# Cross-pollinating Marxism and Deep Ecology: Towards a Post-humanist Eco-humanism

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In his critique of capitalism, Marx is fundamentally asking whether or not this system we have created is functioning to maximize human freedom, wealth, and happiness. While *Capital* seems to depart from the more humanistic and philosophical works of earlier Marx, it is essentially a critique of an economic system that does not fulfill the promises laid out in a humanist ethos. In this paper I will show that in an age of global environmental crisis we need to radically rethink what it means to be citizen in a global-ecological sense. My goal is to demystify the operations of humanism as a rational means of attaining democracy, freedom, and prosperity for all by situating it within the environmental crisis and analyzing the root causes of anthropogenic environmental degradation. By performing a theoretical cross-pollination between deep ecology and Marxism, I hope to illustrate the insights and trappings that both theories have on their own, and suggest a number of useful conjunctions that emerge in this act of discursive recycling. That said, the inability of capitalism and Marxism to conceptualize value outside labour, results in a larger genetic contribution from deep ecology than from Marx. However, I will use Marx's various critiques of capitalism, especially relating to

alienation, reification of exchange value, and the creation of surplus value, in order to reveal the limitations of an anthropocentric humanist discourse that does not factor nature into the equation, and also to point out some of the limits of the purely biocentric environmentalism espoused by deep ecology. By looking at ideas of species-being, labour, and capitalist production, I argue for the need to incorporate a deep ecological or biocentric perspective into any formulation of value, the good life, freedom, and democracy. Deep ecology is similarly limited because it is riven with contradictions surrounding the practical application of biocentric equality. Moreover, while deep ecology attempts to address the conceptual impasse of binary thinking and the pervasive nature-culture dichotomy, it relies too much on notions of spiritual connection to the earth based on a very bourgeois conception of wilderness/nature, and therefore establishes an ideal that is very likely impossible and perhaps not even desirable. Thus I will argue that Marxism needs to (re)consider the environment, and deep ecology needs to (re)consider the human. In the same way that capitalism obscures the social relations of individuals within a market of commodity exchange by making it appear that the relation is between things, anthropocentric humanism asserts a similar system of individual autonomy that ignores the visible and invisible processes of nature we depend upon. Anthropocentrism is the bourgeoisie capitalist to the biospheric proletariat. For humanistic discourse to have any currency within the age of global environmental crisis, we must extend the scope of the linguistic and ethical address to the various seen and unseen agents within the natural world upon which our mutual survival, quality of life, and ultimately freedom is contingent.

Marx begins the *Economic and Philosophical Manuscripts of 1844* by positioning himself against philosophical idealism and declaring that all history is the product of material relations of production. The basis of this is nature: "the worker can create nothing without *nature*, without the sensuous external world" (Marx 1978: 72). Marx further develops this position in *The German Ideology*: "in direct contrast to German philosophy which descends from heaven to earth, here we ascend from earth to heaven" (1978: 154). He rejects abstraction as the basis of knowledge and thus grounds reality in the earth. In *Contribution to the Critique of Hegel's Philosophy of Right*, Marx links this abstraction to language in the inversion of the universal and particular in subject and

predicate: "precisely because Hegel starts from the predicates of the general description instead of the real [subject] . . . and since, nevertheless, there has to be a bearer of these qualities, the mystical idea becomes this bearer" (Marx 1978: 18). On the surface Marx seems to deconstruct the binary between nature and culture by focusing on material conditions in a turn that leads critics like Donald Lee to claim that "there is no man-nature dichotomy in Marxism" (1980: 8).

On one level this seems to be the case, as Marxism becomes attuned to nature in a way inaccessible to idealist philosophers. In *The German Ideology*, Marx states that "life is not determined by consciousness, but consciousness by life" (1978: 155). For Marx the aggregate of life activity, rather than an abstracted essence, is the determining factor of material/social relations. Humanity is defined as *homo faber* (Man the maker), which Marx describes as self-actualization based on the transformation of the environment (*material prima*) into the object of labour. Thus for Marx, the environment cannot be separated from man; it is in fact his "inorganic body" insomuch as "man's physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of nature" (1978: 75). On the surface, this statement appears to be profoundly in line with the ecological project's focus on deconstructing the oppressive conceptual framework of Cartesian binaries that cleave nature and culture into two separate entities. A certain measure of ecological potential exists here, as Marx undercuts the notion of humanity residing solely in some abstract realm of philosophy where authentic being is tied to abstraction and alienation, and thus transcendence comes in moving beyond the physical. Hence for Marx, "a being which does not have its nature outside of itself is not a natural being" (1978: 116).

Marx argues that authentic being is intimately tied to the notion of species-being, a sense of community that foregrounds sociality within a broader environmental context of production and consumption. In other words, labour, which forms the basis for humanity's connection to nature, is alienated under capitalism and therefore species-being cannot be fulfilled. Marx states that "in estranging from man (1) nature, and (2) himself, his own active functions, his life-activity, estranged labour estranges the species from man. It turns for him the life of the species into a means of individual life" (1978: 75). Thus alienation is understood in terms of ownership and control of labour, rather

than objectification in and of itself. Charles Tolman states that "all labor objectifies. This is the very essence of labor. It is only when the objectification is governed by needs and priorities other than the producer's that one can speak of alienated labor" (1981: 72). Thus humanity becomes reunited with nature and itself when its labour is owned by each individual. For Marx, human alienation from nature is predicated on the notion of unrealized and unfair distribution of the mastery of nature and its resources. Therefore, alienation is a function of distribution, rather than an ontological or epistemological fissure. For humanity to be a part of nature, we must no longer be susceptible to the vicissitudes of nature. Val Routley argues that for Marx the

> real objection to capitalism is that it fails to carry out the process of mastering nature thoroughly enough. Nature is apparently to be respected to the extent, and only to the extent, that it becomes man's handiwork, his or her artefact and self-expression. (1981: 243)

Herein begins the first need for cross-pollination. Deep ecology is an approach to understanding the relationship between humans and nature that seeks to uncover the structural roots of exploitation at the heart of the environmental crisis. Deep ecologists challenge the strict subject-object distinction of a reductionist scientific paradigm and ask, "how can the individual self maintain and increase its uniqueness while also being an inseparable aspect of the whole system wherein there are no sharp breaks between self and the other" (Devall 1985: 65)? Departing from the modern scientific discourse of objectivity and mechanistic assumptions regarding nature, the principles of the universal right to self-realization and biocentric equality become the *modus operandi* for deep ecologists. Unlike reformist environmentalists, deep ecologists look for the root causes of the environmental crisis by acknowledging the ontological, epistemological, political, spiritual, and physical components of anthropogenic environmental destruction. Thus it becomes insufficient to simply reform the system because "economics itself is an invention that makes no ecological sense" (Suzuki 2003: 107). Many mainstream reformist ecological movements tend to focus on individual choice, recycling, green-consumerism, and a myriad of other shallow reformist agendas that ideologically shift

ecological responsibility from production to consumption. Timothy Luke argues that this shift, while it encourages a personal affective connection between individual choices and environmental consequences, does little to address the "fundamentally antiecological qualities of production in contemporary capitalist society" (Luke 1997: 135). While increasing efficiency and reducing humanity's ecological footprint is necessary, fully addressing the environmental crisis requires some radical ideological, political, material, and ontological transformations.

In a *Sand Country Almanac,* Aldo Leopold makes the case for an ideological shift that changes "the role of Homo Sapiens from conquerors of the land-community to plain members and citizens of it" (1966: 240). He "enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land" in an attempt to bring to surface the interdependency of all members of a community as they develop a cooperative, mutually beneficial balance (1966: 239). He argues that because most members of the biotic community cannot be consumed, sold, fed or eaten by humans we must seek another system of valuation that acknowledges the interconnectedness of all members of an ecosystem. An economic model "assumes, falsely . . . that the economic parts of the biotic clock will function without the uneconomic parts" (Leopold 1966: 251). Thus Leopold argues for the development of a land ethic that mitigates the freedom of individuals to commit acts unsuitable for the good of the biotic community, a necessary step to prevent continued environmental degradation. Just because we do not understand the role or purpose of something, doesn't mean that it doesn't have one. Leopold's morality can be summed up as "a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (1966: 262).

But what can be the basis of this evaluation? How can you efficiently apply the principle of biocentric equality, which states that "all organisms and entities in the ecosphere, as parts of the interrelated whole, are equal in intrinsic worth" (Devall 1985: 67)? Along these lines, "humans have no right to reduce this richness and diversity except to satisfy vital needs" (Devall 1985: 70). But what exactly is contained within this highly subjective category? The United Nations *Sustainable Consumption* report calculated ecological footprints for various countries around the world by comparing the

available biocapacity of the region in light of the country's current consumption and production. The biocapacity is then divided by citizens and thus forms the average hectares per person required to sustain a person in that country. While there are some methodological problems, namely that class needs to be more closely considered, the numbers reveal the extreme disparity between various national consumption levels. Worldwide, there are less than 2 hectares available per person. While the United States uses on average 9.6 hectares of land per person (with a 4.1 hectare deficit), Germany uses 4.6 (-2.8), India 1.0 (-0.5), and Ethiopia 0.7 (-0.2) (United Nations 2004: 48). Which of these consumption patterns represent vital needs? Surely an Ethiopian deserves more resources, but how much is enough? According to the report, "the overall consumption of the richest fifth of the world's population is 16 times that of the poorest fifth" (United Nations 2004: 12). Moreover, "the footprint per person of the high income countries is, on average, over six times that of low income countries and over three times greater than the Earth's biological capacity" (United Nations 2004: 15). If we simply redistributed resources more evenly, we would still not have enough to go around. Beyond this, the principle of biocentric equality tends to promote a mystification of the process of survival by advocating an enlightened form of altruism that nonetheless relies on centring the human subject as a benevolent steward.

Donald Lee argues precisely this by suggesting that "man as the unique creature with universal consciousness becomes responsible for all species. Man is the steward of the ecosystem for the good of the whole just as 'socialist' man is the steward of the human race" (1980: 16). Like Marx, Lee believes that production can be redirected towards positive and sustainable means if we simply rearticulate it within a more ecologically aware socialism. This stance vastly overestimates human ability, and nonetheless locates worth, if not within human evaluation, as dependent on our willingness for self-sacrifice and god-like benevolence towards the ecosystem. Moreover, Lee states that humanity can "produce for the good of the whole ecosystem," and thus works under the assumption that humanity can function as a primary producer (like plants), when our biological role is apex predator (Lee 1980: 16). Although we produce carbon-dioxide, which in turn feeds plants, this role is by no means unique, nor is it even beneficial at current exponential rates. We are producers, in the strictest

biological sense, only insomuch as everything is food that hasn't died. To try to occupy the role of benevolent producer is at best short sighted, idealistic, and technologically positivistic, and at worse, hubris, and doomed to failure.

Timothy Luke points out that while "serious abuses of Nature will probably lessen [under deep ecology] . . . the human being still is "more equal" than other beings in deep ecology's Animal Farm" (Luke 1997: 32). The very act of survival necessitates this kind of soft-anthropocentrism, and in the process of biocentric mystification fails to address issues of what constitutes "proper" use of nature. Members of Earth First!, who embrace a deep ecological stance, tend to deny humans, which are equally part of nature, the same sympathy they extend to nature and therefore reinscribe a very limited notion of the nature-culture relationship. Far from reconciling the fissure, they widen it to an almost uncrossable chasm, because culture, in its "advanced" forms, is seen as fundamentally incompatible with ecological co-existence. Yet we are social animals whose self-actualization is rooted in social and cultural interaction. Moreover, if all life is equal, why should we not save a human life over a grizzly bear or whale? What would be the basis of making these decisions? Who would get to decide when the value of an ecosystem or a rare plant or animal supersedes the rights of a human? Would we have courts to decide this, or would we just offer the weak, infirm, and disabled to the self-actualization of the flu virus, sharks, and tigers? I am being facetious, but these kinds of questions reveal serious gaps in the deep ecological schemata.

While acknowledging the intrinsic value of nature is indeed a necessary step, the principle of biocentric equality tends to obfuscate the inherently selfish act of survival that, within the human relationship with nature, will always operate within at least a soft-anthropocentrism. If deep ecology is to move from a philosophical-ethical stance towards a real political-environmental alternative, it must address these questions. The propensity of groups like Earth First! to valorize the noble hunter and gatherer's way of life betrays the patently bourgeois and urban sentiment of nature as a garden of fecundity and bounty. Anyone who actively lives off the land knows that it can often be a brutal struggle that does not easily translate to a principle of biocentric equality. It is easy to sentimentalize the idyllic connection to the land such a lifestyle seems to afford, but even hunters and gatherers and early farmers changed the landscape considerably, driving

many plants and animals to extinction, and radically altering geological features. Especially given current population levels, the anti-urban sentiment of many environmentalists tends to ignore the fact that urban areas take up less land and consume less energy than rural areas (Light 2003: 297). Moreover, the moral superiority of groups like Earth! First falls into the maudlin mythos of the heroic eco-warrior sacrificing herself for brother whale, a position that ironically reinforces the very anthropocentrism it seeks to shed. While a hungry tiger will not pause to consider the intrinsic value of their prey, the human is expected to do just this and thus achieves a kind of biocentric badge of honour that further distinguishes the human subject from nature.

Like many theories, deep ecology offers no real sense of transition, a problem that faced Marx when considering how new social formations come into existence. I do not mean to belittle the legitimacy of deep ecology, but we do need to ask these questions if deep ecology can provide any practical means of addressing the environmental crisis. Unfortunately, instead of challenging the basis of binary thinking, deep ecologists tend to simply reverse the conventional evaluation of the nature/culture dichotomy by celebrating pristine wilderness above corrupt culture. While there is indeed a value in pristine wilderness, the binary logic remains and "quietly expresses and reproduces the very values its devotees seek to reject" (Cronon 1996: 80). William Cronon examines the problems with the notion of wilderness by highlighting the constructed nature of any idea of wilderness, especially those that promulgate the idea of wilderness as the antithesis to humanity. He criticizes the concept of empty land as the projection of the "leisure-time frontier fantasies" of "elite urban tourists and wealthy sportsman" (Cronon 1996: 79). Because "the romantic ideology of wilderness leaves precisely nowhere for human beings actually to make their living from the land," it therefore promotes a binary logic that suggests "if nature dies because we enter it, then the only way to save nature is to kill ourselves" (Cronon 1996: 80,83). Moreover,

> the movement to set aside national parks and wilderness areas followed hard on the heels of the final Indian wars, in which the prior human inhabitants of these areas were rounded up and moved onto reservations. The myth of the wilderness as 'virgin,' uninhabited land had always been especially cruel when seen from

> the perspective of the Indians who had once called that land home. . . . The removal of Indians to create an 'uninhabited wilderness' — uninhabited as never before in the human history of the place — reminds us just how invested, just how constructed, the American wilderness really is (Cronon 1996: 79).

Thus we have to ask ourselves what it means to use and live in nature and how that relates to human self-actualization within an ecologically sustainable system. Fredrick Turner points out that "the polluter and the ecology freak are two faces of the same coin; they both perpetuate a theory about nature that allows no alternatives to raping it or tying it up in a plastic bag to protect it from contamination" (1996: 45).

For Marx, the use of nature is precisely the way that humanity attains proper self-actualization. The notion of the inorganic body, species-being, and self-conscious labour offer a number of ways to think about the human-nature relationship, but are ultimately tied to a transformationist ontology of domination. Labour is a good place to begin articulating a biocentric ethic because it acknowledges that humanity will always leave a mark on the earth, and it is precisely in this moment of discursive transformation, whereby humans and nature co-create each other, that an ethical-political-ontological system of responsible ecological citizenship begins to form. However, Marx's notion of labour is insufficient because it relies on the master/slave dynamic and thus maintains the artificial binary of nature-culture. Like Hegel's reversal of subject and predicate in the relationship between the universal and particular, Marx makes the same mistake when suggesting that "Nature is man's inorganic body" (Marx 1978: 75). Here, the subject is man (in the possessive), and the predicate is Nature; nature is subordinate to man, rather than man to nature. The master/slave relationship is not resolved; rather, nature becomes an absolute slave (the predicate) in the sense that its identity is effaced within the larger corpus of man (the subject). Ironically, Marx's myopic abstraction of the generalized individual (man as aggregate species-being) results in the same form of abstraction he accuses Hegel of in the relationship between universal and particular (Marx 1978: 18). For Marx, the particular, man as a whole, is the source of all meaning. John Clark points out that "rather than taking seriously the idea of human development as part of a larger

system of self-unfolding in nature, he quickly reverts to the view of humanity as supreme self-creator" (1989: 252).

Thus for Marx, we are alienated from nature in the same way that the labourer is alienated from his/her product, namely, we do not own the product of our labour. The solution is therefore absolute, communal (qua human) ownership, where the master-slave relationship is not resolved, but made moot because the slave has no subjectivity separate from the master. Marx extends the commodification of nature by naturalizing the process as a part of humanity's, and consequently nature's, self-actualization. Reiner Grundmann states that "nature appears above all as the medium of the realization of human social development," or in other words, a stage upon which the human drama unfolds, and not an actor with its own agency (1991: 5). This is problematic in the sense that it assumes the legitimacy of "the transposition of man into a god's role vis-à-vis nature" and expresses a "vast overconfidence and overestimation of human ability to interfere in complex and only partially understood natural systems without ill consequences" (Routley 1981: 240).

Thus Marxism becomes capitalistic to nature in that the wealth of a few (humans) comes at the expense of the mass (the ecosystem). If alienation is the result of external ownership of the products of labour, then human self-actualization becomes the alienation of all other beings from the products of their labour. Marx ignores this issue by claiming that "the animal is immediately identical with its life-activity . . . an animal only produces what it immediately needs for itself or its young. It produces one-sidedly, whilst man produces universally" (1978: 76). In a typical anthropocentric reduction, Marx discounts the production of nests, dens, ant-colonies, and, in general, the life-activity of animals (forgetting that humans too are animals) by arguing that animal labour is a manifestation of instinct, rather than self-conscious activity. Thus consciousness functions in the same way that money does in bourgeois capitalist society. In his critique of capital, Marx declares money as the "pimp between man's needs and the object," because exchange-value abstracts and becomes a "universal agent of divorce" (1978: 102,104). In both consciousness and money, the primacy of the mediator supercedes value by reducing it to a function of exchange. An object's/subject's value is based on its perceived utility to humanity and, thus, is dissociated from any intrinsic characteristic

within that subject/object. For example, humans are producers not because they produce but because, unlike animals, they are conscious of the act. Likewise, a tree has no value as a tree, but must be cut down and reduced to pulp or lumber before any worth can be ascribed to it. In this equation, consciousness (the abstract universal), rather than the act or object of production (the materialistic particular), signifies meaning.

For Marx, nature is a vessel for human labour: "labour is the father of material wealth, the earth is the mother" (1990: 134) There seems potential here if we use deep ecology to extend this consideration to the role of other agent's labour; not just human labour, but the labour of chloroplasts, foxes, and polar bears. Why does human labour in the production of meat supersede the labour congealed by the cow's activity? Humanity appropriates the surplus labour of nature by categorizing all value as contingent upon the often banal transformative powers of human agency. The anthroponormative impulse of "unique" consciousness ensures that humanity remains locked gazing at itself in the mirror — hairless tool-using monkeys with big heads and even bigger egos incapable of transcending our self-induced species solipsism.

The current trend in biotechnology and intellectual property rights illustrates some of the problems with making human labour the *sin qua non* of value. In her book *Biopiracy,* Vandana Shiva states that because biotechnology employs a reductionist paradigm, it reduces life to a series of processes and functions and "wildly exaggerates human power" (1997: 20). Those functions or components which do not fall into the definition — whether they are genes, molecules, or entire cultures — are therefore classified as useless, junk or redundant. By fragmenting the world into its constituent parts, a kind of DNA fatalism emerges that privileges the isolated part above the interrelated whole. In doing so, a reductionist worldview ignores the complicated interaction of organisms with their biotic and abiotic environments. "Nature is declared dead, inert and valueless," and the scientist, like Marx's labourer, revivify the empty vessel of nature with his genius touch, all the while denying nature's self-organizational regeneration by declaring life as "terra nullius" (Shiva 1997: 24, 46). A mechanistic view of nature preferences engineering over growing and thus establishes man as the measure of all things. This view becomes the foundation for the oppression of nature, women, and the developing world. Because the tropics hold much of the world's biodiversity, the old

paradigm of colonialism is maintained through the patenting of life forms, whereby the indigenous cultures that rely on that biodiversity are robbed of their way of life and sustenance. Even though 75 percent of all plant-based medicine originates in traditional knowledge, and the process of creation is often based on simple extraction and purification, bio-prospecting is seen as adding enough novel value to warrant ownership (Shiva 1997: 74). In an act of astounding human arrogance the insertion of one gene constitutes creation, whereas hundreds of millions of years of evolution are simply background noise we have clarified and improved upon. Moreover, the ownership of life constitutes the colonisation of the internal space of life itself, and thus threatens to open a corporate Pandora's Box. Stanley Aronowitz suggests that "the transformation of the human gene into an industrial raw material subject to private corporate ownership may signal the last frontier of the global empire" (2003: 186).

Marx's notion of *homo faber* works within a similar ontology of labour based on anthropocentric transformative agency. He states that labour is the living force that takes raw materials and "awaken[s] them from the dead" (Marx 1990: 289). In doing so he wildly exaggerates humanity's creative powers by making labour into a voodoo magic show of natural wonders where the earth becomes Sleeping Beauty awaiting the kiss from Prince Proletariat Charming. Thus he claims that

> a spider conducts operations which resemble those of the weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax (1990: 284).

Neil Evernden points out that a scientific, reductionist mode perpetuates its own assumptions because by "starting with mechanistic assumptions, it can only discover machines" (1985: 21). Because Marx starts with the premise that animal's do not think, they of course do not seem to, and thus resemble clever machines rather than life forms capable of agency. An alien visitor to earth might make the same conclusion about humanity, having no knowledge of our language, or a means of translating the perceived

activity into a correlative they could understand. This would especially be the case if this alien saw the extent to which we have undermined our own existence by polluting the earth. Consciousness for Marx is based on intent; however, proving intent is difficult enough in a legal setting when all the participants share the same language, form of consciousness, and context. Naturally, it will be even more difficult to do so across species lines, especially when you start with the assumption that only humans can transcend instinct. Neil Evernden points out that "animal is, by convention, the name of a thing, an object, a clever machine. To say one is animal-like is to say that he is thing-like, a mere object, or that he behaves like a machine, with no awareness or initiative" (1985: 77). The notion of unique consciousness, often connected with Descartes famous syllogism *cogito ergo sum*, delineates a hermetically sealed self whose home is not only outside of nature, it is outside of the body. This radical separation promotes a subject-object dyad that Neil Evernden suggests is perhaps the "most potent adversary of environmental thought" (1985: 54).

Like the biotech definition of creation, Marx's notion of labour foregrounds technique by assuming change of form as tantamount to creation. The original content, while it may be essentially the same, is simply an empty vessel awaiting labour's vivification. By jealously guarding consciousness as a solely human prerogative and then defining labour and agency as requiring consciousness, Marx reduces nature to mere raw material. Even though labour may simply involve picking an apple from a tree, humans are capable of understanding and planning the process and are therefore truly agents in this respect. Consciousness thus becomes an instrument of anthropocentric hegemony. Ted Benton argues that there are many problems in "Marx and Engels's systematic exaggeration of the potential transformative power of human action in relation to nature" (Benton 1996: 169). By focusing on transformation rather than collection or adaptation, the ontology of *homo faber* blocks a sense of *place* from developing by insisting on neutral *space* in need of manipulation. Thus "the world is a field for the use of tools," and any potential for a relationship based on reciprocity is undermined from the start (Evernden 1985: 128). The possibility for co-agency rooted in the collective nature of production is short-circuited and therefore increases the likelihood that ecological limits will be exceeded. Instrumentality, in the focus on transformation and intent, prefers the

adaptation of the environment to humans rather than humans to the environment. Hence space only becomes place when transformed by humanity. Economy and environment are thus connected through the "circuit of maggot and corpse" (Luke 1997: 71).

The consequences of the instrumentalist world view are central to understanding the sources and solutions to the environmental crisis. By reducing the earth to raw material, an instrumentalist worldview circumscribes a limited ontology of space that has resulted in a vast overextension of the earth's carrying capacity. Technology is not unnatural, but given the sophistication of human technology and the historic propensity to radically overextend natural limits, technology must be augmented with a philosophical and moral system that registers limits so as not to globalize all environmental problems. In his provocative, though often problematic book *The End of Nature*, Bill McKibben argues that by "changing the weather, we make every spot on earth man-made and artificial" (1989: 58). As such, "we can no longer imagine that we are part of something larger than ourselves," and thus are doomed to an unstable monoculture of largely mediated environments (McKibben 1989: 83). Marx's notion of participation in nature through labour is useful in that he rightly acknowledges the biological role that the evolution of thumbs, brain, and sociality has played in our understanding of the world. However, problems arise when all relations are categorized as natural only insomuch as they measure up to a specific mode of interaction. Marx's anthroponormative categorization is problematic because it discounts other modes of production (both human and non-human), and encourages a process of infinite transformation irrespective of natural limits. If humanity is most connected with nature and its species-being when engaged in the transformative act of labour, then in must be the case that humanity will be most human when the earth is completely dominated by this process. Thus "for Marx, raw material shortages reflected the inability of capital to master the environment," rather than a fundamental flaw in the whole project (Perelman 1996: 67).

Too often, technology is considered as neutral, and misuse comes in the false assumption that a tool only changes what it is being applied to. Beyond being a simplistic overgeneralization that does not take into account the profoundly political and economic forces that drive technological development, the claim to neutrality fails to acknowledge the underlying assumptions inherent in any technological manipulation of

the environment. Namely, technology assumes a subject-object instrumentality that naturalizes the process of utilization, transformation, and reduction. On a small scale, and in concert with non-instrumentalist world-views, this is not dangerous in and of itself and in fact, the predator-prey relationship involves a similar objectification (Evernden 1985: 97). However, problems arise when *homo faber* becomes the modus operandi for the ontological species-being of humanity. At current population levels, and within a globalized system of unsustainable consumption and production, the technological/instrumentalist modality threatens to unravel the basis of the system by draining the very "resources" the system requires to perpetuate itself. Like any constructed system of mediation, technology is not neutral. It imposes a very specific ontology based on manipulation, reductionism, subject-object binarism, and abstraction. When Marx articulates human self-realization as contingent upon such an instrumentalist paradigm, the conditions of agency circumscribed by the system encourages a fundamentally anti-ecological mode of human-environmental interaction.

Neil Evernden points out that "objectification is an inevitable part of the life-rhythm of any being that lives by consuming life" (Evernden 1985: 97). However, the problem with Marx and humanism in general is that this state of objectification has become a permanent and endemic condition of our relationship with nature. In a sense, we have no functional relationship with nature because relationship involves reciprocity. We have become the predator of the whole world and ideologically, politically, and materially we only see the world from the eyes of a predator. Humanity is the bourgeoisie capitalist extracting the surplus-value of the labour of the entire planet. While we are naturally technological, given the global nature of human hegemony and the profound implications of globalizing pollution, *homo faber* must be augmented by a system of mediation that mitigates our impact, and imagines new ontologies for humanity. Like any animal whose worldview compromises the homeostatic drive of a local ecosystem, natural limits will ensure that the ecosystem will nonetheless continue. Unfortunately, technology, in concert with colonial expansion and globalisation, has made it seem that we have transcended ecological limits by mitigating local environmental stress by simply taking resources from another area that is not as stressed. Thus local ecological problems are rarely contained by the homeostatic mechanism of

that particular bioregion. Our technological sophistication and the global reach of anthropogenic environmental degradation necessitate a self-conscious analysis of this particular mode of instrumentality. Part of this means deconstructing the subject-object ontology that guard's consciousness as a solely human mode. The question of course becomes how do we do this without falling into the altruistic soft-anthropocentrism of deep ecology, or the hard-anthropocentrism of Marxism and humanism? Perhaps the solution lies precisely in the difficult, but productive middle ground between these ideologies.

In the discussion of commodity fetishization and the money form, Marx laments that the social nature of transaction is obfuscated by the presence of a universal exchange equivalent. The congealed human labour is thus mediated by the equivalent (money), which therefore seems to be the source of value. The social character of the labour is abstracted twice and undergoes a process of reification that values the mediator above the object. This is precisely the role humanism/anthropocentrism has in relation to the environment. In this case the economy is seen as the source of value and meaning, whereas all food, life, and being are fundamentally rooted in the biosphere without which, we would literally be nothing. While the economy seems to be the source of jobs, wealth, progress, food, shelter and, ultimately, well being, Nature in its totality is the true source of value. Like the capitalist system he critiques, Marx cannot conceptualize nature outside labour, and thus no worth can be accorded to nature beyond its status as raw material. The economy, a system of equivalence and valuation for the purpose of exchange, thus takes on the role of simulacra effacing the original.

In discussing the creation of surplus-value, Marx suggests that the capitalist is able to keep labour to himself because he silences the worker by preventing the formation of unions, maintaining a reserve army of labour, dehumanizing work, and/or long hours that move beyond the necessary labour time. All these tactics ensure that workers cannot unite to form a collective voice, and thus the old tactic of divide and conquer allows the bourgeois capitalist to control the products of their labour. The money-form obscures the social relations of labour and alienates the worker and the commodity in a system of universal exchangeability. In regards to nature, Marx is the perfect vivisectionist, and while his notion of nature as man's inorganic body seems to promote a more ecologically

aware subjectivity, the impetus behind this ideology is to "[sever] the vocal cords of the world" (Evernden 1985:17). By reducing nature to an adjunct of the human body, the world becomes an immense marionette humanity is struggling to master. Nature is the great silenced because the anthroponormative gaze renders nature into raw material or principle matter. Foucault has shown that "social power operates through a regime of privileged speakers" (qtd in Manes 1996: 16). As a result, Christopher Manes suggests the anthropocentric tendency to cast non-human nature as silent and inarticulate is a manifestation of the impulse to dominate and control nature. "Nature *is* silent in our culture (and in literate societies generally) in the sense that the status of being a speaking subject is jealously guarded as an exclusively human prerogative" (1996: 15).

Thus, I would suggest that the humanistic discourse of privileged consciousness that Marx embraces is the money-form correlative to nature and hence the great alienator because it disassociates activity/existence (materiality) from meaning/value (ideas). Moreover, it convinces us that we are not a part of nature, but that nature is a part of us, and thus does not address the idealism and abstraction within philosophy/life that Marx identifies as being so problematic. Even though we are only one species amongst millions, "humans now use approximately 40% of global net primary production" (Alberti et al 2003: 1169). The centre is literally consuming itself! In the same way that capitalism obscures the social relations of individuals within a market of commodity exchange by making it appear that the relation is between things, humanism asserts a system of individual autonomy that ignores the visible and invisible agents and processes of nature it depends on. Like capitalism, pure humanism values the mode of evaluation more than what it measures. In capitalism, money is reified and thus stands above the social relations and labour that produced the initial surplus value. In humanism, the human agent jealously guards his/her position at the centre and thus radiates a panoptic gaze that undergoes a similar process of reification and hence becomes more valuable and powerful then the object/subject of the gaze. Ultimately, this position is solipsistic, narcissistic, pathological, and profoundly dangerous to our survival and the health of the entire biosphere.

However, given previous discussions of the problems inherent with the idea of biocentric equality, how do we simultaneously acknowledge the soft-anthropocentrism of

any act of survival without falling into the reductionist humanist trap? Anthropocentrism is a problem not because it conceptualizes perception/being as central to the world, but because it limits the act of perception and therefore conscious choice to the human. By universally extending the act of negotiating the world based on a conscious and structured reaction to phenomenon (consciousness and agency), we can begin to develop a system of bio-ethics that considers diverse ecological needs, rather than simply human ones. Anthroponormative consciousness is akin to the monoculture of industrial agriculture, and as such, is susceptible to the same stresses: vulnerability to disease, inability to adapt, and reliance on a high level of artificial inputs. "Biodiversity is a survival mechanism. It ensures that each species will have enough genetic variety to effectively adapt to changing environments" (Boyens 1999: 166). The jealously guarded consciousness of humanity operates within the same limited ontological strain as monoculture. Because nature is reduced to a series of essentially dumb and mute objects, the pool for diversity of consciousness and worldviews is fundamentally impoverished. Like cultural diversity amongst humans, the willingness to embrace a diversity of worldviews/consciousnesses in nature simultaneously allows for recognizing subjecthood, as well as the ability to enter into a dialogue with different modes of existence. While it truly may be impossible to think like a mountain, as Aldo Leopold suggested, even the attempt drastically changes our relationship to nature, as well as unfolding a myriad of new forms of consciousness that subsequently increase our adaptability as a species, and make room for the co-flourishing of other species. Communication must begin with desire, which means that we have to stop pretending that humanity occupies a special place in nature, and thus reconnect the vocal cords of nature that scientific reductionism has cut (Evernden 1985: 17). Human consciousness may give us a greater range of "world-formation," but it does not mean that we are the sole possessors of this ability (Evernden 1985: 82).

Within the discourse of humanism, humanity becomes the universal exchange-value to which everything is measured, and in the process, all of nature is alienated. By reconstituting labour and consciousness within nature and engaging in a deep ecological Marxist analysis, we can accommodate the necessary soft-anthropocentrism of survival, while also understanding the power relationships that undergird the system and lead to

the manifestation of certain maladaptive characteristics. The problem with deep ecology is that its principles have little practical applications and often rely on the very same binary dualisms they attempt to reject. Hence I argue for a post-humanist eco-humanism that acknowledges the necessity for a soft-anthropocentrism, but one based on a sense of ecological polity that allows for truly reciprocal relationships to form. In the well known passage about base and superstructure, Marx states that "the totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which corresponds definite forms of social consciousness" (www.marxist.org December 14, 2004). By denying nature an independent subject position, humanity is completely ignoring its ecological base and building a tower of Babel on a crumbling foundation beset by the termites we have unleashed. Nature is the base, and culture, whether that of ants, baboons, fish, aspens, or humans, is the superstructure.

Given the profoundly apocalyptic potential of the current global environmental crisis, we are at a point in history where we need the courage to imagine a new future by thinking inter-generationally and thus taking the future seriously as a referent. We need a politics of hope that seeks to articulate practical, alternative modes of subjectivity, society and systems of political-economic organization that do not rely solely on profit, instrumentality, labour, production, or on ephemeral notions of deep ecology that tend to replicate the very dualisms it rejects. To accomplish such a shift, we must begin by reconnecting the earth's vocal cords and reconstituting human society within the metabolism of nature. Human freedom, happiness, equality, individual agency, truth, and all those venerable goals of the Enlightenment may all be attained, ushering a new renaissance of human history, but what will they amount to if we cannot drink the water, safely eat a carrot or potato, or even breathe the air. Cancer rates are already skyrocketing, childhood asthma is on the increase, and you cannot even enjoy a day in the sun for fear of cancer (Suzuki 2004). While a humanist ontology has been pushing towards the independence of the human mind, even the most abstract human activities nonetheless require calories, air, and water; there is no way to separate the base from the superstructure. Thus, part of the solution must occur on the level of perception, by

reversing the wholesale categorization of nature as an object, and acknowledging that humanity is but one actor in the play that is life.

Heidegger's earlier philosophical discourse does just this by proposing a "nonessentialistic, nonsubjectivistic view of the internal constitution of things" that rejects the "technological disclosure of being as flexible raw material" (Zimmerman 1994: 126). He argues that if we can acknowledge the role of the land as a significant factor in determining our identities, then killing it would be like killing a piece of ourselves. For Heidegger, our alienation from the land can be understood through an ontological speculation about the relationship between subjects and objects. Inauthentic being occurs because we conceive ourselves as

> stable, self-grounding subject, thus transforming Dasein's uncanny nothingness into a defendable thing: the ego-subject. Second, since Dasein cannot succeed in turning itself into a fixed entity, inauthentic Dasein continues to experience a sense of existential lack or incompleteness. One way of overcoming this lack is to fill up the self by consuming ever more entities. Death-denying, inauthentic Dasein, then, seeks to protect and to complete itself by dominating other people and by devouring the planet. (Zimmerman 1994: 111)

Heidegger concludes that "the securing of the highest and unconditioned self-unfolding of all human capacities to the unconditioned dominance over the whole Earth, is the hidden thorn which drives modern man.' In this process, nature becomes nothing more than a gasoline station for fueling the drive towards infinite power" (Zimmerman 1994: 112). Thus, for Heidegger, the solution is to dwell authentically and in tune with your surroundings in a way that allows things "to be," through a movement towards a more holistic, interdependent model of understanding our relationship with the environment. With a similar impetus as Leopold's land ethic, the concept of "dwelling" relies heavily on the understanding of nature as an interdependent community of individuals where the highest goal rests in a network of authentically dwelling beings in which each member of the community interacts, but does not unduly interfere with the course of another member's self actualization. Although this position is quite abstract and offers no suggestions about the method of attaining this state, it does point to the fact that "the

reality we occupy depends on the stance we take towards the world" (Evernden 1985: 98).

In his discussion of the biology of subjects, Neil Evernden draws on Martin Buber's distinction between modes of address. By relating to nature through I-It rather than I-Thou, we radically circumscribe the kind of relationship we can have with nature (Evernden 1985: 98). I-It assumes a subject viewing an object and thus undermines the possibility for a relationship based on reciprocity. In deconstructing the relationship between subject-object, Michael Zimmerman states that when "[all] aspects of the world are just as much part of our bodies, to cut down the tropical rainforest for any short term goal, would seem to us as not any less crazy then to cut off our finger simply because it hurts or somehow bothers us" (Zimmerman 1994: 83). For Marx, nature is a body that demands mutilation and defacement for its own self-actualization. Human and thus nature's self-actualization depends on the "working-up of the objective world" (1978: 76). Through industry and technology, humanity can rightfully control and use nature in any way that benefits society as a whole. Thus cutting down a rainforest takes on the secular air of self-flagellation as a means of transcendence. For Marx, the exploitation of nature is only wrong when the flagellation is committed within a capitalist society where those holding the whip and benefiting from the exploitation comprise only a small portion of the society. Communism functions to redistribute the exploits and hone the whip so as to ensure that humanity's self-actualization may proceed in an equitable fashion for those considered part of society. Although nature is man's inorganic body, it is mute, dumb, raw material awaiting the transformative agency of human productive power; it is a body controlled and dominated by the mind.

Cheryl Glotfelty suggests that "the environmental crisis has been exacerbated by our fragmented, compartmentalized, and overly specialized way of knowing the world" (1996: xxii). The bifurcation of the world into humans and resources needs to be addressed on an ontological and epistemological level before we can begin to transform the material relations responsible for the current environmental crisis. In a provocative move Neil Evernden claims that "we are not *in* an environmental crisis, but *are* the environmental crisis" (1984: 134). Although this statement potentially fosters a problematic nature/culture binary whose only solution is viral pandemic or mass suicide,

within the context of the previous discussion of consciousness and malleable world-views, the locus of the problem becomes a *mode* of consciousness, rather than the subject circumscribed by that mode. One of the most powerful implications of Marx's theory of historical materialism is that "circumstances make men just as much as men make circumstances" (1978: 164). By cross-pollinating Marxism with deep ecology, the environmental circumstances humanity is always within can finally speak for themselves. Climate change, smog, acid rain, resource depletion, rising sea levels, reduction of biodiversity, extinction, soil erosion, pollution of fresh water, salinization, desertification, ozone depletion, and the plethora of environmental problems are one of the ways the earth speaks to us. We can choose to listen or we can remain deaf to the fire alarm blaring in the hall. Unlike the fire alarm, however, this speech-act requires that we consciously listen to a language we know, but have forgotten. Our survival depends on it.

Although this paper is by no means comprehensive and much work remains to be done, the process of discursive hybridization and cross-pollination between Marx and deep ecology is meant to illustrate the literal interconnectedness of nature and culture. While Marxism fails to address many ecological problems, its mode of analysis and many of its criticisms of capitalism are germane to current analyses of the environmental crisis. This is especially the case in the Marxist analysis of labour and reification, processes which remain parasitically affixed to human-environmental interactions, and which augment and are augmented by a deep ecological critique of capitalism. By dialogically linking Marx and deep ecology, I hope it becomes clear that the fate of humanity and the fate of the biosphere are inseparable. The spectre of nature haunts humanity, but only because we have made nature into a ghost, an ephemeral stage upon which the human drama unfolds. It is time to realize that the human drama is but one show in an infinite programme of interrelated productions. It is time to listen, participate, and reciprocate, rather than direct.

Works Cited

Alberti, Marina, et al. (2003). "Integrating Humans into Ecology: Opportunities and Challenges for Studying Urban Ecosystems." *BioScience* 53:1169-1179.

Aronowitz, Stanley and Gautney, Heather. eds. (2003). *Implicating Empire: Globalization and Resistance in the 21st Century World Order*. New York: Basic Books.

Aronowitz, Stanely. (2003). "Global Capital and Its Opponents." Pp. 179-198 in *Implicating Empire: Globalization and Resistance in the 21st Century World Order*, edited by S. Aronowitz and H. Gautney. New York: Basic Books.

Benton, Ted, ed. (1996). *The Greening of Marxism*. New York: Guildford Press.

Benton, Ted. (1996). "Marxism and Natural Limits: An Ecological Critique and Reconstruction." Pp. 157-186 in *The Greening of Marxism*, edited by T. Benton. New York: Guildford Press.

Blair, Andrea. (2002). "Landscape in Drag: The Paradox of Feminine Space in Susan Warner's *The Wide, Wide World*." Pp. 111-130 in *Literature, Theory, and the Environment: The Greening of Literary Scholarship*, edited by S. Rosendale. Iowa: Iowa UP.

Boyens, Ingeborg. (1999). *Unnatural Harvest: How Corporate Science is Secretly Altering Our Food*. Toronto: Doubleday Canada.

Clark, John P. (1989). "Marx's Inorganic Body." *Environmental Ethics*. 11:243-258.

Cronon, William. (1996). "The Trouble with Wilderness; or, Getting Back to the Wrong Nature." Pp. 69-90 in *Uncommon Ground: Rethinking the Human Place in Nature*, edited by W. Cronon. New York: Norton & Company.

Devall, Bill and Sessions, George. (1985). *Deep Ecology*. Salt Lake City: Peregrine Smith Books.

Evernden, Neil. (1985). *The Natural Alien: Humankind and the Environment*. Toronto: U Toronto P.

Glotfelty, Cheryll & Fromm, Harold., eds. (1996). *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: Georgia UP.

Grundmann, Reiner. (1991). *Marxism and Ecology*. New York: Oxford UP.

Lee, Donald C. (1980). "On the Marxian View of the Relationship Between Man and Nature." *Environmental Ethics*. 2:3-16.

Leopold, Aldo. (1966). *A Sand County Almanac: with Essays on Conservation from Round River*. New York: Ballantine Books.

Light, Andrew. (2003). "Globalization and the Need for an Urban Environmentalism." Pp. 287-308 in *Implicating Empire: Globalization and Resistance in the 21st Century World Order*, edited by S. Aronowitz and H. Gautney. New York: Basic Books.

Luke, Timothy. (1997). *Ecocritique: Contesting the Politics of Nature, Economy, and Culture*. Minneapolis: U Minnesota P.

Manes, Christopher. (1996). "Nature and Silence." Pp. 15-29 in *The Ecocriticism Reader: Landmarks in Literary Ecology*, edited by C. Glotfelty and H. Fromm. Athens: Georgia UP.

Marx, Karl and Freiedrich Engels. (1978). *The Marx-Engels Reader*. 2nd Edition. Ed. Robert C. Tucker. New York: Norton.

Marx, Karl. (1990). *Capital: Volume 1*. London: Penguin Books, 1990.

Marx, Karl. *Preface to A Contribution to the Critique of Political Economy*. 14 December 2004 http://www.marxists.org/archive/marx/works/1859/critique-pol-economy/preface.htm

McKibben, Bill. (1989) *The End of Nature*. New York: Random House.

Perelman, Michael. (996) "Marx and Resource Scarcity." Pp. 64-80 in *The Greening of Marxism*, edited by T. Benton. New York: Guildford Press.

Routley, Val. (1981). "On Karl Marx as an Environmental Hero." *Environmental Ethics*. 3:237-244.

Shiva, Vandana. (1997). *Biopiracy: The Plunder of Nature and Knowledge*. Toronto: Between the Lines Press.

Suzuki, David. (2003). *The David Suzuki Reader: A Lifetime of Ideas from a Leading Activist and Thinker*. Vancouver: Greystone Books.

Suzuki, David. (2004). *Sustainability Within a Generation: A New Vision for Canada*. 12 December 2004 http://www.davidsuzuki.org/WOL/Sustainability/

Tolman, Charles. (1981). "Karl Marx, Alienation, and the Mastery of Nature." *Environmental Ethics*. 3:63-74.

Turner, Frederick. "Cultivating the American Garden." Pp. 40-51 in The Ecocriticism *Reader: Landmarks in Literary Ecology*, edited by C. Glotfelty and H. Fromm. Athens: Georgia UP.

United Nations Environmental Program. (2004). *Sustainable Consumption: A Global Status Report*. 12 December 2004 http://www.uneptie.org/pc/pc/pdfs/Sus_Cons.pdf

Zimmerman, Michael, E. (1994). *Contesting Earth's Future: Radical Ecology and Postmodernity*. Berkeley: U California P.