in and of itself independent of a valuer"), corresponds to what Taylor terms "inherent worth". He defines "inherent worth" as:

> A state of affairs in which the good of X is realized as better than an otherwise similar state of affairs in which it is not realized (or not realized to the same degree), (a) independently of X's being valued, either intrinsically or instrumentally, by some human valuer, and (b) independently of X's being in fact useful in furthering the ends of a conscious being or in furthering the realization of some other being's good, human or nonhuman, conscious or nonconscious.[27]

Within Taylor's biocentric ethic, the concepts of intrinsic/inherent value and inherent worth flag two parallel meta-ethics. Intrinsic and inherent value are grounded within an anthropocentric value framework and inherent worth within a non-anthropocentric value framework. These two value frameworks are parallel in that the latter cannot be derived from either of the two former. Thus, adopting a biocentric ethical perspective recognizing the "inherent worth" of nonhuman organisms requires a meta-ethical shift from an anthropocentric value theory to a life-centred, or biocentric, value theory. Taylor states:

> From the standpoint of a life-centred theory of environmental ethics...our duties toward nature do not stem from the duties we owe to humans. Environmental ethics is not a subdivision of human ethics.[28]

The meta-ethic underlying the non-anthropocentric value framework advanced by Taylor and other deep ecologists (e.g. Naess) as the proper foundation for an environmental ethic is based on two related yet categorically distinct claims. First, it involves a

reconceptualization of the capacities/characteristics necessary for moral considerability. In the case of Taylor, this involves a reconceptualization of the interest-principle to recognize the "inherent worth" of all natural nonhuman organisms. And second, having become full members in the "Earth's Community of Life", all natural nonhuman organisms become *as* morally significant as human beings.[29] It will be argued that the first claim cannot be substantiated within a traditional anthropocentric value theory, but that it can be accommodated within the Greater Value Thesis. It will also be argued that the second claim is highly problematic within *any* workable value framework.

Taylor seeks to establish the intrinsic value of natural nonhuman organisms through an analogy to humans having interests, purposes, preferences and aims, and consequently, "a good that can be frustrated or furthered".[30] Taylor must define "interests" very broadly if he is to maintain that all natural nonhuman organisms can be conceived as having "a good of their own", and thus value unto themselves. Therefore, although natural nonhuman organisms may not hold interests in the same sense as humans, Taylor argues that they have a definable good which other nonhuman entities such as rocks do not.[31] Taylor states:

> Even when we consider such simple animal organisms as one-celled protozoa, it makes perfectly good sense to a biologically informed person to speak of what benefits or harms them, what environmental changes are to their advantage or disadvantage, and what physical circumstances are favourable or unfavourable to them. The more knowledge we gain concerning these organisms, the better we are able to make sound judgements about

> what is in their interest or contrary to their interest, what promotes their welfare or what is detrimental to their welfare.[32]

Taylor argues that this objective life-based conception of interests provides the framework through which the notion of a natural nonhuman organism having a "good-of-its-own" becomes meaningful, and thus can be said to have intrinsic value.[33] As Taylor directly acknowledges and draws on, within traditional ethical theories there is a well-established link between individuals having clearly defined interests and their having intrinsic value.

Feinberg holds a perspective antithetical to Taylor's, in that he doubts whether natural nonhuman organisms and/or systems have a good of their own, at least in the way Taylor, and sometimes Rolston, maintain they do. Feinberg does appear to acknowledge that natural nonhuman entities such as trees are not "mere things" when he states:

> Plants, after all, are not "mere things"; they are vital objects with inherited propensities determining their natural growth. Moreover we do say that certain conditions are "good" or "bad" for plants, thereby suggesting that plants, unlike rocks, are capable of having "good".[34]

Although bearing similarity to the line of argument Taylor uses when seeking to ground his claim that natural nonhuman organisms have intrinsic value, Feinberg really only assumes this position as a means to critique it.

Feinberg focuses on the definition of "good" invoked when one speaks of plants having a "good" of their own, and argues that such

talk is misleading. He argues, for example, that paint can be believed bad for the walls of a house in the absence of a belief that the walls have "a good or welfare of their own".[35] His opposition hinges on the idea that simply because one can define that something is in the interest, or good, of a nonhuman entity (living or non-living) does not necessarily make the entity intrinsically valuable. For example, one could also argue that it is in the interest of ungalvanized steel left exposed to the elements to receive a fresh coat of paint once every couple of years, but this does not imply that the unprotected steel is valuable in and of itself, or beyond its instrumental value to humans. As Attfield points out in "The Good of Trees", the basic premise behind Feinberg's opposition to trees or plants having a good of their own is that they "do not have wants or goals, and thus cannot *experience* satisfaction or frustration, pleasure or pain" (my italics).[36] Feinberg goes on to state:

> Why then do I deny them (trees, plants) the status of beings with interests of their own? The reason is that an interest, however the concept is to be finally analyzed, presupposes at least rudimentary cognitive equipment (my addition).[37]

Hence, in being founded on desires or wants, Feinberg's conception of interests denies intrinsic value to non-sentient organisms.

These two different conceptions of "interests" attributed to Taylor and Feinberg, reflect mutually exclusive value theories. Although illuminating problems within theories of deep ecology, the narrow human interest-based conception of interests advanced by Feinberg is itself problematic. A principal point of contention in

Feinberg's theory revolves around his sharp distinction between sentient beings and non-sentient "mere things". First, Feinberg's conception of interests seems to based on a faulty analogy. In critiquing what he presents as the "hard case" for the extension of the interest-principle to include natural, nonhuman organisms (essentially Taylor's position), Feinberg focuses on "needs". As Feinberg acknowledges the word "need" is a highly ambiguous term, but in attempting to sort out this ambiguity, he characterizes the needs of plants as analogous to "the pseudo-needs of mere things". In keeping with the spirit of his analogy comparing the good of a plant to the good of a wall, Feinberg states in "The Rights of Animals and Unborn Generations":

> To be sure, we can speak even of mere things as having needs too, but such talk misleads no one into thinking of the need as belonging, in the final analysis, to the "mere thing" itself.[38]

Here Feinberg outlines that where a "mere thing" is concerned our attitudes of sympathy or reproach regarding the thing refer not to the thing itself, but to the people to whom the thing belongs. Thus, for example, if one states that a neighbour's house is in need of repair, one is not implying that it is to the benefit of the house that it be repaired, but that it is to the benefit of the owners, and/or the tenants, inhabiting the house. If our neighbour lost her job and has been unemployed for the past year, then the sympathy (if sympathy was fitting) invoked by seeing the house in poor repair would be based on her *projected* human needs and not on the needs of the house.

The analogy employed by Feinberg makes sense when applied to

"mere things", such as houses, however it is problematic when employed to dismiss claims that natural nonhuman organisms can have interests. Where Feinberg is mistaken is in maintaining that trees have interests and needs in the *same* sense as houses and cars. He attempts to justify his position through further reference to the ambiguity surrounding the term "needs". Feinberg states:

> To say that *A* needs *X* may be to say either: 1) *X* is necessary to the achievement of one of *A*'s goals, or to the performance of one of its functions, or 2) *X* is good for *A*; its lack would harm *A* or be injurious or detrimental to him (or it).[39]

Feinberg expands on his first need-statement by adding that it is "value-neutral", and thus does not comment on the value of the goal or function in progress.[40] Conversely, he states that his second need-statement commits one to a value judgement about what is in the long-term interests of *A*. Thus, in this case, *A* must have a "good of its own" in that its interests can be benefited or harmed. Feinberg states:

> A being must have interests, therefore, to have needs in the second sense, but any kind of thing, vegetable or mineral, could have needs in the first sense.[41]

Thus, for Feinberg, non-sentient organisms can only have needs analogous to the needs of cars. Accordingly, one fills a car with gas and oil and a plant with water and sunshine. In performing these actions human beings provide cars and plants with what each needs to carry out their respective functions. These "functions", Feinberg argues, are "assigned by human interests and not their own".[42] According to Feinberg, the reason we perceive the needs of trees to be different than cars is not based on rational

assumptions, but is the result of confusion surrounding the meaning of the term "need" and the personification of plants through botanically-based metaphors such as "flourishing".[43] Is Feinberg right? Is Taylor completely unfounded in maintaining that natural nonhuman organisms can have interests, and thus a good of their own?

If one begins with the analogy set up by Feinberg wherein the needs of cars correspond in kind with the needs of trees, then one can begin to deconstruct his strong anthropocentric conception of interests. In summary, Feinberg's argument is that interests are comprised of desires and wants, and thus sentient or non-sentient organisms which lack the conative abilities to realize their desires or wants by definition can have no interests.[44] The power of Feinberg's analogy is centred in his definition of "interests". One can concede to Feinberg that "plants lack beliefs and desires", but at the same time emphasize that "beliefs and desires" do not actually comprise interests.[45] In so doing, one brings into question the necessity of linking interests and conation.

Taylor's broad conception of interests provides a counter-example to the narrow sense advanced by Feinberg. Taylor has replaced the notion that all natural nonhuman organisms must have the conative ability to realize "purposes and aims" to be considered interests-holders, with the broader conception that because a nonhuman organism has teleologically defined biological interests it has a "good of its own" which can be benefited or harmed. Thus, for Taylor a "mere thing" such as a rock cannot have

value because it fails to have interests that can be benefited or harmed.

The conception of interests at the root of Feinberg's analogy between non-sentient organisms and "mere things" is suspect in at least one fundamental way -- a natural nonhuman organism is not a nonliving, human creation of metal, plastic, and rubber. On the contrary, a non-sentient organism is a teleological centre of life which functions in terms of fulfilling the capacities of its kind, and only *coincidentally* functions in terms of fulfilling the interests of humankind (unless perhaps genetically altered to do so, e.g. rust-resistant wheat, or coloured cotton). Metaphorically speaking, a car is only a teleological centre of life when it is being driven by a human being.

This fundamental difference is best illustrated through a scenario. Imagine a car is being driven down a country road when, coming over the crest of a hill, the driver suddenly swerves to miss a dog. In swerving, the driver loses control and crashes the vehicle into a large red maple. The car is totally destroyed and the driver is taken to hospital with non-life-threatening injuries. The car and the tree remain at the scene of the accident. A great deal of bark has been stripped away where the car came in contact with the tree, and one can reasonably assume that the ability of the tree to function has been impaired. Within this scenario, can it be maintained, as Feinberg believes, that the tree has no "good of its own" and that its functions are extrinsicly "assigned by human interests" and not by the tree itself?

Regardless of any coincidental human interests (e.g. someone desiring to save the tree because it shades their house), and accepting that the tree is not too severely damaged, it will begin to heal itself and continue to live. Although it would seem absurd to argue that the red maple has been *wronged* in any substantive sense by the driver of the car, it would seem equally absurd to deny that the process of self-renewal, or self-preservation, inherent in the tree's very nature does not in some way reflect the realization of the tree's interests independent of any human interests, or benefits. If at all able, the tree will simply go about realizing the natural teleology that it is genetically programmed to operate in terms of, regardless of any extrinsic teleology humankind might project onto it. If the good of a tree in itself is defined solely by its benefit to humankind then one would have to contend that it was to the benefit of this particular tree to have been struck by the car, thus rendering its ultimate purpose synonymous with that of a guardrail.[46] Although the tree may have acted as a guardrail, perhaps preventing the car from hitting a house, this in no way implies that it is in essence a guardrail. Furthermore, if one were walking by and recognized that the tree would not likely survive its injuries, one could decide to act for the tree's "sake". In other words, one could opt to help the tree realize, or regain, its potential through treating its wounds with "tree tar" -- a protective coating used to keep disease and pests from infiltrating the living core of the tree. Feinberg might argue that one could also act for the "sake" of the car

through restoring it to its past potential (i.e. new, or working condition). I would point out, however, that "by design" a car is created to carry out certain predetermined functions and cannot truly be *aided* in recovering its past potential (i.e. prior to the accident). Instead, a car is simply "fixed"; in fact it makes very little sense to speak of a wrecked car "recovering" (unless perhaps metaphorically, as Feinberg believes is the case with trees and plants). Furthermore, a skilled autobody repairperson can return the car to its original condition and potential, but even if the tree is aided in its recovery it can never be returned to its original condition, and arguably might never regain its original potential (i.e. it might eventually succumb to infection and die). The point is that natural nonhuman organisms and nonliving "mere things" cannot be said to have the same types of "needs" unless moral agents respond to them and treat them in the same way. In choosing whether to fix the car or treat the tree, a person with scientific understanding regarding the tree's condition and with mechanical understanding regarding the car's condition, would decide to aid the tree first because the quick application of tar may increase its probability of survival. On the other hand, the car could be repaired when time allowed without it suffering irreversible damage.

Regarding the growth and survival of non-sentient organisms, Feinberg states:

> unless the growth and survival of trees are matters of human concern, affecting human interests, practical or aesthetic, the needs of trees alone will not be the basis of any claim of what is "due" them in their own right.

> Plants may need things in order to discharge their functions, but their functions are assigned by human interests, not their own.[47]

In speaking about "what is 'due' them in their own right", Feinberg seems to imply that his conception of interests is largely premised on what can and cannot have rights.[48] Perhaps Feinberg's motivating premise is that because natural nonhuman organisms cannot be holders of rights, they cannot be conceived as holding interests in any meaningful sense either. It does not seem inconsistent, however, to maintain that natural nonhuman organisms can have interests and thereby moral considerability without advancing that they have "rights" in the sense that specific duties are "owed" to them, or that they are as morally significant as humans. When one speaks of "rights" one seems to be operating more in the realm of "moral significance", which involves the comparative weighting of the interests of different moral subjects. The sense of inadequacy accompanying Feinberg's narrow definition of interests is also partially the result of a truism which it yields, namely -- "it is in the interests of human beings that natural nonhuman organisms (e.g. trees) can repair themselves and continue to live". Rudimentary science tells us that it is in the interests of humans that trees survive, heal themselves, and propagate, and in so doing, continue converting carbon-dioxide to oxygen. But it simply does not follow as Feinberg maintains, that trees repair themselves in terms of an extrinsic teleology based exclusively on human interest and human need.

In summary, there are two inter-related reasons why Feinberg's

conception of interests must be rejected. First, from a social/political perspective it represents the traditional Dominion theory of value that underpins the majority of western ethical, political and economic thinking, and which is moving us ever closer to ecological collapse. Second, at the level of value theory, Feinberg's traditional anthropocentric conception of interests might allow for the inclusion of the interests of some higher-level sentient nonhuman beings, but it arbitrarily relegates all natural non-sentient organisms to the status of "mere things". A status which one can sense even Feinberg himself is not entirely comfortable with.[49]

Paralleling Taylor, I have argued by analogy for an extension of the interest-principle to include natural nonhuman organisms, and have argued against the exclusive human-based concept of interests advanced by Feinberg. But it could be contended that if one advocates the reconceptualization and extension of the interest-principle to include natural nonhuman organisms, then one is also advocating the adoption of a non-anthropocentric value theory. According to the tenets of Taylor's biocentrism, or those of deep ecology in general, it is a necessary but not a sufficient condition of a non-anthropocentric value theory that natural nonhuman organisms and/or ecosystems are morally considerable. In order to operate within a non-anthropocentric framework, one must argue not only that natural nonhuman organisms and/or ecosystems can have intrinsic value and thus are morally considerable, but

also that they are *as* morally significant, or *as* valuable, as human beings. Whereas "moral considerability" essentially determines whether or not the person, thing, or nonhuman organism in question can be conceived of as a "moral subject", in the words of Kenneth Goodpaster, "moral significance" aims at "governing *comparative* judgements of moral "weight" in cases of conflict" (his emphasis).[50]

Another way of envisioning this distinction between moral consideration and moral significance can be expressed in terms of a natural nonhuman organism having a "good of its own" and its being considered "good".[51] The principal problem associated with adopting a biocentric, or ecocentric, egalitarianism is that the meta-ethical shift into non-anthropocentrism dissolves the distinction between moral considerability and moral significance. Consequently, to maintain consistency within biocentric or ecocentric egalitarian ethics, the deep ecologist is forced to support many polemic conclusions. The Human Immune-Deficiency Virus (HIV), for example, is a natural nonhuman organism with a "good of its own", and thus under a biocentric egalitarian ethic it is (to some degree) morally significant. Within a weak anthropocentric value theory (a.k.a. The Greater Value Thesis) as has been argued for above, one can consistently maintain that HIV is a natural nonhuman organism with interests and thus a "good of its own", thereby qualifying it for moral consideration, without having to defend the absurd position that it has *any* moral significance when its interests conflict with those of humans.

In arguing that natural nonhuman organisms have interests, one is maintaining that it is *conceptually* possible for an organism to be meaningfully considered a moral subject. Its moral subjecthood is based on the premise that it has a "good of its own" which can be benefited or harmed by the actions of moral agents. But whether the *normative* question "Is this particular organism worthy of moral significance?" is true, comprises a separate and secondary question which does not logically follow from a natural nonhuman organism actually having interests and "a good of its own".[52]

Deep ecologists could argue that without some form of biocentric egalitarianism through which natural nonhuman organisms can gain moral significance, there can be no meaningful representation of the interests the "Greater Value Thesis" argues organisms have. Thus in practice, human domination of nature would remain unchallenged and natural nonhuman moral subjects would continue to have their interests unjustly violated. Subsequently, human action would continue to result in the eradication of nonhuman life.

Earlier it was stated that Taylor and other deep ecologists believe that a "non-anthropocentric value theory implies very different and broader ethical obligations than can be invoked from an anthropocentric value theory". One of these "broader ethical obligations" is that in some situations were the interests of natural nonhuman organisms conflict with the interests of humans, the interests of nonhumans would, and *should*, triumph. A fringe minority of deep ecology proponents such as activist Dave Foreman,

formerly of "Earth First!", have gone as far as to advocate that in some cases the interests of natural nonhuman organisms and/or ecosystems should even trump basic human needs. For example, in regard to the threat human overpopulation poses to the natural world, Foreman once remarked that it is better to leave Ethiopian children to starve than:

> save these half dead children who will never live a whole life. Their development will be stunted.[53]

I do not want to portray Foreman as spokesperson for the deep ecology movement in general, because both Fox and Naess (and even Foreman) have advocated that if faced with the problem of hungry children "humanitarian action would be a priority".[54] But in one sense, Foreman's position represents the logical extension of deep ecology's ethical commitment to a biocentric, or ecocentric, egalitarian axiom. If *equal* "inherent worth", or "intrinsic value" among human and nonhuman organisms is to be truly meaningful, then on some level one is left to morally justify feeding the starving if such actions threaten the existence of other living organisms and/or ecosystems. Regardless of whether or not humankind eventually comes to see itself as living within nature, humankind will always remain dependent on the destruction of natural nonhuman organisms and/or the disruption of ecosystems for survival. As a result, Taylor and other deep ecologists who adopt a non-anthropocentric-based egalitarianism, are left with enormous practical problems when confronted with how to prioritize and regulate the obligations of moral agents within a greatly expanded pool of moral subjects commanding *equal* moral significance.

At the level of basic human needs Taylor's biocentric egalitarianism also becomes embroiled in moral conflict. For example, Taylor must maintain that because carrots and chickens are of equal "inherent worth" (moral significance), the killing of carrots and the killing of chickens require equal justification.[55] Thus, *prima facie*, a moral dilemma results whereby not even veganism is morally justified human behaviour. This foreshadows the magnitude of Taylor's problems because human beings, in acting in accordance with their own most basic interests, are unable to act in a morally consistent manner. In the final chapter of *Respect for Nature* entitled "Competing Claims and Priority Principles", Taylor works to resolve this problem through laying down guidelines by which the conflicts between the good of humans and the good of nonhumans are to be adjudicated. The methodology which Taylor adopts for adjudication will not be explored here, but bringing to light Taylor's practical moral problems helps portray how some proponents of deep ecology (e.g. Foreman) have turned biocentric egalitarianism into anti-humanism and misanthropy.

Let us return to the second perspective, which I termed the "Love of Nature" hypothesis, and contrast it with the extension of the interest-principle to determine which one provides the strongest argument for natural nonhuman organisms having intrinsic value. As with the argument for an extension of the interest principle to include all natural nonhuman organisms, the "Love of Nature" hypothesis is rooted in the thought of Aristotle. The

former is underpinned by the Aristotelian principle that the good life for a living organism depends on the fulfilment of its nature, and the latter on Aristotle's notion of moral altruism, wherein love seeks benefits not only for itself but also for its object.[56]

Mark Sagoff is one advocate of the "Love of Nature" approach to grounding non-instrumental value in nature. Sagoff claims that this approach to "value in nature" represents a form of "weak anthropocentrism", and cites the thought of American preservationist, Aldo Leopold, as an early harbinger. Leopold argued that the love, admiration and respect many people feel for the natural world should be reflected in land use and environmental policy.[57] Sagoff notes that the United States' "National Environmental Policy Act" (NEPA) of 1969 advocates a Leopold-based position regarding the aesthetic and ethical relations between humankind and nature.[58] Regarding Leopold's position, Sagoff states:

> Love, admiration and respect are human values, of course, but they do not necessarily involve human welfare. Rather, these values (although they arise in human beings) may be directed to the well-being and integrity of the rest of nature. Values such as these engender a widely shared attitude of aesthetic contemplation and moral altruism, for example, towards other species, for love typically seeks benefits not for itself only but also for its object.[59]

On Sagoff's interpretation of Leopold, the reverence and respect people feel for nature endows nature with intrinsic value. Sagoff contrasts this position with the views of an early American conservationist, Gifford Pinchot. Pinchot's conservationism was

based on the strong anthropocentric stance that only human welfare has intrinsic value, and thus only human welfare is valuable in and of itself.[60] Pinchot states:

> The first great fact about conservation, is that it stands for development.[61]

Sagoff maintains that Pinchot and Leopold both hold that only human beings have values. But, whereas Pinchot's position is that nothing in nature can be valuable in and of itself, Leopold argues that nature as an object of reverence, love and respect "itself has a moral worth and therefore should be protected for its own sake and not simply for the 'satisfactions' or 'benefits' it offers human beings".[62] Cast in this light, the Leopoldian position represents another approach to a weak anthropocentric theory of environmental ethics. As portrayed by Sagoff, the source of Leopold's conflict with Pinchot is not tied to the proper meta-ethical grounding for an environmental ethic, but to "what is valuable" within an anthropocentric ethic, and "why?".[63]

There is an intuitive attraction to Sagoff's presentation of Leopold's belief that the intrinsic value of natural nonhuman entities can be grounded in human love and altruism. Most of us can conjure up images of beautiful natural expanses like Banff National Park or the Mojave Desert within which we have spent time (or imagine we have spent time), and for which we have developed strong aesthetic sensibilities and deep reverence. As advanced by Sagoff, "reverence, love, and respect" for objects in nature, or for nature itself, represent the three dominant intangibles upon

which the environmental movement in general has been built. Sagoff admits that some theory is needed to explain the non-instrumental value human beings attach to objects in nature (e.g. Old-Growth Forests or the Grand Canyon), and the point to be decided here is whether the "Love of Nature" hypothesis is capable of providing a sound theoretical grounding for that "non-instrumental value".

The principal problem with Sagoff's approach to grounding "value in nature" is that it ultimately places the value of natural nonhuman organisms at the subjective mercy of individual valuers. Although one can point to historical evidence, or even legal precedents, to support the claim that people intrinsically value the natural world (perhaps citing an extensive parks system and endangered species legislation), conceptually this approach is problematic. That people intrinsically value nature is echoed in history and common language, but the empirical proof of such intrinsic value lies in the altruistic acts of humans. We often speak about a "love of nature", and both Canada and the United States have longstanding literary traditions which have sought to explore a sense of the religious, and/or a sense of awe, and/or a sense of mystery surrounding nature and humankind's place in it. Thus, the notion of "love of nature" did not arise with the environmental movement, but is as old as humankind itself. The relation between altruism and love is supported through observing human interaction with nature, wherein altruism can be viewed as an empirical manifestation of ones love, reverence and respect for a

particular object in nature, or nature in general. Therefore, an individual arrested for blocking a logging road in Clayoquot Sound, by willingly sacrificing many of her personal interests (e.g. money, time, career options, personal harm), is expressing her love, respect and reverence for nature through her altruistic act. When someone willingly sacrifices their personal interests for a particular entity (i.e. acts in an altruistic manner) this act, or series of actions, symbolically infuses the entity with intrinsic value. Thus, regardless of why an "Old Growth" forest has value for the individual willing to sacrifice her interests to save it, observers would not question that this act of altruism, either directly (i.e. love of nature, trees, biodiversity) or indirectly (i.e. concern for future generations), has as its object the "Old Growth" forest itself.

I do not wish to question that individuals, or groups of individuals, love and revere nature as intrinsically valuable, and perform worthwhile altruistic acts for the sake of its "good". Instead, what I would like to advance is that theoretically the "Love of Nature" approach to explaining value in nature is based on a theory of intrinsic value which is far too general and all encompassing to support the claim that "nature", in any meaningful sense, is more valuable than non-nature. This theory allows numerous non-natural entities to qualify as intrinsically valuable, and thus on some level they must be weighed against, and may even trump, the intrinsic value of natural nonhuman organisms and/or ecosystems.

The problem centres around using the willed actions of individuals, and/or groups of individuals, as the *conceptual* basis for a theory of value professing to explain how nature comes to have intrinsic value. It seems to beg the question -- "*what* is it about nature that makes it more intrinsically valuable than cars and televisions?" A response to this question might argue that a love of nature is based on nature's beauty, and/or in a spiritual sense of humankind's place within nature, and/or in nature as a source of biological diversity, and furthermore, that these experiences are somehow uniquely more satisfying than experiences associated with cars or televisions. But, whatever ones reasons for valuing and revering nature, within this theoretical approach "value in nature" ultimately rests with the individual valuer, or as a shared value within a community of valuers.

I do not believe it mere coincidence that human beings value nature intrinsically. The admirable acts of altruism performed by environmentalists who actively defend the natural world's value are testament to the fact. Furthermore, there is some comfort to be taken in the social and political gains precipitating from increased public awareness of environmental issues -- arguably the direct product of this vocal and active group. But, the problem with grounding the intrinsic value of natural nonhuman organisms and/or ecosystems in human love and altruism, is that it subjectifies value to the point that what is considered intrinsically valuable becomes synonymous with what people are willing to sacrifice their personal interests to protect.

Consequently, this tells us nothing about the nature of the actions environmentally *unconcerned* individuals are morally obliged to exercise, except that all interests are best served by a social and political system that respects differing ideas regarding what is intrinsically valuable. In short, there exists no necessary correlation between altruistic acts of "love, reverence, and respect", and the presence of intrinsic value in natural nonhuman organisms, and/or ecosystems.

As implied, this theory of why nature is intrinsically valuable is not only applicable to nature. It could also apply to many other objects that a person, group, or society might value in and for themselves. Under this conception of intrinsic value for example, Toronto's Maple Leaf Gardens could be considered intrinsically valuable. Earlier I quoted Sagoff as stating, "Values such as these [love, admiration and respect] engender a widely shared attitude of aesthetic contemplation and moral altruism". One could consistently act in accordance with the notion of a "shared attitude of aesthetic contemplation" and intrinsically value Maple Leaf Gardens as strongly, and as justifiably, as an environmentalist might value a Sitka spruce or a rare ecosystem. This love and respect for the Gardens may have nothing to do with watching the Toronto Maple Leafs play hockey, it also may have nothing to do with the Gardens bringing people and their money to Toronto. Instrumental values aside, the Gardens may be valued by some individuals simply for architectural, and/or cultural reasons. Maybe some individuals see the Gardens as a

Canadian cultural icon -- the lightening rod of English Canada that, in the early years of the "Original Six" and television, united the country from coast to coast in the accomplishment of a common task -- cheering on the Leafs. Or, perhaps the Gardens is one of the last examples of depression-era stadium architecture left in the world.

The point is, that in accordance with this theory it is every bit as legitimate for a person, or a group of people, to desire to preserve Maple Leaf Gardens as a national historic site and save it from demolition, as it is for a person, or group of people, to desire to save Clayoquot Sound from being clearcut. It is conceivable that some people might pool their entire savings to launch a "Save the Gardens Fund" only to lose everything because of powerful money interests, or City Hall. These same people could then chain themselves to the Garden's doors just as the wrecking ball begins to swing. Is one to maintain that Maple Leaf Gardens is not as intrinsically valuable to these people as Clayoquot Sound is to an environmentalist? The Sagoff approach to intrinsic value needs to maintain this very contention, but ultimately fails to provide a strong basis as to how and why it is necessitated.

What Sagoff's theory must confront is a problem indirectly raised earlier by Peter Singer's "last person" argument. Singer argued that if the last person on earth were soon going to die and she made a fire of all the paintings in the Louvre to entertain herself, she would have done nothing wrong. Attfield alters Singer's argument in that he substitutes the last Dutch elm on

earth for the paintings in the Louvre; otherwise all aspects of Singer's "last person" argument remain the same. Attfield's thought-experiment differs in that he argues that the world would be poorer if the last person was to cut down the Elm, because she would be destroying the chance of a living entity to "renew the stock of its own species".[64]

If we import Sagoff's conception of "value in nature" into this context, one cannot draw the conclusions of either Singer or Attfield. A direct consequence of Sagoff's conception of intrinsic value is that because there is nothing valuable in the object of love in and of itself, all objects of human love and altruism are of equal intrinsic value. Consequently, the only differences between the various objects of human love, reverence and respect are ultimately those that arise with individual preferences. Thus, in accordance with the Sagoff conception of "value in nature", one cannot comment on whether cutting down the last Elm would be right or wrong, because it would be entirely dependent on the preferences of the "last person". If the "last person" viewed the Elm as an object of love and revered it enough to let it stand, then hopefully it would "renew the stock of its own species". If however, the "last person" preferred to burn the tree and keep the paintings, this would also be morally justified under the logic of the Sagoff/Leopold approach. In essence, because the Sagoff/Leopold approach defines intrinsic value in accordance with how individuals, or groups of individuals, act or have historically acted relative to some natural nonhuman organisms and/or ecosystems

(e.g. Clayoquot Sound), one can say that this expression of "value in nature" is predominantly *descriptive*. In other words, the only logical conclusion is that whatever people love, revere, and respect, is intrinsically valuable.

In conclusion, it has been shown that it is well within the realm of reason to hold that natural nonhuman organisms (both sentient and non-sentient) can be conceived as having interests, and hence moral considerability. This essentially implies that natural nonhuman organisms are moral subjects and deserve consideration in any human deliberation which could impact negatively on their interests. But unlike a non-anthropocentric environmental ethic, it does not imply that in cases of conflict their interests should always be weighted equally with human interests, even though in most cases basic nonhuman interests (e.g. species survival) should legitimately trump non-basic human interests (e.g. another golf course).

Weak anthropocentric value theory is much more beneficial to natural nonhuman organisms grounded in the Greater Value Thesis than in the Sagoff/Leopold approach. Through the extension of the interest-principle, GVT provides a well-established and quasi-objective criteria which, through analogy, allows for the circle of moral considerability and human responsibility to be expanded to include natural nonhuman organisms. Most importantly, GVT provides the necessary theoretical basis for addressing the present imbalance in inter-species justice.

CHAPTER TWO

Upon leaving Chapter One the pending question is, if natural nonhuman organisms can be conceived as having interests and "moral considerability", then what degree of "moral significance" should different organisms be granted, and most importantly, for what reasons and under what circumstances? Taking into consideration the complexity and enormity of this question, the overall task of this chapter will be to try to develop *general* principles for adjudicating conflicts between the interests of humans and the interests of natural nonhuman organisms, both sentient and non-sentient.

Deep ecologists would maintain that the weakening of anthropocentric value theory resulting from the adoption of the "Greater Value Thesis" ("GVT") simply entrenches the environmental status quo. In other words, under "GVT" human beings retain the moral imperative to trump the interests of, and override any intrinsic value accorded to, natural nonhuman organisms. As a result, if the organisms are instrumentally valuable to humans (e.g. a 1000 year-old Sitka spruce for high-grade lumber), or conversely, lack any instrumental value to humans (e.g. the snail darter), then there is a strong tendency to overlook their individual and/or species interests, and/or survival. For example, the deep ecologist might argue that the extirpation of Rain Forests will continue in the absence of a biocentric or ecocentric egalitarian ethic, because any intrinsic value accorded to natural nonhuman organisms as a result of their having interests is

ultimately derived from human interest. Thus, although "GVT" represents a progressive approach to understanding environmental value, from the deep ecology perspective its ability to ground an environmentally sustainable theory of human action is seriously suspect.

The interests-based approach to environmental value advanced in the first chapter presupposes that it is wrong to unjustly deprive natural nonhuman organisms of the opportunity to fully realize the natural potential that is in keeping with their kind (species). Although this premise could be viewed as strongly non-anthropocentric, "unjustly" flags an important qualification. Re-conceptualizing "interests" to include natural nonhuman organisms in no way implies that "like" interests (e.g. biological survival) shared by various species of organisms command equal moral significance, or confer *equal* intrinsic value on both parties in conflict. As shown in Chapter One, advocating that the interests of humans and natural nonhuman organisms are of equal worth produces counter-intuitive resolutions.[65]

Thus, as Philip Devine points out in "The Moral Basis of Vegetarianism", if the "like" interest of both humans and plants in acquiring sufficient water is weighted equally, then *equal* amounts of water should be allotted to each.[66] If humans and plants have equal moral significance, then they have a justifiable claim to equal amounts of water. Inevitably, both plants and humans do share a "like" interest in their need for water to survive, but any theory which would advocate the preceding conclusion seems

philosophically misguided and potentially misanthropic. Remembering, however, that plants do have interests and a "good of their own", then their interests, even in the preceding case regarding water allotment, are worthy of consideration even if their needs cannot be accommodated under certain circumstances. In other words, it is not that a plant has *no* significance and *no* entitlement to *any* water in *any* conflict with a human being regarding water allotment. Instead, the problem revolves around the degree of moral significance natural nonhuman organisms should be accorded within various contexts, *why* they should be accorded that level of significance, and *how* that significance impacts on human actions.

It was established in Chapter One that natural nonhuman organisms have interests and are morally considerable, or have moral standing, and consequently that their interests cannot be disregarded.[67] It was also argued however, that questions regarding a comparative framework for adjudicating between the interests of humans and natural nonhuman organisms constituted a separate issue. Kenneth Goodpaster was quoted as stating that moral significance "aims at governing *comparative* judgements of moral 'weight' in cases of conflict (his emphasis)".[68] He goes on to state:

> Whether a tree, say, deserves any moral consideration is a question that must be kept separate from the question of whether trees deserve more or less consideration than dogs, or dogs than human persons. We should not expect that the criterion for having "moral standing" at all will be the same as the criterion for adjudicating

> competing claims to priority among beings that merit that standing.[69]

To make both "GVT" and "moral significance" theoretically meaningful and useful, one needs a framework for determining when the interests of natural nonhuman organisms should be given priority over human interests in cases of conflict.

Let us begin by setting out the type of scenario that by the end of this chapter we would like to be able to resolve. Suppose, for example, that a severe drought was to hit Bigtime, Canada this summer, say akin to the droughts experienced in Southern California over the past couple of summers. The drought has severely limited the supply of fresh water in Bigtime and the City has decided to impose limits on the amount of water allotted to each household. The City retains a small percentage of its estimated reserves for its own use, safety purposes, and/or other emergencies.

Now let us suppose that five hundred new homes have been constructed in an estate-style subdivision around the periphery of Bigtime and all have backyard pools needing to be filled. Bigtime is under increasing pressure from the developers to provide them with enough water to fill all the pools, but the City had already decided to divert any "surplus" water to help ensure the survival of one thousand young Elm trees planted several years earlier by a local school. At City Council, attorneys for the developers argue that the homes are proving difficult to sell with no guarantees as to when the pools will be filled. The developers have looked into trucking water in from neighbouring provinces, but the cost would

be more than they can feasibly absorb. The lawyers also argue that the developers' economic loss combined with the loss in tax revenue to the City of Bigtime, far outweigh the minimal economic loss associated with replacing one thousand trees. In the end, the developers offer to pay for the planting of new trees where necessary, and the City agrees to divert "surplus" water their way. Has the City or the developers done anything *wrong*?

As long as all dealings between the City of Bigtime and the developers were above board, then within a traditional anthropocentric value theory it would seem that all corresponding obligations between the competing interests of opposing parties have been discharged. This conclusion seems to directly conflict with the conclusion of an earlier scenario in Chapter One wherein it was argued that independent of a tree's human utility (i.e. being used as a guardrail), it had interests of its own beyond any human interests assigned to it.[70] Thus, conceptually speaking, it was decided that a tree could be treated rightly or wrongly. The case of Bigtime and its developers creates a scenario wherein the interests of humans (e.g. profits, taxes) are in direct conflict with the survival interests of natural nonhuman organisms. Although this scenario is fictional, many parallel examples are common (e.g. the economic benefits of urban sprawl vs. the survival of various fauna and flora within that region, the quick economic gains implicit in clear-cut logging vs. the biological survival of various species of fauna and flora, the spraying of lawns with herbicides and pesticides for aesthetic purposes vs. the long-term

survival interests of plants, animals, and humans). We will return to the "Bigtime scenario" later, but first, if one wishes to claim that the City of Bigtime and its developers have improperly adjudicated this conflict, then one needs a moral framework to show that within this context the moral worth of trees is significant to the point that it requires human beings to bypass what is in their immediate interest.

One attempt at devising an ethical framework to deal with conflicts analogous to the one in Bigtime has been termed "Two Factor Egalitarianism" (TFE) by Donald VanDeVeer in his paper entitled "Interspecific Justice". VanDeVeer states:

> Two Factor Egalitarianism assumes the relevance of two matters: (1) level of importance of interests to each being in a conflict of interests, and (2) the psychological capacities of the parties whose interests conflict.[71]

VanDeVeer does not set out to resolve conflicts of interest between *all* natural nonhuman organisms and humans, but confines himself to the realm of "beings" (animals and humans), or more specifically, the interests of humans versus the interests of *sentient* nonhumans. For present purposes however, if one substitutes the more general categorization "natural organism" for "being" in (1) above, then one can expand the notion "level of importance of interests to each being" to "level of importance of interests to each natural organism" (i.e. human or nonhuman, sentient or non-sentient).

VanDeVeer moves on to delineate four basic types of potential conflicts of interest between human beings and nonhuman beings, or

in my expanded version, between humans and natural nonhuman organisms. In Figure 1.2 (next page) I have replaced VanDeVeer's original right column entitled "Animal Interest" with the broader "Natural Nonhuman Organism Interest", which subsumes the interests of both sentient and non-sentient organisms. Beyond this change, VanDeVeer's table is original.

Figure 1.2[72]

Human Interest	Natural Nonhuman Organism Interest
(1) Basic	Basic
(2) Basic	Peripheral
(3) Peripheral	Basic
(4) Peripheral	Peripheral

In regard to the second "factor" in "TFE", VanDeVeer states:

> ...the interests of beings with more complex psychological capacities deserve greater weight than those with lesser capacities -- up to a point.[73]

By definition, deferring to psychological capacities to resolve conflicts automatically excludes natural non-sentient organisms from any degree of significance in cases of conflict with humans. VanDeVeer must exclude the interests of all natural non-sentient organisms because he premises "psychological capacities" on a form of utilitarianism wherein the greater the psychological capacities of an organism the greater its potential for suffering, and

consequently, the greater one's duty to reduce its amount of suffering. And, seeing as plants cannot "suffer" (at least within "TFE" as established by VanDeVeer), their interests are not simply excluded but are non-existent. Thus, if "TFE" is to be useful in resolving conflicts between humans and all natural nonhuman organisms then some means other than "psychological capacities" will have to be introduced to adjudicate conflicts between the interests of humans and the interests of natural nonsentient organisms.

Although my aim is to modify "TFE" to include conflicts of interest between humans and *all* natural nonhuman organisms, I will begin by focusing primarily on the manner in which VanDeVeer envisions "TFE" resolving conflicts between humans and sentient nonhuman organisms.

It is strongly intuitive that basic human interests should necessarily and without exception trump the basic interests of sentient nonhuman organisms [(1) above], but VanDeVeer holds that this is not always the end-product of "TFE". He maintains that an important tenet of "TFE" is that it precludes *any* interest of *any* human morally outweighing *any* interest of *any* sentient nonhuman organism.[74] Consequently, he argues that the basic interest of a sufficiently developed sentient nonhuman (e.g. a chimpanzee) *could* take precedence over the basic interest of a human being with lesser developed psychological capacities. In regard to this

point, VanDeVeer states:

> An example where an 'under capacity' human is involved might be this. Suppose, contrary to fact, that an infant with Tay-Sachs disease could be saved from imminent death by a kidney transplant from a healthy chimpanzee at the expense of the chimpanzee's life; TFE prohibits this way of adjudicating the conflict of interests.[75]

The driving intention behind VanDeVeer's "TFE" is to develop a theory which does not create counter-intuitive resolutions to conflicts (as in the case of equal water for plants and humans), while avoiding charges of "speciesism" or "human chauvinism". Acknowledging that exceptions are possible in resolving a type-one conflict of interest between a human being and a sentient nonhuman organism, one can still assume that they will consistently be resolved in the favour of humans. Thus, a more typical example of a type-one conflict is: if a life-raft only has room for one, then one does nothing wrong in letting a dog drown to save oneself.[76]

In the case of a type-two conflict [(2) above], a basic human interest conflicts with a peripheral interest of a sentient nonhuman organism. VanDeVeer states that an example of such a conflict would be giving up one's career to move to a climate where one's dog would be happier.[77] The third type of conflict [(3) above], results when a "peripheral" human interest conflicts with the "basic" interest of a sentient nonhuman organism. An example of such a conflict might be using one's water allotment from the City of Bigtime to wash one's car, instead of watering one's dog.[78]

VanDeVeer's four types of conflicts are built on a division of

"interests" into two levels -- "basic" and "peripheral". This "division", however, becomes problematic upon closer analysis. To begin with, lumping the interests of humans and nonhumans into only two levels "basic" and "peripheral" creates an *extremely* general categorization.[79] For instance, if one looks at VanDeVeer's examples one can see that his portrayal of a basic human interest in a type-two conflict [(2) above] is *qualitatively* different than in a type-one conflict [(1) above]. Instead of a basic human interest pertaining solely to biological survival, VanDeVeer portrays a basic human interest as encompassing factors such as career, community, and economics. In essence, VanDeVeer seems to suggest that human psychological factors are as seminal to human survival as food and water, and thus, qualify as basic interests. It is certainly a truism that humans can suffer immensely from psychological trauma and, as a result, may care little for their biological sustenance unless some of their primary psychological needs are fulfilled (e.g. love, belonging, self-esteem, understanding, etc.). But if a basic human interest is left ambiguously defined, in that it can refer to either human biological survival and/or human psychological suffering, then it could be interpreted to mean that almost *anything* causing psychological dissonance could qualify as a basic human interest.

Different reasons can be offered for privileging human beings over sentient nonhuman organisms in cases of conflict, and in some cases such privilege is justified. VanDeVeer advances that humans should be privileged because they are "subject to certain kinds of

suffering that animals are not".[80] In defense of this claim he states:

> For example, humans are typically capable of suffering from the dread of impending disaster (e.g. death from terminal cancer) in a way that animals are not (e.g. a turkey will not be wary of impending Thanksgiving events).[81]

In one sense VanDeVeer's point is well-taken. However, is a loose fox in a turkey pen not perceived by the turkeys (and any human willing to watch) as an "impending disaster"? Regardless of how docile a turkey is, it would surely prove to be more concerned with its immediate future than VanDeVeer's example might suggest.[82] With this in mind, VanDeVeer is still justified in contending that human beings differ from sentient nonhuman organisms because of their ability to comprehend the future consequences of present events (e.g. premature death from contracting HIV). Thus, unlike the majority of sentient nonhumans, humans can suffer great psychological trauma in the present regarding events which will take place at some time in the future (e.g. death, loss of personal autonomy, etc.).[83]

Returning to the ambiguity surrounding what qualifies as a basic human interest, VanDeVeer recognizes this as problematic when he states:

> TFE is subject to a number of objections not yet considered, some of which are obvious and some of which are not...There is no precise way of determining which interests are basic, which serious, and which are more peripheral or how to rank these interests precisely. Similarly, no adequate account has been offered of how to determine levels of psychological complexity.[84]

In classifying conflicts VanDeVeer characterizes a type-two conflict as a basic human interest conflicting with a peripheral sentient nonhuman interest (See Figure 1.2), which he exemplifies as giving up one's career to move to a climate where one's dog would be happier.[85] Let us refer to this second level of basic human interest as a "basic$_2$" human interest. As advanced earlier, a different conception of a "'basic' human interest" is being invoked here than in a type-one conflict, because moving or not moving in no way directly threatens one's biological survival (although it *may* threaten one's psychological stability).

Staying with VanDeVeer's example, let us suppose that a well-established medical doctor in Florida owns a Siberian Husky. The dog does not enjoy the hot weather and tends to stay inside where the air-conditioning keeps things cool. As a result, the dog is overweight and rather lethargic, factors which may affect his/her longevity. There is little doubt that the Husky would probably be more at home in Whitehorse, Yukon where the average temperatures and long winters are more in keeping with the dog's "kind". Now assuming that the doctor did decide to move to Whitehorse for the dog's sake, and assuming this was her sole reason for leaving Florida, in no foreseeable way is the doctor's biological survival directly threatened.[86] It might be the case however, that after two months of winter darkness the doctor becomes manicly depressed and her health suffers as a result. In other words, the *quality* of her existence *may* suffer as a result of psychological factors relating to her new circumstances. It seems that some factor(s)

like this are what VanDeVeer has in mind here. In this case, the potential psychological suffering of the doctor justifies overriding any affect the hot climate might have on the dog's longevity. However, if the doctor's interests truly are basic, then it is a conception of "basic" concerned with psychological factors and not necessarily with human biological survival.

This definitional ambiguity regarding what is basic to humans and what is not has traditionally promoted unjust resolutions to conflicts wherein claims of human psychological suffering are routinely used to justify trumping the basic interests of natural nonhuman organisms, both sentient and non-sentient. The formalization of this type of conflict between humans and natural nonhuman organisms is best described as a $basic_2$ human interest conflicting with the basic interest of a natural nonhuman organism (in general, there is only one level of basic interest for natural nonhuman organisms -- biological survival). The introduction of this new type of conflict schematically transforms Figure 1.2 into Figure 1.3 (next page).

Figure 1.3

Human Interest	Natural nonhuman organism Interest
(1) $Basic_1$	Basic
(2) $Basic_1$	Peripheral
(3) $Basic_2$	Basic
(4) $Basic_2$	Peripheral
(5) Peripheral	Basic
(6) Peripheral	Peripheral

This "new" type of conflict [(3) above] helps externalize the ambiguity and potential ramifications regarding conflict resolutions that surround VanDeVeer's conception of a basic human interest. Furthermore, it also provides a more accurate categorization of the nature of the conflict between the interests of humans and those of natural nonhuman organisms in the "Bigtime" scenario, or other similar conflicts.

There is little doubt that many social and psychological factors are basic to the well-being of humans. However, what is at issue is the nature of the psychological factor considered basic, and the degree of moral relevance that different types of psychological factors should be allotted when in conflict with the basic interest of a natural nonhuman organism. Without first

determining what constitutes a basic$_2$ human interest the supposed neutrality derived from using psychological *capacities* as a second factor in resolving conflicts between humans and sentient nonhuman organisms, may be negated by an already implicit bias in favour of human psychological *needs*.

Thus, because basic$_2$ human interests are inadequately defined by VanDeVeer, scenarios can be envisioned which not only fail to fit into the types of conflicts VanDeVeer originally cites (see Fig. 1.2 & Fig. 1.3), but also fail to produce the results he intended -- namely, an anthropocentric theory of conflict resolution for humans and sentient nonhumans void of speciesism. For example, under which type of conflict would VanDeVeer subsume the interests of a cattle feedlot owner and the interests of the cattle in the feedlot?[87] In accordance with the two levels of interest I associate with VanDeVeer's use of "basic human interest", the interests of the rancher would be classified basic$_2$ because they are based on important social/psychological principles such as the exercise of individual autonomy, but they are not directly related to his, or anyone elses', biological survival. On the other hand, the interests of the cattle are best categorized as basic because their biological survival is ultimately at stake.

The above presents a case within which a basic$_2$ human interest conflicts with the basic interest of a natural sentient nonhuman organism. In addition, any curtailment of this basic$_2$ human interest stretches far beyond the rancher's immediate economic interests and personal autonomy to include the interests of those

who might enjoy the symbolic significance of a feast, and/or anyone who would suffer because cheap meat was no longer in abundant supply.[88] However, if these basic$_2$ human interests are not realized, the long-term potential for human beings to live meaningful and worthwhile lives is not in any serious peril. But on the contrary, if these basic$_2$ human interests are realized, it will lead not only to the suffering of animals on factory farms while they are alive, but inevitably will also lead to their premature death.

There are two possible responses to the above problem with "TFE", neither of which seems to avoid the charge of "human chauvinism". It could be argued that either: (1) the interests of the feedlot operator which I have classified as basic$_2$ are actually "peripheral" human interests, and thus the scenario I have created can be subsumed under a type-three conflict, or (2) that the outcome is justified because the feedlot operator and the public's interests (e.g. individual autonomy) are of far greater significance than the cattle's interest in avoiding suffering and premature death. This latter point is based on the premise that human being's have far greater psychological complexity than cattle. Thus, to be justifiable within VanDeVeer's utilitarian approach, it would have to be argued that the net suffering from curbing individual human autonomy is greater than the net suffering arising from the inhumane treatment and slaughtering of the cattle.

In regard to (1) above, besides the fact that VanDeVeer (or

anyone else) would not likely cast individual autonomy as a "peripheral" human interest, categorizing this scenario as a type-three conflict produces the opposite result to (2), and thus sentient nonhuman organisms become as significant as humans. In other words, resolutions could result wherein important human interests (e.g. individual autonomy) would be consistently sacrificed to the basic interests of sentient nonhuman organisms. Thus, taking (1) and (2) into consideration, it does not appear that VanDeVeer has truly escaped the charge of "human chauvinism" as he intended. To achieve this objective would seem to imply precluding *any* possibility that a sentient nonhuman organism's basic interest in avoiding suffering and premature death could be superseded by truly non-basic human interests such as Thanksgiving feasts.

This critique of VanDeVeer's "TFE" focuses on the ambiguity surrounding his presentation of a "basic" human interest, and is not to be interpreted as arguing that "interests" cannot, or should not, be broken down into the two general categories "basic" and "peripheral". In fact, it would seem that dividing interests according to their seriousness from the perspective of the interest-holder (i.e. "basic" = biological survival, "peripheral" = non-survival related interest) is a necessary point of departure. However, too liberal an interpretation of what constitutes a basic$_2$ human interest could easily be used to justify allowing unjust practices, as in the above "feedlot scenario", to continue unabated. It could result in a *laissez-faire* approach to questions

regarding inter-species morality not based on just and rational principles, but based entirely on the consequences for humans. More specifically, it could produce a form of human-based "moral relativism", wherein a human being's psychological dependency on particular practices, and/or standards, are used to morally justify trumping the basic interests of both sentient and non-sentient nonhuman organisms in cases of conflict.

The form of "moral relativism" I have in mind is sometimes invoked when adjudicating conflicts involving questions of *intra*-species justice, or more simply -- *human* justice. A profound example of this form of relativism within the realm of human justice stems from a criminal trial in 1980 involving a well-cultured and well-heeled 63 year-old woman convicted of murdering her ex-husband's lover. Maisie Irene Clark served six years of a life sentence before a rare act of clemency on behalf of the Solicitor General saw her released into a half-way house.[89] What is relevant to the larger issue of adjudicating cases of inter-species justice are the reasons advanced as to *why* she was granted an early release. Her early release was not because a retrial proved her innocent or even temporarily insane, but was the result of her supporters successfully arguing that because of her privileged background she would not, or could not, survive in jail. Her friends and even the Warden of the Kingston Penitentiary for Women cited her deteriorating health along with other factors, and argued that within the context of her case/life, jail was proving an unusually cruel and inhumane punishment. In part, this woman

was released because the justice system (or some segment of it) believed that psychological factors based on an individual's previous living standards and social practices posed a significant threat to her basic interest (i.e. biological survival), and supposedly, justice would not be served by her premature death. What is of interest here is not whether or not the woman should have been released from jail, but the extent to which human psychological needs were allowed to influence the question of justice. If examples of moral relativism such as this exist in the adjudication of conflicts between humans (in this case, between the woman and the crown), then one can only assume they would be carried over (arguably to a greater degree) into questions of inter-species justice.

When one extrapolates from the above conception of moral relativism to a context wherein a basic$_2$ human interest conflicts with the basic interest of a natural nonhuman organism (sentient or non-sentient), one can perceive the necessity in deciding exactly *what* constitutes a basic$_2$ human interest prior to the type of conflict being established, and thus prior to any resolution. For example, let us suppose that someone believes that the trapping and killing of Silver Fox for their pelts is morally justified. In this situation, the concept of a loosely defined basic$_2$ human interest could easily lead to moral relativism by allowing greater weight to be assigned to human psychological *needs* (not *capacities*) through placing them in the balance against the fox's basic interest in avoiding suffering and premature death. Killing the

foxes could be justified if the foxes were being trapped by individuals who needed the fox pelts to keep themselves warm in the immediate, thus directly relating to their physical survival.[90] There seems little problem in adjudicating this conflict because, although the fox is a morally significant "being", the nature of the human interest (i.e. biological survival) justifies taking the life of the fox. Or, in accordance with VanDeVeer, because both parties have basic interests at stake (i.e. biological survival), the greater psychological capacities and thus the greater ability to suffer of humans provides justifiable grounds for killing the fox. These actions are only justified, however, if no other alternative exists for ensuring human survival (e.g. access to other forms of adequate protection from the cold).

But can killing the fox be justified as a basic$_2$ human interest, for example, if one is killing the fox to produce fur coats for the fashion industry? One might argue that not being able to trap fox and/or purchase and wear a fur coat constitutes a serious threat to ones right to individual autonomy and sets a dangerous precedent effecting all citizens and not simply those who desire the "right" to own fur coats. Although individual human autonomy is an important principle within any free society, it is never absolute. Thus, when the basic interest of a sentient nonhuman organism comes into conflict with a basic$_2$ human interest, one must guard against non-basic human needs (e.g. fashion and profit) under the guise of "individual autonomy", holding the balance of power. Therefore, it must be upheld that killing

sentient nonhumans with the capacity to suffer pain is never justified, except under conditions where one's biological survival is truly at stake (e.g. starvation, warmth, self-defense). Translated into practice, social and political structures must be put into place which ensure that in cases of conflict the above principle is taken seriously, and that "basic$_2$" human interests are not *de facto* accorded greater significance than the basic interests of sentient nonhumans.

In summary, the above critique is not intended to portray the psychological capacities of humans as an irrelevant factor in the just adjudication of conflicts with natural nonhuman organisms. But without clearly defined parameters around what constitutes a basic human interest, a deferral to psychological capacities in an effort to resolve a particular conflict could result in a non-basic human psychological need trumping the basic interest of a sentient nonhuman organism. A truly basic human interest can legitimately trump any basic sentient nonhuman interest if it deals directly with human biological survival, and not simply with basic$_2$ human interests of the nature of Thanksgiving feasts, personal fashion, and/or other related forms of personal preference.

If the basic interests of natural, sentient nonhuman organisms should not be trumped by the majority of basic$_2$ human interests primarily because of their sentience and the level of interest involved (i.e. basic), then what can be said regarding the interests of natural non-sentient organisms? For example, when the

basic interests of non-sentient organisms are in conflict with basic$_2$ human interests, any appeal to the psychological capacities of the parties involved would consistently result in the *de facto* resolution of conflicts in favour of humans. As earlier stated, because VanDeVeer's "TFE" does not concern itself with non-sentient organisms, it requires further refinements if it is to prove useful in adjudicating the conflicts between non-sentient organisms and humans.

In the remainder of this chapter it will be argued that the just adjudication of conflicts between humans and non-sentient organisms cannot be solely based upon the level of interest to the interest-holders (factor 1), and/or on the psychological capacities of the interest-holders involved (factor 2). The just adjudication of conflicts necessitates some means of determining the significance of non-sentient organisms. Thus, here and in the following chapter, one approach to determining the significance of non-sentient organisms within a weak anthropocentric value theory will be advanced, and subsequently, one means of expanding "TFE" to adjudicate conflicts between humans and non-sentient organisms.

Historically, "contextualization" has always played an important role in the evolution of ethics. Andrew Brennan points out in *Thinking About Nature* that ethics has continually been contextualized and rethought through the incorporation of newly evolved knowledge from within disciplines such as psychology and sociology.[91] For example, we no longer perceive someone who is

"mad" as an autonomous moral agent when being tried in a court of law because the extension of human knowledge to the contrary has been incorporated into ethical thinking.[92] More recent developments, such as the recognition of "Battered Wife Syndrome", further exemplify the contextualization of right and wrong in questions of human justice. In a trial where an abused woman has murdered her husband, the court now takes into consideration the unique social status of the relationship (i.e. husband and wife), and the nature and extent of the physical and emotional abuse to which the woman was subjected during the marriage. Analogous to the influence of psychology and sociology on ethical discourse, ecology and biology can also be used to *inform* and contextualize traditional ethics, as was exemplified in the arguments for natural non-sentient organisms having interests and moral considerability in Chapter One.

In one sense ecology itself, coined the "subversive science" in its infancy, bases its understanding of ecosystem processes on the contextualization of the more traditional sciences such as biology and chemistry. The seminal importance of "context" in ecological thought is portrayed by Brennan when he states:

> One of the central pieces of ecological insight -- whether of scientific or metaphysical ecology -- is that each thing is *what* it is in part by being *where* it is.[93]

This primacy of "place" or "physical context" stressed by Brennan, and ecologists in general, implies that all living and non-living things are inextricably bound up with each other, and that the existence of each individual thing is largely dependent on the

contextual inter-relations within which it is found to exist. Thus, the value of a particular thing (e.g. a natural non-sentient organism) is partially based in its relation to the larger web of value within which its life unfolds.

Brennan's statement echoes the "holism thesis" central to theories of deep ecology such as those advanced by Holmes Rolston and Baird Callicott.[94] In short, they maintain that the inter-relatedness and interdependency of all things within nature (both animate and inanimate) constitute a larger whole which, in and of itself, bears ultimate value. Thus, participants in this larger whole are valuable by means of their participation in perpetuating the interests of the whole, and not by means of perpetuating their own individual interests. This value premise is fundamental to the holistic theories of non-anthropocentric value held by ecocentrists. The problem with this approach to grounding an environmental ethic was discussed briefly in Chapter One, but the ecologically-based link between value and context -- namely, that an entity is valuable in part because of where it is physically located -- is of present relevance. This ecologically-based link provides an important backdrop against which efforts to quantify the significance, or value, of a non-sentient organism and/or a species of non-sentient organism can be made meaningful.

Regarding the moral significance of non-sentient organisms, Attfield states:

> As they [non-sentient organisms] have moral standing, when at any rate a large number of them are at stake (as

> when a forest is threatened), or when the possible existence of multitudes of future ones could be foreclosed (by the elimination of a species) their otherwise almost negligible intrinsic value as individuals amounts to a serious moral ground [my addition].[95]

In one sense, Attfield seems to suggest that if a tree has some degree of moral significance, then it follows that in their millions trees would have a degree of moral significance which could, and should, override certain human interests in cases of conflict. In short, if each non-sentient organism has any degree of significance at all, then an increase in the number of organisms would correspond to an increase in their overall significance, and therefore, the seriousness of their moral claim on humans.

Attfield's statement reflects an underlying principle seminal to any just resolution of conflict between humans and non-sentient organisms within a weak anthropocentric framework -- namely, the moral significance, or intrinsic value, of a non-sentient organism and/or a species of non-sentient organism varies according to population. However, although manifesting this important link, Attfield's conception of the way in which population determines the moral significance of non-sentient organisms is problematic. For example, suggesting as Attfield does that an increase in population directly correlates to an increase in the moral significance of non-sentient organisms produces counter-intuitive resolutions which fail to allow for vast differences in organisms and between species. In accordance with Attfield's principles it would seem that the fast-growing poplar, if allowed to prosper, could be

attributed a higher cumulative degree of moral significance than other species solely because of its genetic programming. This begs the question: what if the last oak tree on the planet was being slowly choked to death within one of many stands of poplar? Which interests should triumph, those of the oak or those of the poplar? Attfield's principles for resolving inter-species conflicts seem to dictate that both should be saved -- the oak to save a species from extinction, and the poplars based on their cumulative significance.

In one sense, this contradiction results from Attfield presupposing that moral significance is a linear quality and that significance can be attributed to a non-sentient organism irrespective of other contextual considerations which also impact on conflicts between different organisms and between humans and non-sentient organisms. If the significance of a non-sentient organism and/or an entire species is predominantly a function of population size (large or small) as Attfield seems to suggest, then to a large extent the criteria which makes them significant would have to reside in the individual organisms themselves. This conclusion seems to blur the distinction between the conceptual possibility of non-sentient organisms having moral considerability, or moral standing, and the separate question regarding what degree of moral significance (if any) they should be accorded.

As was argued in Chapter One, a principal tenet of a weak anthropocentric value theory is that moral significance does not necessarily follow from moral considerability. Thus, contrary to non-anthropocentric theories of value, if a non-sentient organism

is to have any moral significance it cannot be based upon the same criteria as that which make it morally considerable.[96] In other words, if a non-sentient organism is morally considerable because it has interests which can be benefited or harmed, then its moral significance cannot also be based on this criteria. To maintain the contrary is to risk arguing an essentialist position wherein all non-sentient organisms are necessarily significant *a priori*. Applied to certain non-sentient organisms occurring in large enough numbers (e.g. HIV), this could result in serious moral claims against humans, and thus produce counter-intuitive conflict resolutions of the nature discussed both here (the poplar case) and in Chapter One.[97]

Maintaining a distinction between "moral considerability" and "moral significance" necessitates that the significance of non-sentient organisms be extrinsically determined, and not intrinsically determined as in a non-anthropocentric value theory. This does not translate into the significance of any particular non-sentient organism and/or species of non-sentient organism directly correlating to the size of their population. For, although the moral significance of individual non-sentient organisms does vary according to their species' population as Attfield maintains, at the same time, the significance of a species is not simply the cumulative value of its individual constituents. The moral significance of non-sentient organisms is partially dependent on their respective species' populations, but within a

weak anthropocentric value theory their significance is also dependent on other external and human-centred considerations (e.g. social, political, and economic factors). Acknowledging that the significance of non-sentient organisms is also dependent on considerations beyond issues of organism population allows basic and important basic$_2$ human interests (e.g. an interest in the extirpation of HIV and/or the ecologically sustainable harvesting of forests) to trump the basic interests of non-sentient organisms without seriously threatening the cogency of the argument. And on the contrary, it allows one to avoid the strong anthropocentric claim that non-instrumental, and/or even deadly, non-sentient organisms (e.g. the Snail Darter and HIV, respectively) are of absolutely no significance under any circumstances. For example, it is not inconsistent with this approach to argue that the last snail darter, or even the last HIV, on earth is significant and should not be eradicated. Attfield's approach also seems compatible with this conclusion. Although it may strike some as counter-intuitive, within a context where the last HIV is safely contained in a research laboratory and incapable of threatening human life, strict accordance with this position would dictate preservation of the virus.

If questions of inter-species justice involving humans and non-sentient organisms are to be justly adjudicated, a framework is needed to quantify the significance of non-sentient organisms in relation to particular conflicts. "Framework" is not meant to imply an acontextual formula that can be applied to all situations

(e.g. a cost-benefit analysis) to automatically yield the significance of any given non-sentient organism(s), and/or yield supposedly just resolutions to inter-species conflicts in any given circumstance. In general, a meaningful "framework" must seek to quantify the differing degrees of significance attributable to non-sentient organisms in relation to *particular* conflicts with humans.

One potential framework through which to quantify the significance of non-sentient organisms is according to their species' population within established social and political units, or boundaries (e.g. cities, and/or regions, and/or provinces/states, and/or nations, and/or continents, and/or the globe). Separately, or in conjunction with the above framework, another option would be to quantify the significance of non-sentient organisms in terms of their populations within "bioregions".

Etymologically, "bioregion" means "life-place". The concept of a bioregion as described by two of its earliest sources, Peter Berg and Raymond Dasmann, "refers both to a geographical terrain and a terrain of consciousness -- to a place and the ideas that have developed about how to live in that place".[98] Consequently, some bioregionalists and/or deep ecologists might take exception to my largely "geographical" use of the term. But geographically speaking, a "bioregion" is an area sharing common characteristics of soil, watershed, climate, native plants, nonhuman animals, and human cultures.[99] In this sense a "bioregion" defines a particular

physical context. The principle difference between a bioregionalist's definition and the one invoked here stems from the bioregionalists' belief that "bioregions" should form the principal axioms around which human social, political and economic activity is organized, thus grounding the ecopolitical theory -- "bioregionalism". This promising theory will be discussed further in Chapter Three, but the sense in which I am presently using "bioregion" parallels its use in places such as Ontario, wherein bioregions have historically been categorized according to watersheds and institutionalized through the creation of "Authorities" (e.g. Credit Valley Conservation Authority, Grand River Conservation Authority, etc.).

What is being proposed is that the significance of non-sentient organisms increases in proportion to their scarcity and decreases in proportion to their abundance, not solely based on their numbers as purported by Attfield, but relative to broader considerations such as (1) their abundance or scarcity within definable physical contexts (e.g. established political boundaries or bioregions); and (2) important principles of human self-regulation (e.g. individual autonomy, economic principles, participatory democracy). Further discussion of (2) will be undertaken in the following chapter, but to see whether (1) can help quantify the significance of non-sentient organisms, and help provide just resolutions to conflicts between humans and non-sentient organisms, let us return to the City of Bigtime scenario.

In the Bigtime scenario it was stated that as long as all

dealings between the City of Bigtime and the developers were above board, then within a traditional anthropocentric value theory, all corresponding obligations between the competing interests of opposing parties had been discharged.[100] Consequently, the City did nothing wrong in diverting water away from the trees and into the developer's swimming pools. This scenario reflects the value-neutral conception of "physical context" inherent in a strong anthropocentric value theory. Strong anthropocentrism by definition precludes incorporating the ecological insight wherein an entity's value (in this case, a non-sentient organism) is partially tied to the physical context within which it is found. Consequently, within a strong anthropocentric value theory, the only significance a non-sentient organism and/or species of non-sentient organism can be granted is that which an individual human chooses to confer onto it. If the physical context(s) within which a conflict unfolds does not in some way inform the adjudication process, then there exists no terms of reference within which the interests, and hence significance, of non-sentient organisms can be made meaningful.

In an earlier observation it was stated that the Bigtime scenario is best categorized as basic$_2$ human interests (e.g. individual autonomy, and/or profit) conflicting with the basic interests (i.e. the biological survival) of the trees in question. Regardless of how one quantifies physical context (i.e. established political boundaries, and/or the more ecologically-informed "bioregions"), the underlying premise is that the significance of

the trees, and subsequently a just resolution to this inter-species conflict, is partially determined by the different physical context(s) within which they are found. Invoking this sense of a definable physical context provides a framework within which general criteria for quantifying the moral significance of non-sentient organisms can be developed. For example, such criteria might include: i) the prevalence of a particular species of non-sentient organism within the local community and surrounding area, and/or ii) the prevalence of other species of the same genus within the local community and surrounding area (e.g. the prevalence of different species of "hardwood trees" in the area, or even, "trees" in general), and/or iii) the prevalence of the species of non-sentient organism, and/or species of the same genus, within the extended context of larger ecological and/or political spheres (e.g. nation and/or continent, "ecoregion" and/or planet).

In an inter-species conflict such as in Bigtime, this framework based on external political and/or bioregional boundaries works to counter-balance the moral weight granted the advanced psychological capacities of humans within "TFE". These "boundaries" create quasi-objective contexts within which it becomes possible to quantify the significance of non-sentient organisms, and subsequently, to determine whether basic$_2$ human interests should trump the basic interests of non-sentient organisms relative to a particular conflict. The contextualization of "TFE" is achieved through the significance of non-sentient organisms being partly premised on the ecological link between

value and context, wherein "value" becomes quantifiable through reference to externally defined boundaries. This approach serves to introduce important empirical and ecological elements into an otherwise subjective and entirely human-centred moral decision-making process based on sentience and the psychological capacities of the beings in conflict. In brief, both established political boundaries and bioregions provide empirically definable physical contexts (although categorically different) within which it becomes meaningful to speak of the significance of natural non-sentient organisms. These two means of defining context are intended to encompass two different, although not entirely incompatible, frameworks for helping to determine the significance of non-sentient organisms, but neither is exhaustive, or exclusive, in this function.

Once the levels of interest accorded to the non-sentient organism(s) and the human(s) involved in the conflict are established as basic and basic$_2$ respectively, then the significance of non-sentient organisms becomes a function of their populations within the physical context(s) in which the conflict simultaneously unfolds. For example, if one was to use established political boundaries to meter the significance of non-sentient organisms, then the level of significance accorded the organism(s) is not necessarily definable through an appeal to its population within the immediate arena of conflict. Even if the developers in Bigtime were able to show that the deaths of the young elms were insignificant because Bigtime and its surrounding area are home to

thousands of elms, before they can be sacrificed, the significance or "insignificance" of the elms would have to be determined in relation to larger physical contexts (i.e. larger political units, or boundaries). Essentially, this would result in the conflict being viewed from the larger "species-perspective". Thus, although Bigtime and its surrounding area may indeed have a high concentration of elms, the significance of these particular trees within the provincial and/or national and/or global arena may be much greater than can be deduced at the local level. In other words, if Bigtime was the only place in the entire nation elms existed or could exist (perhaps for reasons of climate, soil, etc.), then even with a large population, their individual significance should reflect the national reality and each should be provided with the water necessary for its long-term survival.

From a different yet legitimate perspective, regardless of the number of elms in the nation, if the elms were the only elms in Bigtime then the trees could also come to possess a high degree of significance. This could result from the citizens of Bigtime taking political action and infusing the elms with significance through refusing to trade the elms' survival for the benefit of the developers, the city, and subsequently, themselves. Furthermore, the elms would possess a high degree of significance if there existed a serious threat to their genus-type in the surrounding area, or in other words, if hardwood trees where under-represented or even endangered.[101]

In summary, a framework and criteria based on quantifiable

conceptions of "physical context" (e.g. established political boundaries or geographically defined bioregions) provides a general means of reflecting the significance of non-sentient organisms within a weak anthropocentric value theory, and in relation to a particular conflict. Although this constitutes an important conceptual element in the overall development of the significance of non-sentient organisms, the nature of many social, political and economic principles deployed within particular physical contexts has an enormous impact on the significance of non-sentient organisms. For example, the weak anthropocentric value theory upon which the significance of non-sentient organisms is grounded not only presupposes humans listen to reason and recognize the interests of non-sentient organisms, but it also presupposes that this "moral recognition" is compatible with traditional ideologies. The question now becomes -- how ideologically compatible are the interests of all natural nonhuman organisms, but especially non-sentient organisms, with traditional left/right conceptions of social, political, and economic organization? To delineate what social, political, and economic principles best reflect, or are most sympathetic to, the interests and where warranted the significance of non-sentient organisms would be an enormous undertaking. Thus, in the final chapter I will focus on the way in which traditional ideologies, especially the contemporary liberalism represented by neoconservatism, exclude the moral considerability and significance of natural nonhuman organisms, and therefore, also exclude the hope of environmental justice.

Chapter Three

An environmentally just society must be able both to respect and incorporate the varying levels of significance accorded to non-sentient organisms when and where warranted. If this is to be realized in practice, one must first decide what principles of human social, political and economic organization result in the exclusion of interests and, where warranted, the significance of non-sentient organisms. This rather sizeable project will be approached through an analysis of both traditional and contemporary political economies and their ability, and/or inability, to allow natural, non-sentient organisms to have significance when and where warranted.

Questions regarding environmental degradation and inter-species justice have received brief yet often prophetic consideration within traditional ideologies. For example, at different points in his writings, Karl Marx expressed concern about the destruction of Nature at the hands of an emerging capitalism:

> Nature becomes for the first time simply an object for mankind, purely a matter of utility; it ceases to be recognized as a power in its own right; and the theoretical knowledge of its independent laws appears only as a stratagem designed to subdue it· to human requirements. Pursuing this tendency, capital has pushed...beyond the deification of nature and the inherited self-sufficient satisfaction of existing needs confined within well-defined bounds, and the reproduction of the traditional way of life.[102]

Further to this, Robyn Eckersley has observed that Frederick Engels was also quite aware of the environmental hazards associated with

a developing industrial society, and of the need for humans to understand themselves as existing *in* Nature. Engels states:

> at every step we are reminded that we by no means rule over nature like a conqueror over a foreign people, like someone standing outside nature -- but that we, with flesh, blood and brain, belong to nature, and exist in its midst.[103]

Within the liberal tradition, John Stuart Mill displayed a definite "ecological sensibility" in parts of his work *Principles of Political Economy*. His section entitled "Of the Stationary State" contains a dark and prophetic description of a world:

> with nothing left to the spontaneous activity of nature; with every rood of land brought into cultivation, which is capable of growing food for human beings; every flowery waste or natural pasture ploughed up, all quadrupeds or birds which are not domesticated for man's use exterminated as his rivals for food, every hedgerow or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture.[104]

Although these and other traditional ideological perspectives are early harbingers of the emerging ideology of environmentalism, they consistently assume either explicitly or implicity that Nature is a force to be tamed and domesticated for the unfettered use of humankind. Even in the more progressive thought of Mill and Engels, the prevailing pattern is one of "mastery before harmony".

The reason traditional ideologies share this perspective is largely rooted in their grounding in a strong anthropocentric value theory. This strong anthropocentrism dictates, but does not necessitate, a preoccupation with principles of human justice -- a

preoccupation which has traditionally focused on questions pertaining to distribution.[105] In "Technology and Responsibility" Hans Jonas offers an informative historical/sociological account of the way in which ethical discourse has evolved to be so strongly anthropocentric. Jonas states:

> Man's life was played out between the abiding and the changing: the abiding was Nature, the changing his own works. The greatest of all these works was the city, and on it he could confer some measure of abidingness by the laws he made for it and undertook to honour...
> ...in this citadel of his own making, clearly set off from the rest of things and entrusted to him, was the whole and sole domain of man's responsible action. Nature was not an object of human responsibility -- she (was) taking care of herself and, with some coaxing and worrying, also of man: not ethics, only cleverness applied to her. But in the city, where men deal with men, cleverness must be wedded to morality, for this is the soul of its being. In this infra-human frame dwells all traditional ethics and matches the nature of action delimited by this frame.[106]

Thus, although socialism and capitalism are based on antithetical ethical assumptions regarding what is or what should be valuable to humans, both share a strong anthropocentric value assumption implied by Jonas -- nature is inexhaustible. Hence, regardless of the nature of ethical action [i.e. whether individual (the metaphysical basis of capitalism) or collective (the metaphysical basis of socialism)], nature's abundance can never be threatened. As a result, natural nonhuman organisms tend to become debased into value-neutral commodities and/or value-added commodities. A fundamental implication of this shared assumption is that the varying degrees of intrinsic value attached to natural non-sentient organisms in Chapter One, and the significance of non-sentient

organisms as discussed in Chapter Two, are consistently sacrificed to human wants and desires within traditional conceptions of political economy.

Despite the seeds of early environmental consciousness stemming from within the more progressive elements of traditional ideologies, the shared assumption of unlimited economic growth, largely premised on a value-neutral conception of Nature, not only has profound implications for the significance of non-sentient organisms, but also for the quality of life, and even future existence, of human and nonhuman beings. The assumption that economic growth is an unquestionable constant stems from a systemic denial within both socialism and capitalism that there are definite ecological limits to economic growth.[107] Economic and/or material wealth (whether it be individual or societal) cannot be assumed to increase indefinitely within a finite biophysical environment. For example, the natural world has a finite ability to receive and recycle the various forms and quantities of waste generated by economic systems (e.g. CO_2). Carbon dioxide's effect on climate is an example of the dangerous implications involved when the absorption and conversion capacities of the environment are overwhelmed by the rates and nature of global economic expansion.

This is not meant to imply that all principles of individual and/or societal organization within traditional ideologies are environmentally destructive and of no contemporary relevance.[108] Mill, for example, recognized the ecological limits to economic growth in his conception of a "steady-state economy", which he saw

as necessarily superseding capitalism. Mill states:

> It must always have been seen, more or less distinctly, by political economists, that the increase of wealth is not boundless: that at the end of what they term the progressive state lies the stationary state, that all progress in wealth is but a postponement of this, and that each step in advance is an approach to it.[109]

Although Mill realized both the ecologically destructive nature of economic growth and its ultimate limits, many contemporary theorists refuse to entertain the idea. In global practice, the growth paradigm has never been stronger.

Proponents of traditional ideologies often argue that to correct the imbalances in questions of inter-species justice, one requires some means of incorporating environmental value axioms into traditional political theories. This is not entirely without promise, but the commitment to economic growth is so pervasive in traditional left/right political economies that it comprises the principal component of economic thought and practice towards which all other values must acquiesce. Traditionally, the health of a country's economy, and thus the health of a country, have been measured in terms of increases/decreases in Gross National Product (GNP), and/or increases/decreases in GNP per capita, from year to year. But the current state of humankind's ecological problems and the effects on all forms of life are far too serious for economic growth to remain an unchallenged constant. Hence, a more thorough examination of traditional ideologies and their relation to economic growth must be undertaken if one is to maintain that problems adjudicating questions of inter-species justice are truly endemic to traditional theories of political economy.

As stated earlier, the central focus of traditional ideologies has been the distribution of costs and benefits within a society. Marx viewed capitalist distribution mechanisms as unjust because the working class are bound by the chains of necessity to sell their labour through an alienating means of production. This in turn produced a surplus to support the freedom of a ruling bourgeoisie. This admittedly over-simplified synopsis is relevant to the topic at hand in that although Marx denounced capitalism as a *means* of production, he never truly denounced capitalism's *modes* of production.[110] Marx embraced capitalism's modes of production because he believed that increasing material wealth in and of itself is the fundamental objective of any modern society. Nowhere is this more evident than in Marx's acceptance of the relationship between economic growth and technological progress. In *Environmentalism and Political Theory*, Robyn Eckersley states:

> (Marx) extolled the new techniques of industrial society as the harbinger of freedom in creating the material and social preconditions for a socialist society...Marx also welcomed what he saw as the civilizing influence of technology and rejected nature romanticism and primitive cultures alike as "childish," "backward," and "reactionary" in opposing or otherwise showing no inclination toward, technological progress.[111]

Marx's technological optimism is largely motivated by his freedom/necessity dichotomy, which translates into "freedom from" subservience to social and natural constraints through technological advancement.[112] If freedom can only be attained where necessity has been conquered, then Nature must first be brought

under the rational control of humankind. Marx states:

> Freedom...can only consist in socialised man, the associated producers, rationally regulating their interchange with Nature, bringing it under their common control, instead of being ruled by it as by the blind forces of Nature; and achieving this with the least expenditure of energy and under conditions most favourable to, and worthy of, their human nature. But it nonetheless still remains a realm of necessity. Beyond it begins that development of human energy which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity at its basis.[113]

Placing Marx in historical context (i.e. the beginning of the industrial revolution), one can understand his optimism regarding technological advancement and his belief that it held the potential to free workers from the mundane reality of hard manual labour. Whether or not continual technological advancement is a desirable societal end is an interesting and even relevant topic, but will be discussed later. What is immediately relevant is that technology as a means to control nature for the good of humans has remained a constant through much of leftist thought since the time of Marx. For example, Eckersley points out that many neo-Marxists such as Herbert Marcuse and/or eco-Marxists such as Andre Gorz, have upheld Marx's distinction between freedom and necessity wherein "freedom" is solidly premised on both technological advancement and economic growth.[114]

Within classic liberalism, the coupling of economic growth and technological progress remains unquestionable. The ideological perspective within liberalism upon which I will focus is the contemporary ideology of neoconservatism. Some might argue that neoconservatism is not entirely "representative" of liberalism and

I concur on this point. But neoconservatism has been chosen for three inter-related reasons: (1) it is arguably the dominant ideology in contemporary western liberal democracies and is showing no real signs of decline;[115] (2) it has displayed an inverse relationship relative to economic growth in that as the growth in western economies has slowed the popularity and dominance of neoconservatism and its counterpart, neoclassical economics, have increased;[116] and (3), but directly related to (2), it houses the strongest and most vocal proponents for economic growth on the "liberal-democratic" right.

In practice, one reason neoconservatism has flourished is that, from within a publicly perceived and/or directly experienced sense of scarcity (i.e. a context of little or poor economic growth), it pronounces that "scarcity" is largely a human construct. When scarcity is a practical problem (e.g. regarding food, jobs, wealth), neoconservative ideology maintains that it is the result of big governments impinging on the ability of markets and the private sector to properly allocate goods and services and create growth. This premise is problematic in and of itself, but even more problematic (especially regarding issues of inter-species justice) are the metaphysical presuppositions which underpin the neoconservative understanding of "scarcity". The most problematic, and the most ecologically destructive, is the presupposition that natural resources are not in any meaningful sense "finite".[117] In denying the finiteness of the Earth, neoconservative political economy denies there are ecological limits to growth, and

subsequently, excludes the context-based value considerations through which natural non-sentient organisms can become morally significant (where warranted).

Regarding the scarcity of natural resources, neo-classical economist Julian Simon states in his book *The Ultimate Resource*:

> We look at a tub of water and mark the water level. We assert that the quantity of water in the tub is "finite." Then we observe people taking water out of the tub and walking away. When we return, lo and behold the water level is higher (analogous to the price being lower) than before. We believe that no one has reason to put water into the tub (as almost no one will put oil into an oil well), so we figure that some peculiar accident has occurred, one that is not likely to be repeated. But each time we return, the water level in the tub is higher than before -- and water is selling at an even cheaper price. Yet we repeat over and over that the quantity of water *must* be finite and cannot continue to increase, and that's all there is to it.[118]

Simon argues that this analogy exposes the paradoxical nature of arguments which state that the earth's resources are finite and hence scarce. In support of Simon, libertarian philosopher, Jan Narveson, notes that Simon distinguishes two ways of measuring natural resources; (1) the "technological", wherein one tries to estimate the amount of particular resources left on or in the earth, and (2) the "economic", wherein one notes price trends for a resource on the market.[119] In "Resources and Environmental Policy" Narveson states:

> When headline-writers, politicians, and environmentally-inclined philosophers talk of scarcity, they invariably produce forecasts of the first, or technological sort.[120]

The implication of this distinction is that simple-minded folk look

at resource consumption, or more realistically -- the consumption of nature -- as having a beginning and an end. But according to Simon, the truth of the matter is that "in the end copper and oil come out of our minds. That's really where they are."[121] In order to shed further light on the anti-nonhuman, anti-ecological, and generally anti-Earth nature of neo-conservative ideology, Simon's theory of resource scarcity and his rather strange metaphysical assertion require more detailed exploration.

Beginning with the technological perspective, Simon states that if natural resources are truly finite, then as real quantities of resources decrease prices should increase as the market responds to increasing scarcity. Simon maintains, however, that this is not the case and has never been the case because the cost of natural resources has actually declined "decade after decade, and century after century...relative to the most important element of life, human work time".[122] Thus, from within his economic model, Simon deduces that the scarcity of natural resources has not increased (as the technological approach would dictate), but in actual fact has decreased. Put in terms of his "tub analogy", the tub comes to contain more water over time and not less. Subsequently, Simon concludes that the environmental "doomsayers" are wrong in cajoling an environmentally gullible public into believing that humankind is in danger of running out of natural resources.

According to Simon, the supposed "finite" amount of water in the tub increases because of resource substitution and/or the increased efficiency that results from technological innovations in

both the extraction and use of resources.[123] The idea of resource substitution is seminal to the neoconservative conception of scarcity. Simon believes resources exist only in our minds because of his fervent belief in technology's ability to substitute one resource for another. Regarding substitution, Jan Narveson states:

> for any actual specific substance you can name - call it X -- we can *do without* X just fine, by utilizing something else, Y, instead. And the availability of Y depends for all practical purposes, *entirely on technology* (which, of course, also depends on human energy) and scarcely at all on the existence of particular quantities of particular natural substances (his emphasis).[124]

To Simon, it makes little sense to speak of resources as finite because once a resource begins to become scarce, the price will rise, capital will begin funding technological innovation into increasing efficient use of the resource and "new" substitutes will be found. For example, if all the minerals in the ground are exhausted this still leaves untapped resources in the sea and on the moon, with only technological innovation barring their recovery.[125] Or from a different perspective, if oil was to become more scarce and hence more expensive, then capital would seek out cheaper substitutes to help meet demand and create further wealth. A basic example of this would be the switch from oil to natural gas furnaces in many North American homes. An abundance of natural gas has made it economically feasible over time for home owners to convert their furnaces to gas. In brief, because technological substitution and increases in efficiency are infinite (limited only by human ingenuity), Simon argues that it makes

little sense to speak of resources as finite.

In being determined solely by markets, Simon's conception of scarcity is based entirely on demand. Regarding the relation between scarcity and demand, Narveson states:

> Scarcity is a relative notion, for one thing: a thing is scarce in relation to *need* or *interest*, to *demand*.[126]

This is also the conception of scarcity which Simon uses to support his conclusion that natural resources become less scarce over time. For Simon, resource availability is not an issue because scarcity is entirely dependent on market demand and not at all on the state of the biophysical world. Simultaneously, however, Simon admits that absolute stocks of natural resources are being depleted at an ever increasing rate. He states:

> The absolute physical quantities of natural resources extracted have been rising, and the kinds of resources used have been increasing in number. But the expenditure on them has been falling as a proportion of total expenditures.[127]

Hence, the economic conception of scarcity presupposes that because the quantity of resources in circulation has met or exceeded demand over time, that resource availability will continue to meet or exceed demand. The first part of this statement is somewhat of a truism (at least in the affluent North), while the second is entirely hypothetical and dependent not only on technological innovation, but most importantly, on the Earth's ability to sustain the ecologically destructive consequences of increased human demand (e.g. resulting from population increases) and increases in the number of human demands (i.e. the number and type of products created and consumed).

In the "nuts and bolts" of reality, the water (i.e. H_2O) in Simon's tub is entirely *theoretical* water. The problem with Simon's entirely theoretical approach to the biophysical world is echoed in Alfred North Whitehead's observations on purely quantitative approaches to economic reasoning. Whitehead states:

> It is very arguable that the science of political economy, as studied in its first period after the death of Adam Smith (1790), did more harm than good. It destroyed many economic fallacies, and taught how to think about the economic revolution then in progress. But it riveted on men a certain set of abstractions which were disastrous in their effect on modern mentality...Its methodological procedure is exclusive and intolerant, and rightly so. It fixes attention on a definite group of abstractions, neglects everything else, and elicits every scrap of information and theory which is relevant to what it has retained. The method is triumphant provided the abstractions are judicious. But, however triumphant, the triumph is within limits. The neglect of these limits leads to disastrous oversights...[128]

Simon's economic "triumph" fundamentally denies ecological "limits" because his economic conception of scarcity is premised on the idea that human action should be without limitations, especially with regard to the biophysical world and technological progress. Consequently, Simon's economic understanding of scarcity functions entirely as an abstraction -- empirically divorced from the biophysical reality about which it purports to speak, to which it is applied, and upon which it has had, and continues to have, grave environmental consequences. Simon's conception of scarcity is about the unbridled destruction of life sustaining organisms and processes in the present, while heavily burdening posterity with an accelerating ecological deficit.

Inherently, the ecologically destructive assumption in Simon's and other similar economic conceptions of the biophysical world is the belief that the commodification of natural resources, and technological progress in and of itself, are value-neutral processes "on the ground". Simon's thorough atomism categorizes nature entirely in accordance with its instrumental value to humankind (arguably, its usefulness to the societal "haves") and by definition denies, not only the value of sentient and non-sentient nonhuman organisms and the biophysical contexts in which they live, but also the inter-related ecological processes about which humankind knows very little and yet upon which all life depends.

The failure to recognize ecological limits to economic growth stems from Simon's religious-like faith in technology. For Simon, the *means* through which the water in the tub increases is inconsequential because technological progress in and of itself is inert, or value-neutral. Thus, technologies cannot impact negatively on the environment, at least not in ways that more technology would fail to remedy. A value-neutral conception of technology is seminal to an ideology based entirely on securing growth because if one starts questioning the means through which the quantity of water in the tub is increasing (i.e. technology), then one would be directly threatening the filling of the tub (i.e. economic growth) and vice-versa. This positive reciprocation between technology and economic growth has become institutionalized in Northern countries and is being spread to countries in the South through means such as the debt re-structuring policies of the World

Bank and the International Monetary Fund. Thus, globally, biophysical contexts within which renewable and non-renewable resources exist and upon which both human and nonhuman organisms depend, are consistently being sacrificed through the destructive impacts and byproducts of technologies solely geared to increasing economic growth.

This questioning of technological progress should not be interpreted as leading toward some form of Neo-Luddism. The intention of this argument is to critique the destruction of the environment and nonhuman organisms (including entire species) which results when humankind strives at *all* costs to maintain economic growth through unquestioned technological expansion. In presupposing that economic growth not only justifies the means, but rightfully justifies any and all means, Simon's "economic" conception of scarcity legitimates practices on the ground that are environmentally unjust and unsustainable.

Thus far, it has been largely presupposed that unquestioned technological advancement is ecologically destructive. For Simon, and even other more "liberal" theorists, the idea that technology is value-neutral is an implicit and necessary premise in an argument which advocates that economic growth is potentially unlimited. For instance, regarding the value-neutral nature of technology, Dr. Edward Teller states:

> There is no invention, no new development that is either peaceful or warlike. Anything can be used in a variety of ways.[129]

The status-quo response to technology critics consistently focuses on a distinction between the amoral nature of technology and the immoral ends to which some individuals might use it. In "Are Luddites Confused?" Dan Lyons cites Petr Beckman as comparing technology critics "to those who would blame obesity on farmers" or "to those who would blame the Crucifixion on the existence of hammers and nails".[130]

As Beckman implies, technology is designed by "valuers" to function in terms of specific and pre-determined ends; to perform specific tasks and/or to inhibit particular sets of events. Thus, it is largely true that valuers infuse technology with value. But Beckman's comparisons do not present the entire picture in that they fail to recognize the relation between technology and "scale". For example, if the Romans had pneumatic hammers or "nail guns" they would have been able to build many more crosses and crucify many more Christians within the same amount of time. From within an economic framework, technological advancement works to free up human, material, and/or financial resources which can then be used to realize other purposes. Thus, if the Roman's had "nailguns" possibly more soldiers could have been put to more lucrative imperialistic purposes. But from within an environmental framework, the faster and/or more efficient a technology is at performing the task for which it was designed, and the larger the scale on which the technology can be deployed, the greater the impact on the environment.

Many of the tasks performed or the events inhibited through

the design and implementation of technological solutions are necessary to our quality of life. One must also keep in mind, however, that many technological innovations, especially in the biomedical area, are largely dependent on the long-term sustainability of the larger community of life with which I am concerned. Simply because *some* forms of technology benefit *some* people, does not necessitate that technology in itself is always beneficial and/or value-neutral. If one argues that technology in and of itself is value-neutral, then one must ignore its reciprocatory relationship with economic growth. Within the expanded moral community supported by the Greater Value Thesis, to argue that a complex technology (e.g. nuclear power) is truly "inert" one would have to maintain: (1) that the biophysical context upon which the community depends is in no greater danger, either in the present or future, than before the existence of nuclear power (i.e. negligible impact), and (2) that a large and reliable quantity of electrical energy is not an essential precondition for economic growth. Clearly, neither (1) nor (2) is the case.

Technology cannot be categorized as value-neutral because its existence fundamentally changes the *nature* of human action in the biophysical world.[131] Some of the resulting actions are positive and have negligible and/or justifiable environmental impacts (e.g. therapeutic pharmaceuticals derived from natural sources). But some forms of technology make human actions much more destructive and do so in two different, yet related, ways: (1) directly,

through greatly amplifying the scale of human action as a means to increase economic growth, and (2) indirectly, through producing unpredictable long-term consequences. To analyze the impacts of these phenomenon on non-sentient organisms and nature in general, one must further explore both (1) and (2).

A direct intervention into nature can range from an individual cutting down a dead tree in her backyard, to clear-cutting thousands of acres of forest or driving one's car to work. Implicit in each of the aforementioned human actions is the use of requisite technologies. Cutting down a tree in ones yard can be accomplished with either an axe, a chain-saw, or a tree harvester. Beckman might maintain that each of these technologies can also be used to clear-cut an entire forest, and on this I would agree. But simply because these technologies were created to perform the general task of cutting down trees, does not necessarily imply that their environmental impacts in performing this task are equal. The principal difference between these types of technology lies in the scale of the task for which they were designed, and hence, the scale of the task they are able to perform.

Let us explore this difference using the example of a tree harvester. There are two separate implications to consider. First, a tree harvester amplifies the impact of human action on the forest's ecosystem(s) through increasing the speed with which resources can be extracted. The increased extraction speed also tends to produce increased peripheral damage. By "peripheral damage" is meant physical damage to, or death for, non-instrumental

nonhuman organisms as a result of direct physical impact on the organisms themselves or the ecosystems upon which they depend. The second implication is that relative to an axe or even a chain-saw, a tree-harvester has inherent in it by design an ecologically destructive set of social, political, and economic values. Arguably, an axe's original purpose was to cut trees for reasons pertaining to self-subsistence (e.g. clearing land for cultivation, cutting firewood, etc.). However, as *homo sapien* gave way to *homo economus*, and individuals became fixated on ever higher levels of material wealth, time and money became the two most significant underlying values. And because the capital required to develop and manufacture different technologies must be returned with interest, these economic imperatives become reflected in the technology's purpose and operation. As a result, growth ideology became an implicit precondition for the very existence of modern technologies such as tree harvesters.

Environmentally destructive technologies, such as tree harvesters, are perceived as value-neutral because the destructive growth values inherent in them are supported by theories of economics, management and applied science which all advocate the "sustainability" of the end the harvesters are designed to serve (i.e. clearcutting).[132] This three-way relationship amongst technology, applied science and growth has two implications. First, if one questions growth then one is perceived as threatening the application of science and the institutionalized organizations with direct interests at stake (i.e. corporations, bureaucracies,

and governments). But more importantly, if one questions the ecological viability of certain interpretations of applied science (e.g. regarding forestry management) which provide the key pretext for the creation of ecologically destructive technologies, then one is perceived as undermining the social and political legitimization of the growth process itself. Thus, in the case of tree harvesters and forestry management principles, neither are value-neutral entities. On the contrary, both work together to realize the ecologically destructive but economically beneficial end represented by clearcutting. Hence, it is no coincidence that as a principle of forest management clear-cutting is both the most cost-efficient and the most scientifically defensible means of extracting forest fibre.

In brief, values that impact negatively on the environment have traditionally remained implicit in the technology's purpose, and because of the direct economic benefits enjoyed by some, these "implicit" values have become socially, politically, and scientifically legitimized and internalized nationally and now internationally. To varying degrees this "legitimization and internalization" is a continual process inherent in all traditional ideologies based on growth, but as witnessed in the case of Simon, it is quintessential to the very cogency of neoconservative theory.

The above is not to be interpreted as advocating that "zero-impact" on nature and/or nonhuman organisms represents a natural, or even morally desirable, end-state. Although advocated by some

fringe deep ecologists, all species including human beings must impact in different ways and to different extents on other species in order to survive and flourish. Essentially, where traditional ideological perspectives and environmentally conscious perspectives differ is regarding what is meant by "flourish". For example, do human beings require 4000 square-foot homes on ten acres, three cars, a cabin-cruiser, and meat once a day to truly "flourish"? Or can our psychological and biological needs be met in alternative ways which work to minimize the destructive impact of our actions on the lives of natural nonhuman organisms and those of future human generations?

At ground level, the difference between the direct and indirect impacts of technology on nature is a matter of degrees. Harvesting timber using more people and more ecologically-sensitive logging practices, walking to work instead of driving, climbing stairs instead of taking elevators, all present circumstances that have traditionally been understood in socio-political terms as matters of personal choice, bounded only by economic circumstance (e.g. owning a car, living in a building with an elevator, etc.). Although these activities involve utilizing various forms of technology (e.g. an axe, a set of stairs, buildings, etc.), their impact on nature is negligible because they represent self-organizing and self-supporting systems. As a result they are much less ecologically intrusive than the more complex, unstable, and unsustainable technologies they replace (e.g. cars, fossil fuel

production, hydroelectric power, nuclear power). Driving a car involves using a complex technological system which demands and produces a multitude of inputs and outputs respectively. The cumulative effects of these "inputs and outputs" have numerous indirect long-term consequences for the ecology of the planet, the most destructive being the production of "greenhouse gases".

As with most complex technologies, their construction and operation are both energy and capital intensive. All economic growth is dependent on securing sufficient and reliable energy sources to drive production processes, and hence, it is not surprising that most large scale interventions into nature are energy related. The best place to witness the unfolding of this relationship is in developing countries. For example, in China the government wants to begin construction on the Three Gorges Hydroelectric project which will flood an area the size of Lake Superior and render extinct the already endangered Yangtze River Dolphin and the Siberian White Crane.[133] According to the Chinese government, "the country needs the dam to solve chronic energy shortages -- which have slowed the country's otherwise rapid pace of industrial development in recent years".[134]

Dams and other energy mega-projects such as nuclear generating stations and off-shore oil rigs are developed with little concern for, or understanding of, the long-term consequences for human and/or nonhuman organisms and the ecosystemic processes which support life and of which they are part. It should be stated that most often the problem does not lie with a single intervention.

Through various natural adjustment mechanisms the planet has been able to absorb a multitude of interventions, both human (e.g. increased CO_2 outputs) and nonhuman (eg. airborne volcanic ash). But what is highly problematic and extremely difficult to predict is the *cumulative* environmental impact of numerous large scale interventions and their effects on both human and nonhuman organisms, and the long-term sustainability of the biosphere as a whole. From this perspective, debating the scarcity of resources is a moot point, because regardless of the quantity of recoverable resources and/or their market value, the real problem lies in determining at what point our large scale interventions will ultimately swamp the earth's natural adjustment mechanisms.[135]

Historically, our record of quantifying the long-term consequences of our interventions into nature has been little short of catastrophic. Because the intended consequences of our large scale interventions are usually highly beneficial, and the unintended consequences of our intended actions are often not immediately understood or perceptible, societies have been led to believe that the so-called "side-effects" of utilizing a particular technology are negligible or non-existent. For example, who could have predicted that the use of aerosol cans, freon, and/or styrofoam cups would eat holes in the ozone layer? Or, who could have predicted that the herbicide "2,4-D", widely used for 20 years by Canadian farmers, was such a deadly carcinogen? Although the number and magnitude of serious, negative, long-term "side-effects" resulting from blind interventions into nature continue to mount,

increasingly supported by the thought of Simon and neoconservative ideology in general, humankind still insists on forcing the natural environment to shoulder the burden of proof regarding the nature of technological interventions.

The problems associated with blind interventions into nature are well exemplified through this analogy used by Dan Lyons in "Are Luddites Confused?". Lyons states:

> Imagine facing a large, malfunctioning clock-works: you can see only a little way into the works: some debris is interfering with a gear. But to remove this you have only a long rod with a protrusion (three feet from the end) which you need for your purpose. You can't deal with the visible problem intelligently without plunging the rod blindly three feet further into the dark works (which of course are running). If you do gamble on the intervention, it's not because you hope that the blind segment of your activity will *improve* the invisible part of the works, nor because you hope that the blind intervention will have effects that will exactly cancel each other out. You know that the unforeseeable effects of your action will likely include more harm than good- but you can hope that the extra three feet of the rod won't affect the works importantly at all. You hope that the unforeseeable consequences (likely bad in the net) will be outweighed by the foreseen consequences (practically all good) [his emphasis].[136]

The emphasis on "hope" relative to the unforeseeable or unintended consequences of interventions into nature presupposes that it is important to limit the unforeseen consequences of ones actions. Arguably, under the auspices of neoconservative ideology, the potential of any unforeseen consequences is neglected because, as Narveson admits, the ideology is entirely dependent on technological progress.[137] Essentially, the reciprocal relationship between technological progress and economic growth necessitates that, with respect to nonhuman organisms and nature in

general, prudence must displace blind and too often unwarranted risk.

Toward an Environmentally Sustainable Politics

Following from what has been argued above, "prudence" must be a guiding principle in all aspects of human actions (i.e. individual, social, political, economic, and scientific) which impact on nature. Consequently, an environmentally sustainable politics within any modern, technology-based society must be based on a "prudential-principle", which would work to safeguard the long-term interests of humans, natural nonhuman organisms, and nature in general.[138] As argued earlier, although many traditional theories of political economy recognize the importance of the natural environment to human existence, their ideological commitments to economic growth and technological progress at any cost produce highly problematic internal tensions when tied to the notions of a "prudential-principle" and "environmental sustainability". In practice, one internal tension is reflected in the internationally accepted but thoroughly vague notion of "sustainable development", as popularized in the Brundtland Report -- *Our Common Future*. At the beginning of the second chapter entitled "Towards Sustainable Development", the report states:

> Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[139]

This is a very popular definition often invoked by governments seeking to appear environmentally concerned. In Canada, the

federal government has taken to including this definition of sustainable development in the preamble to legislation which directly impacts on the environment (e.g. Bill C-62, a.k.a The Regulatory Efficiency Act).[140] It has also been used to define the responsibilities of a Minister charged with enacting legislation in a sustainable fashion, such as the Act creating the new federal Ministry of Natural Resources (i.e. Bill C-48).[141]

Many believe such actions to be environmentally progressive, but even Julian Simon could agree in principle with such vaguely defined notions of sustainability. For example, Simon could maintain that the world's present course of economic development, based on the concept of relative scarcity, is the only feasible way to ensure human needs will be met both in the present and future. Thus, it provides the only way to guarantee a sustainable world. Furthermore, Simon could point out that relative to human work time, the cost of natural resources has constantly decreased, resulting in resources being available to increasing numbers of people over time. Following this logic, one can deduce that future generations will be better off in perpetuity. Hence, without seriously questioning the growth and technology paradigms upon which the global economy is based, *development* will most certainly be sustained in the short term, but only at the long-term expense of both humans and natural nonhuman organisms.

As earlier argued, the belief that economic growth is a necessary constant and that new technologies can solve present and future environmental problems is a delusion at the forefront of

traditional left/right ideologies. This thoroughly anthropocentric perspective, with its strong roots in Cartesian metaphysics, fails to comprehend that an environmentally sustainable politics involves the integration of social, political and ecological values into a new understanding of humankind's place and responsibilities in the world.[142] Seminal to this understanding is an acceptance that we live within nature, and hence, within ecological limits.[143] In addition, if the moral community is to be expanded to include both the moral considerability and (where warranted) the moral significance of sentient and non-sentient nonhuman organisms, then an environmentally sustainable politics necessitates a weak anthropocentric value theory. In the next few pages I would like to further explore the theoretical elements within neoconservatism that make it hostile to the Greater Value Thesis, inter-species justice, and the long-term sustainability of all life on earth.

As one might deduce from the first part of this chapter, the contemporary incarnation of liberalism represented by neo-conservativism fundamentally excludes a prudential-principle. A prudential-principle as I envision it would be based on the Greater Value Thesis, and would provide a meaningful framework for moral considerability for natural nonhuman organisms and, where applicable, safeguard morally significant nonhuman organisms against unjustified basic$_2$ human interests. In many cases inter-species justice would necessitate the slowing and, in certain cases, the stopping of economic growth. A contemporary example of

the growth paradigm and basic$_2$ human interests trumping the interests of morally significant nonhuman organisms presently exists in Banff National Park. In their never-ending quest for more tourist dollars, the Sunshine Valley Ski Resort is expanding to accommodate 7,000 skiers per day.[144] This is resulting in the clearcutting of surrounding mountains and the construction of new parking lots on the ecologically-sensitive moranes around the resort. It is troubling that even in these areas such as Banff National Park, historically set aside in (at least partial) recognition of the separate and competing interests of natural nonhuman organisms, basic$_2$ (i.e. increased profits) and peripheral (i.e. downhill skiing) human interests justified by the growth paradigm are still allowed to trump the publicly accepted significance of natural nonhuman organisms. To address this problem necessitates the dismantling of the trend towards a global economy and the development of more bioregional-oriented economies of scale. But the stopping/slowing of growth and the move towards economies of scale can only be accomplished if reigning neoclassical economic models premised on the concept of "relative scarcity" are overthrown.

The traditional, strong anthropocentric value theory upon which traditional conceptions of liberalism are based, make it hostile to incorporating a prudential-principle for two reasons. The first relates to time-frames and the second to the thoroughly atomistic, rights-based approach liberalism takes toward property (i.e. physical contexts). The right to property must not only be

based on an owner's individual rights, but must also balance the rights of other humans (both in the present and future) and the interests of natural nonhuman organisms. In regard to the second reason, an environmentally sustainable politics must be able to value the inter-relation between humans, natural nonhuman organisms, and the physical context in which they live and on which they are all dependent. In regard to the first reason, sustainability necessitates a politics with the capacity to break with the interests of the immediate and ensure the just treatment of both future human and nonhuman organisms.

All forms of liberalism focus to lesser or greater degrees on protecting the rights of individuals, and individual rights (to some degree) form a seminal principle in any sustainable and just society. At the extreme, however, neo-conservatism has seized on the concept of individual rights and enshrined it as the *sole* measure of justice within a society. One of the spin-offs of neoconservatism's obsession with individual rights, and the atomistic conception of society it produces, is a myopic fixation on immediate human interests. This fixation is manifest in diverse ways but one of the most dangerous and pervasive is the decision-making mechanism -- Cost Benefit Analysis (CBA). At present levels of resource and energy consumption, it is highly questionable whether even the Brundtland conception of "sustainable development" remains a possibility. For example, discounting the monetary value of one human life today at a rate of 5% per year leaves one with

the absurd conclusion that a single human life today is worth more than sixteen billion lives five centuries from now.[145] Discounting posterity combined with an economy based on relative scarcity provides the grounding rationale for continually increasing levels of resource extraction, material consumption, and the destruction of nonhuman organisms. The hyper-immediacy implicit in contemporary liberalism, largely premised on the absoluteness of the "individual", creates a level of speciesism which precludes the Greater Value Thesis and the degree of moral concern for nonhuman organisms expressed in Chapters One and Two.

The problem with the immediacy of the neo-conservative time-frame and its desire to tie individual rights to property rights, is exemplified in a paper entitled "Pollution and Political Theory" by Libertarian Tibor Machan. Machan argues that a libertarian-capitalist framework must be adopted if "pollution" is to be stopped.[146] I am essentially characterizing neoconservative ideology as the enactment of capitalist-libertarian theory. Machan maintains that only through the absoluteness of an individual's right to "life, liberty, and property", will pollution be eliminated. He states:

> Capitalism requires that pollution be punishable as a legal offense that violates individual rights.[147]

Under capitalist-libertarianism, according to Machan, any pollution which would harm non-consenting individuals would be "legally prohibited".[148] He stresses that under libertarianism, if a polluter is proven in a court of law to be inflicting harm on non-

consenting individuals, then the polluter must cease polluting regardless of the economic consequences for themselves or society. By analogy, Machan argues that as the sexual needs of a rapist do not justify the rape of a non-consenting individual, the economic needs of a polluter do not justify harm to a non-consenting individual. Further analysis of Machan's argument will exemplify how neoconservative ideology comes to mutually exclude both a prudential-principle and the possibility of an environmentally sustainable society.

In 1986 the "Butler Tunnel Site", a toxic waste dump near Pitsdon, Pennsylvania, contaminated the town's drinking water. Obviously, the contamination represented a fundamental violation of the "right to life" of Pitsdon residents.[149] Although Machan argues in theory that "potential polluters" could be held liable for "potential" harm to individuals, because of its fixation on the immediate, neoconservative ideology can only advocate *after-the-fact* resolutions to actual environmental disasters. Thus, prudence, prevention, and effective regulation are all logical impossibilities. Within a neoconservative framework the "right to property" and the management of that property lies entirely with the individual owner(s). Consequently, the problem of "potential" or existing pollution is a non-existent problem until after Pitsdon's water was contaminated.

Theoretically, it could be argued that because the river is *public* property, legal action is necessary and justified. It could also be argued that if all public property was privately owned,

potential polluters would be far more inclined to keep toxic waste contained on their own property for fear of legal reprisals. But a theory based solely on individual rights cannot respond to the "potential" of any injustice, let alone one between humans and natural nonhuman organisms, because to do so could result in the violation of individual rights -- the very absolute being protected. Utilizing a Machan-like example, a "potential" murderer (who could be anyone) is not a murderer until the criminal act is committed, incriminating evidence is presented, and the individual found guilty in a court of law. Machan states:

> The onus of proving criminal wrongdoing is on the prosecution, since without such proof untoward and restrictive actions would easily violate individual rights.[150]

In communities the world over the potential for environmental disaster, hence injustice, is always present. But in accordance with neoconservative ideology, this "potential", and any resulting violation of an individual's "right to life", are non-existent problems as long as the toxic waste remains contained on the property of the "potential" polluter. Regarding the implementation of libertarian theory Machan states:

> Stationary sources of pollution contained within the polluter's private property present no insurmountable problem to libertarianism. Toxic as well as nuclear wastes, for example, can be identified as polluting and if owners of firms dealing with these would act in a proper fashion, they would have to confine their operations to areas where others are left unharmed.[151]

In one sense this hinges on how one interprets "identified as polluting", but if property rights remain paramount with respect to

"potential" polluters, then the "identification of pollution" can only exist in the malignant livers of Pitsdon residents, and the devastation of the surrounding environment.

Within the context of serious environmental degradation such as occurred at Pitsdon, neoconservatism cannot simultaneously uphold both absolute property rights for "potential" polluters, *and* the "right to life" of non-consenting individuals. Machan advances the primacy of individual rights grounded in an absolute right to, and control over, property (also accorded to polluters). But this notion can only end in contradiction when confronted with the unmediated "right to property" of a toxic waste dump and the right to life of non-consenting individuals, as was the case in Pitsdon. Consequently, one can deduce that neoconservatism's obsession with the grounding of individual rights in property rights produces principles of property ownership which are antithetical to both the interests of natural nonhuman organisms and long-term environmental sustainability.

In contrast, the left has traditionally countered the present-tense nature of liberalism through a greater emphasis on planning, and social or group values. This emphasis on a "group ethic" is fundamental to an environmentally sustainable politics and will be explored later. However, in light of the left's ideological commitment to economic growth and technological advancement already explored, there exists no *cogent* theoretical home for environmental justice and environmental sustainability within the traditional left.

Taking into consideration the critique of traditional ideologies undertaken in this chapter, one is left asking -- "What would an environmentally sustainable and just politics look like?" This is obviously an enormous and topical question on which a vast array of literature exists. I will not attempt to deal with this question in any systematic sense, but in light of the considerations with which this paper has dealt, it would seem that beyond the earlier discussed "prudential principle" there are three other fundamental principles which an environmentally sustainable politics must work to include.

First, it would need to acknowledge that nonhuman organisms, and indirectly, the physical contexts on which they depend, can hold moral value. This follows from the fact that all nonhuman organisms have interests and hence moral considerability, and also the ecological premise that "each thing is *what* it is in part by being *where* it is". Thus, in contrast to Machan, property is much more than the empirical grounding of individual rights. As has been shown, any politics which lacks the ability to accord value to nonhuman organisms and the physical contexts (i.e. ecosystems) upon which they depend is not environmentally sustainable.[152]

The second concept seminal to a sustainable politics is some form of federalism. By "federalism" is meant a federation of mutually associated, semi-autonomous communities or provinces under one, sovereign state. Thus, a central governing body has the constitutional right to enact laws which apply directly to citizens in the constituent provinces or communities. Many charge that

federalism is contrary to the very essence of bioregionalism, and is actually an impediment to an environmentally sustainable politics. Kirkpatrick Sale, a leading proponent of bioregionalist theory, argues that the best guarantee of social and ecological harmony is through self-government being accorded to the various communities within a bioregion.[153] This strong emphasis on decentralization and community empowerment is of central importance to the bioregional vision. There is little doubt that communities within bioregions and/or within existing political regions must empower themselves in order to properly safeguard their local environments and hence the long-term sustainability of the planet. Those who live and observe their local environment on a daily basis often know most about how to care for and protect it. Thus, on the positive side, the bioregional vision breeds a strong moral attachment to "place", and hence provides a strong framework for recognizing and accommodating the moral considerability and, where warranted, the moral significance of nonhuman organisms.

The principal problem with the bioregional political model is the *extent* to which it is committed to de-centralization. Bioregional principles most definitely provide valuable insights into the way one should strive to live in harmony with the natural world by focusing on the part that is immediately underfoot. On one hand the regional democratization of the environment charges individuals with the responsibility for their local environments, but bioregionalism's decentralization platform fails to provide a strong enough political structure to ensure that the interests of

nonhuman organisms are not unjustly sacrificed to basic$_2$ human interests. If one was to grant political autonomy to the various communities existing within a particular bioregion, there is no guarantee that each would conduct their interactions with nature in an environmentally benign and sustainable way.[154]

To further illustrate this point imagine a scenario in which there are two communities within the same bioregion. They share a beautiful boreal forest. One community might believe in the ecologically-informed practices of the bioregional vision and selectively log the forest to meet their needs, but this does not necessitate that the second community share the same vision. As an autonomous political entity the second community can choose to clearcut its portion of the forest and sell the timber to pay for a hydro-electric dam to power a new aluminum smelter, impacting on the environment in ways affecting the surrounding communities. This form of community-based relativism, implicit in bioregionalism by design, has its roots in Sale's assumption that there is a "clear identity of interest" among the various communities within a bioregion, and furthermore, that these communities are relatively homogenous and organically united through an ecological identity.[155] Although Sale is correct at the level of geography, conceptually and historically speaking it is clearly possible for moral agents to act against their own, and natural nonhuman organisms', long-term environmental interests. Thus, "bioregionalism" is best understood as a belief system which outlines how individual human beings should relate to nature. As

a consequence, it emphasizes the subjective, the local, and the romantic, and in so doing overlooks the need for a strong overarching system which can better ensure the interests of nonhuman organisms are protected over both space and time.

In contrast to neoconservatism's radical individualism, and in light of the expanded moral community dictated by GVT, the third key principle in the development of an environmentally sustainable politics is the recognition that the environmental ethic advanced is fundamentally a group ethic.[156] This reality has often led to the right categorizing environmentalists as "closet communists" and the traditional left embracing environmentalism as a means to further many of its existing arguments. However, in light of the left's shared ideological commitment to the growth and technology paradigms in capitalism, both these claims are highly problematic. An environmentally sustainable politics must be "group" oriented because it is not necessarily the environmental impact of individual actions taken in isolation that are unsustainable, but the *cumulative* impacts of a multitude of individuals acting in environmentally unsustainable ways. Although environmentally conscious actions are necessary at the level of individual choice, for a politics to be sustainable it must incorporate one of the principal presuppositions behind my critique of neoconservatism, namely -- that the *detrimental* results of group choices (e.g. a neo-classical economic system) are ultimately borne by all collectively, including natural nonhuman organisms. Or, from another perspective, nature has little regard for individual rights

or human privilege.

Within the context of the above three principles for a sustainable politics, a federation of bioregions has the potential to be an environmentally sustainable and just political structure. Although suffering shortfalls, a federal nation-state at least has the *potential* to ensure compliance to commonly agreed upon standards and values over space and time. In his "Farewell Lecture to the World Bank", Herman Daly stresses the important role of Nation-states and opposition to the globalization of economics as necessary to an environmentally sustainable politics. Daly states:

> To globalize the economy by erasure of national boundaries through free trade, free capital mobility, and free, or at least uncontrolled migration, is to wound fatally the major unit of community capable of carrying out any policies for the common good. That includes not only national policies for purely domestic ends, but also international agreements required to deal with those environmental problems that are truly global (CO_2, Ozone depletion)...Cosmopolitan globalism weakens national boundaries and the power of national and subnational communities, while strengthening the relative power of transnational corporations.[157]

Bioregionalism's political naivety aside, the idea that politically defined regions largely serve only human interests and fail to incorporate the interests of nonhuman organisms, and nature in general, is an observation of seminal importance. Stepping out of the present context and back to Chapter Two for a moment, one can now venture to state that boundaries based on bioregions are by design much more capable of quantifying the significance of non-sentient organisms than traditional political boundaries. The

principal reason for this is the ecological informed understanding of physical context, and the potential for the integration of human and nonhuman values.

Many would simply dismiss the notion of empowering, or politicizing, bioregions within the context of a federal state as a political impossibility. But, as mentioned earlier, the idea that bioregions should have political representation is not new, and, in Ontario, internal waters are already modelled along watershed lines (e.g. Credit Valley, Grand River, etc.). It is certainly true that changing political boundaries without taking into consideration human factors (e.g. culture and religion) would not be sustainable because of the potential for increased instability at the political level (e.g. contemporary Russia). But the empowerment of bioregions would present a means through which the considerability, and most importantly the significance, of natural nonhuman organisms could be given meaningful representation in the human decision-making process.

One way of potentially broaching this issue lies in the establishment of bioregional shadow governments.[158] For example, in the two-tier parliamentary system in Canada, Senators are appointed by region. With some imagination and political will, the present day Senate could be reformed to function "bioregionally". In other words, Senators could be appointed to represent the interests of major bioregions within the country, and act as the eco-watchdogs on the more regional-based and individual-oriented Lower House of human concerns.

In summary, an environmentally sustainable politics is in fundamental opposition to the value axioms and practical implications of contemporary liberalism as manifest through the radical individualism of neoconservative ideology. In contrast, because the unintended consequences of our interventions into nature too often have serious environmental implications, an environmentally sustainable politics requires the implementation of a prudential-principle. In essence, a prudential principle would seek to limit the scale of human interventions into nature in order to ensure natural adjustment mechanisms were able to properly absorb the shock.

Unlike the neoconservative's obsession with empirically grounding individual rights in property rights, an environmentally sustainable politics must be able to value physical contexts in a broader morally informed sense. Thus, within an environmentally sustainable society, property must be treated by both the state and the owner as much more than a physical extension of the self, and/or a commodity for exchange. A sustainable society must be structured to account for the reality that property provides a "home" for both humans and natural nonhuman organisms.

CONCLUSION

This thesis has argued for expanding the moral community to include natural nonhuman organisms through the extension of the interest-principle, and has also focused on the compatibility of this extension with traditional anthropocentric value theory and with different political ideologies, especially neoconservatism. In keeping with biocentric and ecocentric egalitarian ethics, I have argued that traditional, strong anthropocentric value theory is largely to blame for the injustices wreaked on natural nonhuman organisms. But contrary to the non-anthropocentrism advocated by biocentrists and ecocentrists, I have argued that a weak anthropocentrism is the most philosophically defensible grounding for both an environmental ethic and an environmentally sustainable politics.

Biocentric and ecocentric ethics advocate that the first-principle of an environmental ethic is that all living organisms (human and nonhuman) are of equal value. Paul Taylor argues that it is only after this has been established that one can determine when and why trumping the interests of other members in the "Earth's Community of Life" is ever justified. Taylor's biocentric egalitarianism argues two principal points: (1) a natural nonhuman organism has definable interests and hence a "good" that can be benefited or harmed, and (2) that all natural nonhuman organisms, as members in the "earth's community of life", have *equal* "inherent worth". Principle (1) also forms the basic premise in my argument

for the extension of the moral community to include natural nonhuman organisms. In opposition to a biocentric egalitarian ethic, however, I argue that it is more ethically consistent, and politically powerful, to replace Taylor's second principle with a distinction recognizing the difference between the moral considerability of natural nonhuman organisms and their moral significance. As a result, the extension of the interest-principle to include the interests of natural nonhuman organisms provides grounds for their being morally considerable, but not necessarily for their being as morally significant as humans (i.e. as valuable as humans).

Contrary to the biocentric perspective, I have argued that the significance of non-sentient organisms cannot be entirely intrinsic to the organisms themselves without resulting in serious counter-intuitive resolutions to human/nonhuman conflicts (e.g. that, *prima facie*, HIV has moral significance independent of contextual considerations). Thus, unlike humans and sentient nonhumans, the value of non-sentient organisms is partly dependent on the context within which they are found. In other words, their value is not solely determined by what they are (i.e. as individual organisms and/or as members of a species), but is also determined by where they are (i.e. the physical context within which they live), and their species populations relative to externally defined contexts (i.e. their populations within local, national, and international bioregions.

As maintained from the outset, a strong anthropocentric value theory grounded entirely in human subjectivity randomly excludes the interests of many sentient and the vast majority of non-sentient nonhuman organisms from consideration in the moral deliberations of humans. As exemplified in the arguments of Feinberg, traditional anthropocentric value theory relegates natural non-sentient organisms to the status of "mere things". In opposition to this perspective, I have argued for a weak anthropocentric value theory which acknowledges that natural nonhuman organisms are teleological centres of life with definable interests, and hence a "good" that can be benefited or harmed. In this respect, natural nonhuman organisms are qualitatively different from "mere things", and thus morally considerable and, where warranted, morally significant. The subjectivity implicit in both traditional anthropocentrism and Sagoff's conception of weak anthropocentrism, ultimately results in the value of natural nonhuman organisms being dependent on individual human preference. This leads to an unacceptable conclusion wherein the value of natural nonhuman organisms becomes determined by subjective categories of human experience, such as aesthetic pleasure. As a result, high profile species such as cute, cuddly seal pups tend to receive state protection, whereas the unseen Northern Cod population is almost eradicated before protective measures are taken.

Contrary to a traditional, strong anthropocentric value theory, a weak anthropocentric value theory is better equipped to

adjudicate conflicts of interest between humans and natural nonhuman organisms. The principal reason for this is that strong anthropocentrism, because of its thorough subjectivity, cannot support a cogent theory of inter-species justice. For example, human/nonhuman conflicts such as wearing a fur coat, constructing another golf course, or clearcutting a mountain for a ski hill, have traditionally been construed as matters of individual taste and thus beyond moral reproach. In essence, a strong anthropocentric value theory precludes the very concept of inter-species justice in advocating that all human actions are just as long as they do not impact unjustly on the interests of other humans. To adjudicate human and non-sentient nonhuman conflicts, I expanded VanDeVeer's "Two Factor Egalitarianism" to include a third factor. This expansion takes into consideration both the level of interest attributable to the non-sentient organism(s) and human(s) involved in the conflict, *and* the organism's population within defined physical contexts (eg. local bioregion, national boundaries, global context).

Within the arena of human action, a weak anthropocentric value theory and a complementary theory of inter-species justice will put some limits on human freedom as traditionally conceived. Consequently, political ideologies such as neoconservatism, grounded entirely on the absoluteness of individual rights, are structurally unable to accommodate the necessity of limiting the environmental impact of human actions on natural nonhuman organisms and the environment. Although neoconservatism is arguably the most

environmentally damaging because of its strong anthropocentrism, radical individualism and global proliferation, all traditional ideologies have similar problems when it comes to incorporating the moral considerability and, where warranted, the moral significance of natural nonhuman organisms.

I have argued that the principal reason for this inability is the commitment of all traditional ideologies to economic growth -- "growth" largely premised on unquestioned technological expansion. Nowhere are the environmentally destructive capacities of the relationship between technology and growth more evident than in the concept of relative scarcity advanced by neo-classical economist Julian Simon and libertarian Jan Narveson. Underlying the premise that the scarcity of non-renewable natural resources is relative is Simon's uncompromising commitment to growth, technological advancement, and a value-neutral conception of technology. His notion that resources are not in any meaningful sense "finite" is symbolic of the neoconservative belief that individual human owners have an unfettered right to completely exploit their corner of the natural world without concern for other humans or the natural nonhuman organisms directly or indirectly effected.

A value-neutral conception of technology fails to take into account that the values which impact negatively on the environment and natural nonhuman organisms, such as growth values, are implicit in many technologies by design. Traditionally, these values have remained implicit in the technology's purpose and, because of the economic benefits enjoyed by some, these "implicit values" have

become socially, politically and scientifically legitimized and internalized. Many technologies amplify the scale of human action in an effort to increase growth, but in doing so, also greatly increase human impact on natural nonhuman organisms and ecosystems. This is not morally justifiable behaviour in a community of moral concern, wherein humans have the inherent responsibility to limit the negative impacts of their actions on natural nonhuman organisms. The attitude which advocates technology for technology's sake and the destructive technologies it produces (eg. nuclear power/weapons) must be limited and opposed at every opportunity.

In light of strong anthropocentrism, and its contemporary political complement neoconservatism, I have argued that the structural exclusion of the interests of natural nonhuman organisms creates an environmentally unjust and unsustainable framework for social, political and economic organization. In order to overcome these injustices, an environmentally sustainable politics must include four basic principles. First, it must recognize that natural nonhuman organisms, and indirectly the physical contexts on which they depend for survival, can hold moral value. Greater representation through the politicization of bioregions is one potential way of recognizing the moral considerability and/or significance of natural nonhuman orgnisms. Second, a sustainable politics must incorporate a "prudential-principle" which would work to safeguard the long-term interests of humans, natural nonhuman organisms, and nature in general. Third, it would be best

established within a federation of provinces or bioregions. This is needed to provide the overarching regulatory structure necessary to ensure that the interests of natural nonhuman organisms are taken into consideration prior to human interventions, and protected when deemed morally significant. And the fourth principle seminal to an environmentally sustainable politics is the recognition that, although concerned about the survival of individual organisms (human and nonhuman), an environmental ethic at the political level is fundamentally a group ethic. This "group" focus accompanies the expansion of the moral community to include natural nonhuman organisms, and recognizes that it is the cumulative impact of technologically enhanced individual human actions that results in the greatest environmental destruction.

One-hundred and twenty-five pages ago I began with a Wendell Berry poem for a reason. In it he states, "My subjects are my objects: house, barn, beast, hill and tree." I took this line within the context of Berry's poem as a metaphor for humankind coming to understand itself as functioning within and with nature as opposed to outside and against it. The poem echoed my own intuitions that an extended moral community should be embraced. Throughout this paper, I have worked to evolve a moral community in which natural nonhuman organisms are no longer understood as simply mere "objects", but are seen as moral subjects and hence are worthy of moral concern. Regarding "beast, barn, hill, and tree" Berry states:

> Reader make no mistake. The meanings of these must balance against their weight.

At present, what is needed to give "meaning" to the nonhuman organisms, and balance the "weight" of our responsibilities to the natural world, is a social/political system that recognizes and reflects nonhuman value. But, when Berry's words are uttered within the reality of an abstract world based on leaking reactors and "Aerosol Cheese", the future for both human and natural nonhuman organisms is far from poetic.

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2. Robyn Eckersley, *Environmentalism and Political Theory: An Ecocentric Approach*, (New York: State University of New York Press, 1992), 7.

3. Sagoff, *Economy of the Earth*, 150. Arne Naess coined the term "deep ecology" in his article "The Shallow and the Deep, Long-Range Ecology Movement. A Summary", *Inquiry*, Vol.16, 95-100.

4. Arne Naess, "Interview with Arne Naess" in *Deep Ecology*, by George Sessions and Bill Devall, (Salt Lake City: Peregrine Smith Books, 1985), 74.

5. Sagoff, *The Economy of the Earth*, 150-51.

6. Peter Timmerman, in question and answer period, IREE Workshop on Environmental Ethics, October, 1993. This was my first encounter with the term "sustainable politics", the meaning of the term in this context is my own.

7. Eckersley, *Environmentalism and Political Theory*, 39.

8. Ibid., 36.

9. Andrew Brennan, *Thinking About Nature: An Investigation of Nature, Value, and Ecology*, (London, England: Routledge, 1988),139.

10. Etymologically "biocentric" means "life-centred" and "ecocentric" means "earth-centred". See Warwick Fox, "The Deep Ecology -- Ecofeminism Debate", Environmental Ethics, Vol. 11, 7-8. As Fox correctly points out, most deep ecologists are ecocentrists, Taylor being the notable exception. In the future, I will distinguish between the two as is necessary, but of importance here are two characteristics both share 1) non-anthropocentric value framework, and 2) some form of nature-based egalitarianism.

11. Eckersley, *Environmentalism and Political Theory*, 42.

12. Ibid.

13. Arne Naess, "The Shallow and the Deep, Long-Range Ecology Movement. A Summary", *Inquiry*, Vol.16, 96.

14. Some of this reconciling of differences has recently occurred at the social/political level in the United States where Social Ecologist, Murray Bookchin, publicly declared his support for

Deep Ecologist and Earth First! activist, Dave Foreman. Bookchin also declared support for wilderness protection. One can only presume that Bookchin's actions are motivated to unite different approaches which share complementary political objectives. Eckersley, *Environmentalism and Political Theory*, 227.

15. Eckersley, *Environmentalism and Political Theory*, 38.

16. Bryan G. Norton, Book Review of *Respect for Nature*, *Environmental Ethics*, Vol.9, 1987, 261-62.

17. The word "thing" has been substituted for "other" because traditional ethical theories assume human beings to be intrinsically valuable by nature.

18. Robin Attfield, *Ethics of Environmental Concern* Second Edition, (Athens, Georgia: The University of Georgia Press,1991), 152. Internal quotes by Val Routley from Peter Singer's "Not for Humans Only: The Place for Nonhumans in Environmental Issues", in K.E. Goodpastor and K.M. Sayre (eds.), *Ethics and Problems of the 21st Century*, Notre Dame and London: University of Notre Dame Press, 1979.

19. Singer, *Not for Humans Only*, 204.

20. Ibid.

21. Sagoff, *Economy of the Earth*, 148.

22. See Richard and Val Routley's idea of a "no detachable values thesis" in, "Against the Inevitability of Human Chauvinism", in *Ethics and Problems of the 21st Century*, Eds. K.E. Goodpastor and K.M. Sayre, Notre Dame: University of Notre Dame Press, 1979.

23. Holmes Rolston III, "Are Values in Nature Subjective or Objective", *Philosophy Gone Wild: Essays in Environmental Ethics*, (Buffalo, New York:Prometheus Books,1986), 105.

24. Ibid., 106.

25. Paul Taylor, *Respect for Nature: A Theory of Environmental Ethics*, (Princeton: Princeton University Press, 1986), 73.

26. Ibid.

27. Ibid., 75.

28. Ibid., 12.

29. Ibid., 13.

30. Janna Thompson, "A Refutation of Environmental Ethics", *Environmental Ethics*, Vol.12, Summer 1990, 151.

31. Ibid.

32. Taylor, *Respect for Nature*, 66-67.

33. Here I am using the general term "intrinsic value" as I defined it earlier, but in this particular case Taylor would use the term "inherent worth".

34. Joel Feinberg, as quoted in Robin Attfield's "The Good of Trees" *Journal of Value Inquiry*, 15, 1981, 38-39.

35. Attfield, "Good of Trees", 39.

36. Ibid.

37. Joel Feinberg, "The Rights of Animals and Unborn Generations", *Philosophy and Environmental Crisis*, ed. William T. Blackstone, Athens: University of Georgia Press, 1974, 52.

38. Ibid., 53.

39. Ibid.

40. Ibid.

41. Ibid., 54.

42. Ibid.

43. Ibid.

44. Attfield, "Good of Trees", 39.

45. Ibid.

46. Attfield, "Good of Trees", 42.

47. Feinberg, "Rights of Animals and Unborn Generations", 54.

48. Whether or not nonhuman entities can be holders of "rights" is a much debated topic and the greatest advocate of the pro-side is legal scholar, Christopher Stone.

49. See first quote assigned to Feinberg on page 16.

50. Kenneth Goodpaster, "On Being Morally Considerable", *Journal of Philosophy*, 75, 1978, 311.

51. Brennan, *Thinking About Nature*, 138.

52. Taylor, *Respect for Nature*, 19-20.

53. Dave Foreman, as quoted in Robyn Eckersley's *Environmentalism and Political Theory*, 230.

54. Warwick Fox as quoted in Eckersley *Environmentalism and Political Theory*, 230.

55. Norton, "Book Review on *Respect for Nature*", 265.

56. Sagoff, *Economy of the Earth*, 148.

57. Ibid., 148-49.

58. Ibid.

59. Ibid.

60. Ibid.

61. Gifford Pinchot, *The Fight for Conservation*, (Seattle: University of Washington Press, 1910, p.42. Taken from Sagoff, *Economy of the Earth*, 148.

62. Sagoff, *Economy of the Earth*, 149.

63. Ibid., 148.

64. Attfield, "The Good of Trees", 51.

65. Attfield, *The Ethics of Environmental Concern* 2nd. Edition, 169.

66. Philip Devine, in Attfield's *Ethics of Environmental Concern*, 169. **N.B.** Devine does not advocate equal shares of water, but uses this example to emphasize the absurdity of any such premise.

67. Thompson, "A Refutation of Environmental Ethics", 147-60.

68. Goodpaster, "On Being Morally Considerable", 311.

69. Ibid.

70. See page 29, Chapter One, this paper.

71. Donald VanDeVeer, "Interspecific Justice", *Inquiry*, 22, 68.

72. Ibid.

73. Ibid., 70.

74. Ibid., 65.

75. Ibid.

76. Ibid., 62. It should be noted that some opponents to "GVT" argue that this is an unacceptable conclusion. Richard and Val Routley maintain in "Against the Inevitability of Human Chauvinism", that moral scenarios can be envisioned wherein the morally correct act is to sacrifice the basic interest (i.e. the biological survival) of a human for the basic interest of a natural, sentient, nonhuman organism. See Richard and Val Routley's "Wombat vs. Hitler" scenario in "Against the Inevitability of Human Chauvinism", Ethics and Problems of the 21st Century, Eds. K.E. Goodpaster and K.M. Sayre, Notre Dame: University of Notre Dame Press, 1979, 57.

77. Ibid., 68.

78. We will not concern ourselves with the fourth type of conflict delineated by VanDeVeer as its ramifications seem somewhat trivial. The example of a type-four conflict given by VanDeVeer is buying a new wallet for himself or a new toy for his dog. Ibid., 68.

79. VanDeVeer does acknowledge this as a problem. Ibid., 68.

80. Ibid., 70.

81. Ibid.

82. Turkeys are considered to have very low intelligence.

83. "Majority" denotes an important qualification because I in *no* way want to maintain that *all* sentient creatures are incapable, or will never be capable, of suffering in the way VanDeVeer maintains is unique to humans. Some higher level primates, and/or dolphins may already be capable of such suffering.

84. VanDeVeer, "Inter-Specific Justice", 74.

85. Ibid., 68.

86. I am excluding death by accident, for example, travelling to and from the Yukon, or being malled by a Grizzly bear, etc..

87. Attfield, *The Ethics of Environmental Concern*, 174.

88. Ibid., 174.

89. June Callwood, "Unsuccessful Prisoner Pays the Exacting Price of Justice", *The Globe and Mail*, Wednesday, September 10, 1986, A2.

90. This would only be the case in an emergency situation, or if there was no other form of insulation from the elements to which the individual had access.

91. Brennan, *Thinking About Nature*, 135-136.

92. Ibid., 135.

93. Ibid., 173.

94. Holmes Rolston III, "Are Values in Nature Subjective or Objective", *Philosophy Gone Wild: Essays in Environmental Ethics*, 91-117. For Baird Callicott see "The Case Against Moral Pluralism", *Environmental Ethics*, 1990, 12, 99-124.

95. Attfield, *Ethics of Environmental Concern*, 177.

96. Goodpaster, "On Being Morally Considerable", 311.

97. For example, page 32, Chapter One.

98. Robyn Eckersley, *Environmentalism and Political Theory*, 167.

99. Ibid.

100. For the entire "Bigtime" scenario see Chapter Two, pages 48-50.

101. The assumption here is that Elm trees are indigenous to Bigtime.

102. Karl Marx, as quoted in Peter Victor, "Economics and the Challenge of Environmental Issues", in *Economics, Ecology, Ethics*, Herman E. Daly ed. (San Francisco: W.H. Freeman, 1980), 208.

103. Frederick Engels, *Dialectics of Nature*, trans. Clemens Dutt, in Karl Marx and Frederick Engels, *Collected Works*, vol.25, (London: Lawrence and Wishart, 1987), 460. As quoted in Robyn Eckersley, *Environmentalism and Political Theory*, 81.

104. John Stuart Mill, "Of the Stationary State", *Principles of Political Economy*, in *Collected Works*, Vol.III, (Toronto: University of Toronto Press, 1965), 756, as quoted in John Rodman, "The Liberation of Nature?", *Inquiry*, 20, 116.

105. Robert Paehlke, *Environmentalism and the Future of Progressive Politics*, (Yale University Press: New Haven, 1989), 189.

106. Hans Jonas, "Technology and Responsibility: The Ethics of an Endangered Future", *Responsibilities to Future Generations*, ed. Ernest Partridge, (Buffalo, New York: Prometheus Books, 1981), 25-6.

107. Herman E. Daly and John B. Cobb Jr., *for the common good*, (Boston: Beacon Press, 1994), 15.

108. For example, I believe that some variation of a well regulated "market" represents the most environmentally sustainable means of allocating goods and services, but the controlling factor would definitely involve the scale and scope of the markets. Furthermore, the left's emphasis on humans as "social beings", must be a principal part of any environmentally sustainable ethic, because most of the serious environmental problems (e.g. global warming) are group, or societal, by nature and thus will require group solutions.

109. John Stuart Mill, *Principles of Political Economy*, "Of the Stationary State", Donald Winch ed., (Harmondsworth, U.K.: Penguin, 1979), 260.

110. Eckersley, *Environmentalism and Political Theory*, 80.

111. Ibid.

112. Ibid, 81.

113. Karl Marx, *Capital: A Critique of Political Economy*, ed. Friedrich Engels, trans. Samuel Moore and Edward Aveling, vol.3: *The Process of Capitalist Production as a Whole* (London: Lawrence and Wishart, 1970), 820, as quoted in Eckersley, *Environmentalism and Political Theory*, 80-81.

114. Ibid, 89.

115. Paehlke, *Environmentalism and the Future of Progressive Politics*, 222.

116. Ibid.

117. Julian Simon, *The Ultimate Resource*, (Princeton: Princeton University Press, 1981), 23.

118. Ibid.

119. Jan Narveson, "Resources and Environmental Policy", Unpublished Paper distributed at Ontario Philosophical Association convention at Carleton University, 1991, 6. Quoted with permission.

120. Ibid.

121. Julian Simon, Interview with William F. Buckley Jr., Reprinted in *Population and Development Review* (March): 205-218 as cited in Herman Daly and John Cobb, *for the common good*, 109.

122. Simon, *The Ultimate Resource*, 23.

123. Ibid.

124. Ibid.

125. Ibid., 49.

126. Narveson, "Natural Resources and Environmental Policy", 6.

127. Simon, *The Ultimate Resource*, 25.

128. A.N. Whitehead, *Science and the Modern World*, (New York: Macmillan, 1925), as cited in Daly and Cobb, *for the common good*, 36.

129. Dr. Edward Teller, as quoted in Dan Lyons "Are Luddites Confused?" *Inquiry*, 22, 381.

130. Ibid., 382.

131. Jonas, "Technology and Responsibility", 23.

132. The literature on the ecological destruction resulting from clearcut logging has grown consistently over the past twenty years. Many Swedish scientists note that so-called "sustain yield management" (a.k.a. "clearcutting") has produced a rapid loss of ecological values and biodiversity in Northern Sweden, and it is generally accepted that Swedish forestry practices are more sustainable than Canadian practices.

133. Jeff Heinrich, "China wants Canadian system for planning huge dam", *The Ottawa Citizen*, August 5, 1994, F6.

134. Ibid.

135. Lyon, "Are Luddites Confused?", 390.

136. Ibid., 388.

137. Narveson, "Resources and Environmental Policy", 6.

138. Hans Jonas, "Technology and Responsibility", 28.

139. *Our Common Future: The World Commission on Environment and Development*, (Oxford: Oxford University Press), pg.43.

140. The House of Commons Canada, "Bill C-62: An Act to provide for the achievement of regulatory goals through alternatives to designated regulations and through administrative agreements", First reading December 6th, 1994, Section 3(a)ii.

141. Statutes of Canada 1994, "An Act to establish the Department of Natural Resources and to amend related acts", Chapter 41, Section 2. Assented to 15th December, 1994.

142. The notion of integrating these values stems from the Brundtland Report's conception of "sustainable development", *Bruntland Report*, 62.

143. In all fairness to the Brundtland Commission, it recognizes that there are limits to development. Indeed, the Commission expands much more on the concept of sustainable development than most governments are interested in implementing.

144. Alanna Mitchell, "Banff's outlook not a pretty picture", *The Globe and Mail*, December 24, 1994, A1 and A7.

145. Peter Wenz, "Democracy and Environmental Change", *Ethics and Environmental Responsibility*, ed. Nigel Dower, Gower Publishing Limited: Aldershot, England, 100.

146. Tibor Machan, "Pollution and Political Theory", *Earthbound: New Introductory Essays in Environmental Ethics*, ed. Tom Regan, Philadelphia: Temple University Press, 1984, 74-105.
N.B. Machan uses the term "pollution" because the term "environment" carries within it a sense of human/nonhuman inter-dependency which violates the strong anthropocentric value theory underlying libertarianism.

147. Ibid.,97.

148. Ibid.,98.

149. Draper, Eric. "S.O.S. for the E.P.A." New Internationalist. No.157, March (1986) : 18-19.

150. Tibor Machan, "Pollution and Political Theory", 98.

151. Ibid.,100.

152. "Physical context" is being used here is the same sense as in Chapter 2. It is not intended to refer to the legal notion of property.

153. Robyn Eckersley, *Environmentalism and Political Theory*, 169.

154. Ibid.

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157. Herman Daly, "Farewell Lecture to World Bank", January 14, 1994. Unpublished. Available from author upon request.

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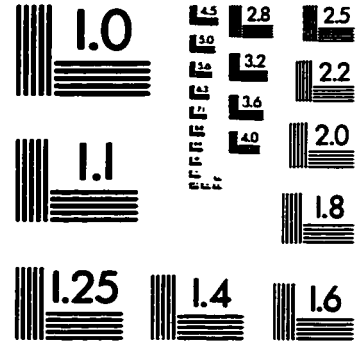
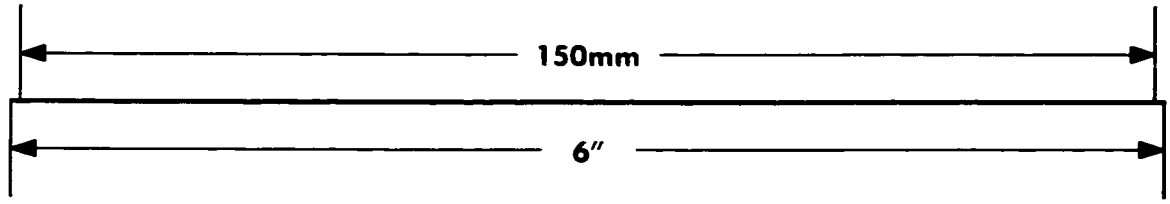
TEST TARGET (QA-3)





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