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Incorporating Sustainability Into Urban Infrastructures: The Tension Between Bio-Cultural Aspects And Environmental Considerations

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INCORPORATING SUSTAINABILITY INTO URBAN INFRASTRUCTURES: THE
TENSION BETWEEN BIO-CULTURAL ASPECTS AND ENVIRONMENTAL
CONSIDERATIONS

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2011

Dedication

This thesis is dedicated to my parents, Herschel and Linda. Thank you for all of your love and support throughout the years; to the memory of Eddie Epting, James K. Webb and The College in

Exile; Coco Bravo, the last of the Temple Dogs.

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by

SHANE RAY EPTING, B.A.

THESIS

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Chapter 1: Introduction

The disciplinary separation of philosophy from other subjects has in recent years begun to give way more and more. Such disciplinary mergers are likely and mutually beneficial because, as philosophy positions itself to solve problems in the world, it finds itself depending on outside disciplines that are either in direct relation to the “aims” of philosophy or are positioned in an auxiliary fashion for it. One can easily argue that philosophy of science was able to tread the most interdisciplinary ground because philosophers who embrace the notion that “philosophy of science is philosophy enough” cannot ignore that science is practiced independently of metaphysical or philosophic speculation. For instance, if we entertain any such notions with anything more than a superficial nod of recognition, we must accept that philosophy of science would not have the respect that it does without the merit of scientific exploration – not to mention the numerous endured headaches by practicing scientists. Yet, if we are to look at philosophy as the best tool in the toolbox for uncovering the state of the cosmological order of the known universe, then we should not find fault with philosophers for sticking their noses into every other academics’ business.

We have in turn witnessed how the interrelatedness of disciplines must be acknowledged and met with an amiable attitude that forges disciplinary boundaries that, for whatever reason, remain all too distant.¹ This distance impedes “philosophers of [insert discipline]” from gaining the view required to see how all of the pieces of information properly fit together to form a puzzle that, once put together, makes sense. For instance, environmental philosophy proves boring and barren if it cannot call upon environmental science for data on which to comment. Looking at this disciplinary reunification of

¹ One example of this can be found by looking at the academic organization, “Interdisciplinary Environmental Association.” This organization draws from environmental science, philosophy, architecture, and several more disciplines. For more information, see: www.ieaonline.org.

theoretical reasoning and practical application requires a cosmological reordering of information because several philosophers end up espousing half-cocked diatribes parading as axiomatic doctrine.² Yet, unlike most academic philosophy produced within the university system, environmental philosophy has the potential to influence congressional decisions through policy formation and implementation since the university system serves as a readymade-makeshift think-tank for environmental dilemmas. And since ill-informed decisions can have unfortunate consequences, we are for once lucky that environmental philosophy does not stray too far from its sheetrock towers.

Yet, environmental philosophy does suffer from a myopic view of itself because it does not often engage in a meaningful interdisciplinary relationship that is mutually beneficial for the discipline from which it draws insights. This view exhibits that, and one can argue, in a manner similar to philosophy of science's relationship to science, environmental philosophy depends on the environmental sciences – and not vice versa. Neither science nor environmental science turns toward philosophers for their opinions on the “objective” content of their respective fields or for ethical guidance. And why should they? My point is that perhaps the environmental sciences *could* benefit – if even only slightly – if environmental philosophers would come down off their “disciplinary high horses” and be willing to engage environmental scientists in a manner that is consistent with the ways in which it is practiced.³

² In one sense this notion could be seen as a broad and sweeping generalization regarding the state of environmental ethics because positions such as ecocentrism rely on persuasive argumentation that is not capable of verification in any fashion whatsoever. On the contrary, the discussion at hand could also be guilty of the same charge due to the surrounding conditions of uncertainty that plague all environmental positions addressing these or other relevant issues. The burden of proof, however, does not seem to rest on my shoulders – or on the shoulders of anthropocentric positions – because we are not attempting to formulate a view that contradicts the ways in which the world or environmental studies present themselves. Instead, we are more-or-less redefining how the world of environmental studies is understood by environmental ethics by reasoning away the nebulous features, which are only nebulous because of the misunderstandings perpetuated by non-anthropocentric positions. For an example of these positions, see Callicott, J., *In Defense of the Land Ethic*, (Albany, SUNY, 1998).

³ My point here is not to make a hasty generalization of the research methods and practices of all environmental ethics. It is simply to point out that it is difficult for one to engage in a philosophic conversation about a specific discipline that rests on the foundation and advances in another discipline.

And this is the point where we find ourselves in the first section of the discussion that follows. I begin by exploring the problems that, while mostly insidious, nonetheless plague environmental philosophy.

The second part of this discussion explains a phenomenon and accounts for the conditions that allows for significant epistemic errors in reasoning within the foundational framework of environmental philosophy to continue. The final section attempts to reconcile manners of thinking with manners of living that are logically consistent on the one hand and practical on the other. The various arguments in each of the sections are carried out through focusing on how to think about sustainability as it relates to technology and the non-human world within an anthropocentric framework. What we end up with is a picture that shows humankind that we need to firstly change the ways in which we look at anthropocentric concerns. And, secondly, the discussion that leads up to the final picture details the urgency that guides the thinking behind the implementation of sustainability. Because, as the West learns to live in an entirely new sense that is consistent with holding humankind's desire for existence as a permanent situation, one finds that this notion must be paramount for us. The notion of permanence suggests that the ability for future generations to satisfy their basic means of survival and to secure the ability to "flourish" is tied in to how we meet our own needs as well. While on the surface notions regarding the needs of distant generations might sound as if they require humans today to go beyond what is normally and morally required, we will see that this is not the case once we dig deeper. And, a well thought out deontological ethics makes it easily visible.

In fact, while it might sound as if we have to engage in a balancing act between considering the needs of future generations and our own, this dichotomy is a false but beneficial one when exhibited within a proper framework that is conducive to the ability for humans to flourish now and in the future. And, lastly, policy and law, viewed as the most effective means for facilitating and expediting measures that are necessary for implementing sustainable living into urban infrastructures, provide avenues that ensure results. Yet, in order to exhibit how sustainability must go hand-in-hand with public and private

action, one must also qualify undertakings in sustainability on a phenomenological-existential level, to which we will dedicate the last section of this discussion.

I.I The Roots of Our Academic Misunderstanding of the Environmental Crisis

Advances in technology impact the planet and, thereby, we indirectly harm ourselves. Some of the harm makes city planning difficult because the relationship between built and natural environments requires a delicate balance of interests. We must consider the wellbeing of the non-human world on the one hand, and we must consider the interests of humans on the other. Today, however, environmentally friendly measures are now commonplace and words like “sustainability” are easily recognizable in the public sphere. Sustainability’s commonplace conception – the one promoted and defended throughout this discussion - requires that we meet society’s present needs without compromising the ability of future generations to meet their needs. And when planning and considering the built environment, promoting sustainability practices is viewed as a way to balance these interests. For instance, many cities now have sustainability offices and managers who deal with the problems associated with implementing sustainability efforts into urban infrastructures. While issues such as water and power are often at the forefront of discussions, bio-cultural aspects often remain on the periphery.

The discussion at hand examines the relationships between natural and built environments, and the complications that arise from these relationships. This examination exhibits that city planners and managers, along with environmental resources, have to consider culture as a resources too. If city officials do not consider social factors appropriately, then they are guilty of “reverse anthropocentrism,” which is having a prejudice against humans for, well, being human.

I begin this process with an examination of the city of Las Cruces, NM, specifically, Las Cruces’ land, flora, and fauna.⁴ New Mexico’s plants and animals have evolved and adapted to harsh conditions:

⁴ http://npsnm.unm.edu/native_plant#Section1, (accessed December 20, 2009).

high temperatures, constantly scorching sunlight, minimal rainfall, and a high elevation.⁵ These plants and animals maintained a balanced relationship until anthropogenic activity changed the conditions that gave the desert its essential qualities. For instance, the Rio Grande now follows the course that we have engineered for it, instead of changing on its own. It is wrong to think of the river as only “a river.” Instead, it could be more instructive to think of it as a resource first and a river second. Yet, it is only a resource in this sense because it carries away waste. Heraclitus is known for saying you cannot step in the same river twice; yet, locals are afraid to step in it once. Because of human appropriation of the river, several species of fish no longer have a place in the regional food chain.⁶

In terms of plant diversity, 390 of New Mexico’s over 3000 species are non-native plants that were previously introduced to combat erosion and for aesthetic value; yet, they are harmful to the ecosystem.⁷ These non-native plants create problematic conditions for native ones, which then affect non-human animals, and, ultimately humans.⁸ Although these plants are now part of the landscape, they do not have an authentic place in it, and they create problematic conditions for other species – including humans.

Considering that these plants exist on the landscape only because of humans, they are not much different than any other artifact. They might as well be billboards. Hans Jonas argues: “For the boundary between ‘city’ and ‘nature’ has been obliterated: the city of men, once an enclave in the nonhuman world, spreads over the whole of terrestrial nature and usurps its place. The difference between the artificial and the natural has vanished, the natural is swallowed up in the sphere of the artificial, and at the same time the total artifact (the works of man have become ‘the world’ and as such

⁵ Ibid.

⁶<http://www.rivers.txstate.edu/rio/presentaions/RG-RB%20Ecological,%20Environmental,%20and%20Administrative%20-%20Urbanc.pdf>, (accessed December 20, 2009).

⁷ Ibid.

⁸ Ibid.

envelop their makers) generates a ‘nature’ of its own, that is, a necessity with which human freedom has to cope in an entirely new sense.”⁹

While Jonas’ claim that boundary has been obliterated could be an exaggeration, thinking over the notion that it is almost impossible to determine whether or not a plant growing on the landscape is “natural,” we have lost the ability to determine the authentic character of the environmental horizon by a simple glance. And, this type of dilemma is a clear example of the tension mentioned in the title. In turn we have to cope in an entirely new sense, and this new sense requires us to exist in a manner that balances environmental and social considerations, which ultimately is sustainability. And the elucidated answer to question of “*what is sustainability?*” says that environmental considerations are essentially social (anthropocentric) considerations. Viewing environmental considerations nothing more than social ones sounds as if we are making a mistake in classification, but it is only a consequence of lacking a clear boundary between the human and the non-human world. Yet, coping in this new sense is the source of the tension we find in my title. If we look at this tension through a socio-technological lens, we see it as a shift in the technological infrastructure of society. In brief, it is an attempt to reconcile a manner of living that is becoming inconsistent with society’s modern attitude about environmental degradation on one hand – and the aims of environmental sciences on the other. And considering that it is becoming extremely difficult to see the boundary between the human and non-human world, we have to ensure that ecosystems maintain the conditions required for biodiversity of which our survival depends on. Yet, considering that the boundary between the human and non-human world is difficult to see, the task becomes painstakingly difficult to determine what, if anything, is from nature. And this new situation makes it even more difficult to determine if the authentic integrity of an ecosystem is complete,

⁹ Hans Jonas, *The Imperative of Responsibility* (Chicago: University of Chicago Press, 1984) 10.

compromised, or if “authentic integrity” is a phrase that no longer has the possibility of having a meaning.¹⁰

Things that are still “by nature,” such as native plants and animals also have to adapt in an entirely new sense. For instance, Las Cruces is home to 772 different species.¹¹ Salt Cedar, an omnipresent alien plant, has caused problems for both native plants and animals. Introduced to New Mexico in the 1950s, it interferes with water systems and overpowers native plants that animals depend on for food and other resources.¹² For instance, the White Sands Pupfish is in danger because Salt Cedar disrupts its natural system.¹³ While it might appear that certain plants are causing problems for other plants, once we look under the surface, we discover that humankind lies at the root. The Salt Cedar is not only causing problems for other plants, but it is causing problems for us because we depend on and value the plants (and the biodiversity that they provide) that are crowded out also. And, when we consider that biodiversity and ecosystem health lend themselves to anthropocentric concerns, we discover that humans are harming themselves when we intentionally intervene in the non-human world. And, seen under a “deontological spotlight,” we discover that we – as ethical agents – should not harm ourselves.

¹⁰ It is worth noting that “authentic integrity” depends on an anthropocentric framework. It is dependent on humankind’s assigning it from the outset. This means that, in one sense, the notion itself does not even make sense outside of an anthropocentric framework because a complete biosphere does not care about its existence because it is not cognizant of itself. Secondly, one must consider that said notion lacks a conceptual or re-conceptual framework because, considering anthropogenic environmental degradation, said notion lacks the basic structure required for the thought to even form. Therefore, it remains in the realm of imaginary numbers, the existence of God, and the vastness of the universe.

¹¹ <http://www.bison-m.org/reports.aspx?rtype=4>

¹² <http://www.nps.gov/plants/ALIEN/fact/tama1.htm>

http://wildlife.state.nm.us/education/wildlife_notes/documents/whitesandsupfish.pdf, (accessed December 20, 2009).

¹³ http://wildlife.state.nm.us/education/wildlife_notes/documents/whitesandsupfish.pdf, (accessed December 20, 2009).

I.II The Question Concerning Water: Culture, History, and Ecosystem Survival

Las Cruces has a rich cultural heritage rooted in agriculture.¹⁴ This rich history, however, is in danger due to residential and commercial development competing for land. As farmland, it is worth \$15,000 per acre, and for commercial and residential development, the price increases up to \$70,000 per acre.¹⁵ Las Cruces' population is predicted to increase dramatically.¹⁶ Of course, there is one obvious problem for a thriving city in the desert: water. Ninety percent of Las Cruces' water supply is used for farming.¹⁷ As the population of Las Cruces increases, the right to water becomes controversial. If Las Cruces has to sacrifice agriculture, it will change the identity of the city. Yet, when dealing with sustainability, we have to address the tension of balancing environmental concerns as they stand in relation to culture. Should a city choose to preserve its identity or change, they will need a methodological approach that facilitates coping in this new sense and encourage cities to implement sustainability.

With this notion in mind, we do encounter a few problems: how do we deal with cultural conflicts when sustainability enters the equation? And, how do we justify who or what deserves consideration and to what degree? As for the former, we should preserve cultures that promote sustainability the most, or find a way to make them favor sustainability more. However, it is difficult to determine a balance between culture on one hand, and use of resources on the other. Agriculture is an important part of the local economy. However, the use of water and pesticides is not favorable for long-term sustainability. Those unfavorable features need to be evaluated to determine if there is a more

¹⁴ http://www.las-cruces-nm.org/html/las_cruces__new_mexico_attract.html , (accessed December 20, 2009).

¹⁵ http://www.lcsun-news.com/las_cruces-growth_and_development/ci_5890587 (accessed December 20, 2009).

¹⁶ http://www.lcsun-news.com/ci_14075973, (accessed December 20, 2009).

¹⁷ http://www.lcsun-news.com/las_cruces-growth_and_development/ci_5890587, (accessed December 20, 2009).

sustainable avenue. For instance, one could argue that we should avoid using pesticides because we want to protect non-human species for their own intrinsic value. Yet, we should avoid using pesticides in the first place because we care about the effects on human health. Secondly, we should also avoid using them to protect the fish because we care about them because of anthropocentric reasons such as the benefits of biodiversity, recreation, and aesthetics. If we choose to not use pesticide only because we want to avoid harming the fish out of respect for their intrinsic value, if the pesticide were not harmful to humans, we are guilty of reverse anthropocentrism because we considered another species over our own when it was in our advantage to think of humans first.

If we are to consider the ethics of sustainability, then future obligations must be firmly in view. Yet, this view does not entail that we must discount humankind now for the sake of a non-existent future. In order to reconcile the needs of future generations with humankind today, we have to appropriate their interests as our own. This appropriation suggests that we have to embrace an anthropocentric view of natural resources because our obligation to ourselves overrides any other obligation. After all, the debt is owed to future humans. However, this view does not mean that we have to resort to wanton environmental degradation; we will touch on this point later on. For now, we must address those who argue that anthropocentrism is an unavoidable cause of anthropogenic environmental degradation and insist that anthropocentric attitudes must be avoided. The underlying problem is that non-anthropocentric environmental ethics and anthropocentric environmental science do not share the same view. Or, they are playing the same language game by different rules. For instance, environmental science operates within an anthropocentric framework, and some viewpoints in environmental ethics claim to represent non-anthropocentric positions. Yet, the incongruity is cleared up when I show that non-anthropocentric positions are really anthropocentric ones once the problematic conditions are explained and dealt with. And now I will turn to those problems.

The charge of “reverse anthropocentrism” argues that it is unethical to have a preference for non-human entities over humans in cases affecting human welfare on theoretical grounds and in practice.¹⁸ The complexities of this notion make it difficult to see how it can be applied across cases that differ because not all cases concerning non-human and human preferences are easy to determine. Therefore, the purpose at this point is to fully clarify what is meant by reverse anthropocentrism.¹⁹ In order to elucidate this notion, I will examine reverse anthropocentrism as we encounter it within one philosopher’s practice. Looking at J. Baird Callicott’s ecocentric approach in practice, we find that it collapses into anthropocentrism. For instance, Callicott (1999,73), trying to avoid the charge of ecofascism, lays out his second order principles (SOP-1 and SOP-2) holding that: “[SOP-1] obligations generated by membership in more venerable and intimate communities take precedence over those generated in more recently emerged and impersonal communities. . . . [and SOP-2) stronger interests generate duties that take precedence over duties generated over weaker interests.” These principles seem to alleviate the problem of ecofascism, and they do; yet, they are still anthropocentric when examined critically. For instance, Callicott (1999, 75) puts forth an example meant to exemplify how these principles work in practice:

The spotted owl is threatened with preventable anthropocentric extinction—threatened with biocide, in a word—and the old-growth forest biotic communities of the Pacific Northwest are threatened with destruction. These threats are the environmental-ethical equivalent of genocide and holocaust. The loggers, on the other hand, are threatened with economic losses, for which they can be compensated dollar for dollar. More important to the loggers, I am told, their lifestyle is threatened. But livelihood and lifestyle, for both of which adequate substitutes can be found, is a lesser interest than life itself. If we faced the choice of cutting down millions of four-hundred-year-old trees or cutting down thousands of forty-year-old loggers, our duties to the loggers would not take precedence by SOP-1, nor would

¹⁸ “Unexamined Resources are Worth Having,” 43rd North Texas Philosophical Association Conference.

¹⁹ It is not my intention to equivocate between human and non-human interests. The only difference that I want to focus on is that humans are cognizant of their intentions and non-human entities such as ecosystems are not cognizant of their interests. Therefore, the preferred sense in which I am using is limited to the teleological sense. This difference is important because it exhibits that the “interests” in question differ primarily by the fact that one is recognized by the one experiencing it, and the other lacks the basic physiological constitution required for experiencing awareness of an interest.

SOP-1 be countermanded by SOP-2. But that is not the choice we face. The choice is between cutting down four-hundred-year-old trees, rendering the spotted owl extinct, and destroying the old growth forest biotic community, on one hand, and displacing the forest workers in an economy that is already displacing them through automation and raw-log exports to Japan and other foreign markets. And the old-growth logging lifestyle is doomed, in any case to self-destruct, for it will come to an end with the 'final solution' to the old-growth forest question, if the jack-booted timber barons continue to have their way. With SOP-2 supplementing SOP-1, the indication of the land ethic is crystal clear.

Callicott is not guilty of reverse anthropocentrism with his second-order principles because they are essentially anthropocentric principles. And by failing to escape anthropocentrism, anthropocentrism has permeated the fabric of Callicott's ecocentrism. All Callicott has done is shift the interest on the surface because he simply has a preference for old-growth forests over logging. Yet, his interests are still anthropocentric. What is more, humankind has interests in the forest also: aesthetics, recreation, cultural, and basic survival interests. People appreciate and appropriate forests. So, choosing the spotted owl's habitat puts us in an interest-laden dilemma. This dilemma becomes a case of culture v. culture: it is a question of logging culture versus the culture concerned with wildlife preservation. Coping with this tension while avoiding reverse anthropocentrism, however, is not as problematic once we have environmental ethics and ecology playing the same language game by the same rules.

Therefore, we can, like Aldo Leopold, try to "think like a mountain" or ecosystem, but we cannot escape being human with a human's perspective. For instance, Eugene Hargrove (1992, 164) argues: "I do not think that it is possible for humans to avoid being anthropocentric, given that whatever we humans value will always be from a human (or anthropocentric) point of view. Even when we try to imagine what it might be like to have the point of view of (or be) a bat, a tree, or a mountain, in my view, we are still looking at the world anthropocentrically, the way a human imagines that a nonhuman might look at the world."

Turning to culture while keeping in mind that we are always situated within an anthropocentric framework, we can argue that we should support culture when it supports biodiversity because

supporting biodiversity, or the conditions that facilitate the preservation of biodiversity, we are in effect helping humankind maintain the required conditions for living with more than just the necessities for basic survival. On the contrary, when culture does not mesh well with biodiversity, we must choose biodiversity – not out of a primary respect for the non-human world because that respect must always be secondary – but because supporting biodiversity supports humankind. For instance, referring back to the allusion of Aldo Leopold earlier, if a mountain lacks wolves because of unrestricted hunting, then this will in turn increase deer populations, which will exhaust food supplies forcing deer to eat and kill trees. And, when the trees die, landslides increase and the mountain loses some of its “mountainness” in an anthropogenic manner. The lack of wolves, through a complex series of steps, harms the mountain itself and nearby human communities. This concrete example above fits into an abstract framework that provides normative guidelines for dealing with the tension between environmental concerns and bio-culture. Although hunting restrictions might seem to be in the wolves’ interests, they are essentially in the interest of the hunters.

Therefore, we have to consider that we can only use resources when doing so does not threaten the wellbeing of the respective ecosystem in question. This action will always be anthropocentric because it is done for our interests. And as modern attitudes become supportive of and sympathetic toward the non-human world, our interests, including philosophic ones, change accordingly. For instance, Callicott (1989,3) holds that we need a shift in the locus of intrinsic value from the individual to the ecosystem as a whole, yet there is not a way to entertain this notion realistically. It simply will not work because any attempt to shift the focus cannot happen because we become inundated with the interest-laden dilemma touched on earlier. When we attempt to shift the focus, what really happens is that we become mindful that a non-human world exists and becomes impacted by the human world. The locus cannot shift to the degree to which Callicott requires it to that would constitute a worldview that goes beyond the anthropocentrism targeted in Lynn White’s famous diatribe. Instead of being bogged

down with questions concerning impossible shifts and scapegoating anthropocentrism, ecocentrists need to look beyond the pedestrian view of anthropocentrism: *it is not that we need to change from an anthropocentric view – we need to change how we view anthropocentrism*. And this is the everyday view that environmentally responsible city planners, ecologists, environmental scientists, policy makers, and others already find themselves unknowingly seeing, and they do not find it in need of questioning. At the beginning of this discussion, I mentioned that if city planners and managers do not consider social factors appropriately, then they are guilty of reverse anthropocentrism. However, the framework out of which they already operate is not at present amiable to or positioned in a manner that supports reverse anthropocentrism. And it is not so much that they need to avoid speaking in the tongue of ecocentrism because that is not a pressing issue, but the danger lies in the possibility of ecocentric thought misleading them into making “ivory tower” decisions that have “real-world” consequences, which could potentially harm humans.

II. Understanding Ecocentrism through an Understanding of Heidegger's Thoughts on Guilt

While several criticisms have been brought forth that question the legitimacy of ecocentrism's foundations, aims, and overall approach, questioning the reasoning behind the formulation of ecocentrism exhibits a notion much more profound when we look under the surface. The anthropocentric versus non-anthropocentric debates have not been as fruitful as one could have anticipated. Instead environmental philosophy resides in a foundational stalemate with ecocentrists situated within their own camp and non-anthropocentrists becoming an academically endangered species or folding into the less controversial position of environmental pragmatism. Others, for the most part, choose to ignore the debate and continue to make progress and produce a bounty of research and arguments that deal with environmental problems of a philosophic nature such as environmental aesthetics or metaphysics for example. When those engaged in environmental philosophy put aside their foundational differences, one identifies that all parties share a sense of care for the non-human realm. What we essentially discover is a sense of urgency and responsibility for humankind's impact on the planet. Considering that the debates have failed to seriously advance the conversation concerning the ultimate grounding of environmental ethics either on epistemic grounds or metaphysically, one could argue that we should abandon such discussions.

Suspending our judgment about the legitimacy of ecocentrism does not, however, suggest that we must bring all positions that pertain to environmental consideration under a spotlight of analytical scrutiny. One could easily make the case that all positions attempting to ground and justify moral consideration for any non-human entity would fall under an umbrella of suspicion the same as ecocentrism. This however is not the case at hand. Ecocentrism (essentially non-anthropocentrism) was singled out because it is the mostly widely known and respected position within environmental

philosophy that requires an explanation about how and why we must shift the locus of consideration beyond the confines of anthropocentrism. What is more, it is the only position that requires us to make this shift in order to build a systematic approach to environmental ethics. And the reasoning behind this shift rests on what I refer to as the “green guilt phenomenon.”

Yes, green guilt phenomenon does have a tongue-in-cheek ring to it. And it is one that cannot be avoided. We must address it from the outset because, on one hand, it is too important to be passed over in silence considering that it deals with my prior contentions that ecocentrism is a fallacy in itself. And, on the other hand, it is too important to discount because it explains how we can account for a long-over due exposition of how ecocentrism was allowed to advance so far into academic circles and root itself firmly into the chronicles of the now self-supporting discipline of environmental philosophy. The primary argument within this paper is a subtle one that lies embedded within the exposition of ecocentrism’s roots. Again, there is not an attack on the foundational principles of ecocentrism *per se*. Yet, in light of the exposition underway, the reader should walk away from this discussion with an understanding of the ecocentrist’s mindset and see the how ecocentrism is not so much a philosophic position: it is an answer for a call from one’s conscious.

In order to fully elucidate the claims mentioned above, the aim of the enterprise at hand is to show by way of Martin Heidegger’s notion of guilt the precise source of this roundabout problem. During this process, the reader will see how the ecocentric position came into existence and how it maintained a support system enabling it to progress at an alarming rate despite epistemic inconsistencies and pedagogical incongruities argued for elsewhere. This process begins with a brief look at the most famous and supported ecocentric position put forth by J. Baird Callicott to gain a sense of where we are going.

Based on Aldo Leopold’s “Land Ethic,” Callicott (1999) aims to move beyond the traditional anthropocentric frame of mind in order to gain a holistic view of humankind’s place as a member

instead of dictator of the planet. This position based on Leopold's land ethic provides Callicott with the backbone of his position. Callicott (1999,3) holds that ecocentrism basically emerged as a way to deal with insufficient approaches that could not, due to their prioritization and classification of values, effectively address problems such as anthropogenic environmental degradation – and he argues and shows the impetus for ecocentrism as follows:

A third contingent of environmental philosophers saw in the environmental crisis a profound repudiation by the environment itself of modern Western civilization's attitude and values toward nature. Thus, nothing less than a sweeping philosophical overhaul—not just of ethics, but of the whole Western world view—is mandated. These philosophers, among whom I count myself, have been called 'ecocentrics' since we have advocated a shift in the locus of intrinsic value from individuals (whether individual human beings or individual higher 'lower animals') to terrestrial nature—the ecosystem—as a whole. . . . Our goal is to build, from the ground up, new ethical (and metaphysical) paradigms.

Notice that in the passage above, almost every aspect of Callicott's wording mirrors an image of care, on one hand, and "responsibility for" on the other. Yet, the manner in which he looks at "responsibility for" is problematic and will be addressed throughout this discussion when it is fitting. Nevertheless, Callicott's choosing the word "crisis" shows that he has judged the state of the environment to be in danger, which requires those who care to be concerned with getting the environment out of danger - somehow. Next, "profound repudiation by the environment itself of the modern Western civilization's attitude and values toward nature," reflects an undeniable sense of discontent for the rest of the world (that Callicott belongs to) with respect to how the Western world views and regards the ecosphere. By not including himself in this view, Callicott has, probably unknowingly, put a chasm between his system and classification of values and the rest of the Western world - as he knows it to be at least.

In turn, he advocates that a restructuring of ethics and the whole Western world view, which many might consider to be an extremist's approach or attitude at the least. And while many might argue that we need to rethink the ways in which humankind interacts with the non-human world in terms of anthropocentric environmental degradation, Callicott conversely does not think that such an undertaking

will suffice. Instead, one can infer that “the whole Western world view” would include everything that might or might not be germane to anthropogenic environmental degradation, which is the indirect and not-so-subtle foe of Callicott’s attack.

This position notwithstanding and resulting from an anthropocentric view of the world, Callicott and those in his camp push for a foundational approach to amend the shortcomings of the Western world view. This approach, even on the surface, sounds unwarranted and excessive, and it goes without meaningful justification. After all, the entire Western worldview sees more than environmental concerns, and it seems rather shortsighted of Callicott to assume that the entire Western worldview requires an overhauling to deal with environmental woes. After all, the required actions, one could argue, need to only address the specific aspects that are related to and have consequences for the environment. Callicott’s extremism brings us to some embedded notions that need exploring. And, at this point, I would like to turn the spotlight back to the notion that Callicott distances himself from the rest of the Western worldview from which, according to him, the environment’s troubles stem from.

Although I can only speculate, it seems fitting to address why Callicott distances himself from the rest of the Western world by asserting that he does not share the same outlook. By distancing himself from the Western worldview, Callicott does not appear to be as culpable as the rest of the Western world because he calls for an entire new paradigm of thinking. This call – *somehow* – excludes him from the *personal* responsibility that Callicott needs to confront and that the rest of the world has to come to grips with. The reality behind the situation, however, does put Callicott in the same culpable position as the rest of the Western world because he is part of it. By not appearing to be aligned with or directly connected to those responsible for wide-scale anthropogenic environmental degradation, Callicott avoids having to be guilty by association. Yet, he does remain guilty as it will be shown. And guilt is the primary reason – speculatively speaking – that explains how ecocentrism gained ground and maintains steady footing. In summation, the reasonings that Callicott employs during the formation of his

ecocentrism stand parallel to what I refer to as the “green guilt phenomenon,” which we will now briefly explore.

The views of ecocentrists such as Callicott do however seem to rest upon a well-thought out system of ethical beliefs stemming from reason, emotion, and imagination. The green guilt phenomenon nevertheless results from the emotional attachments that ecocentrists feel toward the non-human world when they see and think about anthropogenic environmental degradation. They feel on one hand that humankind – and in particular the Western world - acting as the collective agency that is responsible for environmental degradation, needs to be held accountable for bringing harm to the non-human world. And, on the other hand, they feel *as if* they are acting as the voice of responsibility in order to prevent further damage to the ecosphere, which amounts to a form of “ideological vigilantism” because they are outside of the Western worldview attempting to regulate it and provide justice for the non-human realm. This deeply emotional view overshadows the correct reasoning that would allow ecocentrists to see and respect the epistemic conditions that constitute our “always already” human situation that forces us to view the world from an anthropocentric standpoint. In brief, any attempt to see outside the confines of our corporality and imagine what it is like to be anything besides a human will always meet a barricade that does not allow a meaningful non-human view. As a consequence of not accepting this condition of limited consciousness, the ecocentrists reject the full use of reason.

By rejecting the full use of reason to secure solid footing when regarding the way in which they view the world, the ecocentrists must rely on imagination to fill in the logical gaps that their position cannot provide. And while this account might serve well enough for environmental pragmatism, it cannot give us the information required to make decisions about issues such as ecosystem health or sustainability. And in turn it could potentially hinder subjects such as ecological restoration if this view does not give us the necessary picture that allows us to assess environmental situations correctly.

Notwithstanding, in order to bring this phenomenon into an elucidating perspective, the attention now turns to Heidegger's notion of guilt and how it plays into the discussion at hand.

In the section above, the charge of "ideological vigilantism" has a harsher bark than bite. Yet, when we juxtapose this charge with Heidegger's notions associated with guilt, one discovers that it matches up well. For instance, in talking about guilt, Heidegger (259 - 269, 1927, 2010) often employs a tangled web of concepts such as "conscience, calling forth, calling, call, and summoning." For instance, Heidegger (259, 1927, 2010) argues: "Conscience gives us 'something' to understand, it *discloses*. From this formal characteristic arises the directive to take this phenomenon back into the disclosedness of Dasein. This fundamental constitution of the being that we ourselves actually are is constituted by attunement, understanding, falling prey, and discourse. A more penetrating analysis of conscience reveals it as a *call* [*Ruf*]. Calling is a mode of *discourse*. The call of conscience has the character of summoning [*Anruf*] Dasein to its ownmost potentiality-of-being-a-self by summoning [*Aufruf*] it to its own most being-guilty."

Using the passage above, we can better understand Callicott's green guilt by arguing (interpreting) that Callicott's conscience gives him "something" to understand, and this "something" could be "anthropogenic environmental degradation" or "the intrinsic value of the non-human world." His conscience in turn discloses that humankind has played an undeniable role in compromising the integrity of the non-human world – *and that his species must be held accountable*. Still further, he takes it in and understands his role in being-there. He cannot deny that he is called to action. He must do something. And, when we look at this call to action critically, Callicott's summoning means that he must use the means at his disposal to let the summoning manifest in an available avenue: writing environmental philosophy and developing the ecocentric position.

He undertakes these tasks because as Dasein he feels obligated because he understands that most environmental degradation is anthropogenic, for which he ultimately must be held accountable. In

Callicott's – and to a greater extent all non-anthropocentrists – sublimate this guilt in the form of ill-conceived positions that attempt to account for the manner in which we view specific environmental considerations or consideration of the non-human world in general. The above-mentioned account, however, only gives us a cursory glance of the delicate web that Callicott and his camp must untangle their rather sticky philosophic position from. To see these problems more clearly and to grapple with the notion of guilt more fully, let us now turn back to Heidegger and see how this notion comes into play when we look at the structure of the world in which the ecocentrists find themselves.

Although we are dealing with environmental ethics, Heidegger does not endorse or make any ethical claims here. However, the structure of his writing is such that it is amiable to our task at hand without committing a *faux pas*, which is indicative of the benefits of his existential phenomenological method. And here is how it is beneficial for the subject at hand: since the ontic conditions surrounding ecocentrism are existential and phenomenological, we can see how green guilt is the self-selected guilt, which is free from the influence of the they-self who set forth and impose the conditions that environmentalists must cast off in order to be genuinely authentic in their ecologically defended endeavors.

What is more, Heidegger (258, 1927, 2010) argues: “But because Dasein is lost in the ‘they,’ it must first find itself. In order to find itself at all, it must be ‘shown’ to itself in its possible authenticity. In terms of its possibility, Dasein is already a potentiality-for-being-its-self, but it needs to have this potentiality attested.” This passage suggests and explains why it is that the ecocentrists passionately adhere to their position: they discover it on their own when they contemplate anthropogenic environmental degradation and the intrinsic value of the non-human world. In Heideggerian terms, it is authentic. And this kind of contemplation brings a specific notion to light: the-they of most generations before Generation X (and including Generation X is a stretch), including Callicott, held the typical Western worldview that ecocentrism criticizes because it tells one that economic security, profit, and the

alleged self-regulating “free-market” system justifies wanton environmental exploitation. It is this kind of inauthentic mentality that Callicott attempts to escape by embracing ecocentrism since it does not hold the same kind of values that one finds with traditional anthropocentric worldviews and anthropogenic environmental dilemmas.

The cases concerning these kinds of environmental dilemmas that are of interest to ecocentrists are always of human origin. Therefore, the they-self to which the ecocentrists are responding belong to two different classes. And it is these classes that the ecocentrists find themselves dealing with when trying to assert their authentic selves. Firstly, they are responding to any parties directly and/or clearly responsible for anthropocentric environmental degradation: industry, consumerism, and any kind of entity that harms the non-human world. Secondly, and on a much more subtle note, they are responding to anthropocentric positions within academic disciplines including but not limited to environmental philosophy, environmental science, city planning, engineering, architecture, and sustainability. We will revisit this point later on, but, for now, the discussion zeros in on the importance of the authentic self as it relates to summoning.

For instance, Heidegger (269, 1927,2010) argues: “Summoning the they-self means calling forth the authentic self to its potential-of-being, as Dasein, that is, as being-in-the-world taking care of things and being-with others.” This passage suggests that only through a survey of the socially constructed view of the non-human world as valued under the rubric of traditional anthropocentrism can ecocentrists see that an alternative awaits them, which permits them to look at the non-human world as more than a mere means to an end. In turn, ecocentrists focus on the intrinsic value of nature instead of the instrumental view when they step outside of their they-self. For if there was not a separate they-self and an authentic self, one could argue that guilt would not be possible because one could not see how anything other than the prescribed norms of behavior are options.

Guilt, on the other hand, indicates more than owing a debt for something according to Heidegger (1927,2010). Instead, Heidegger (281, 1927, 2010) argues: “Being guilty has the further significance of ‘*being responsible for*’ [*‘schuld sein an’*], that is, being the cause or author of something or ‘being the occasion’ for something. In the sense of this ‘being responsible’ for something, one can ‘be guilty’ without ‘owing’ anything to someone else or coming to ‘owe’ him. Conversely, one can owe something to another without being responsible for it oneself. Another person can ‘incur debts’ to others ‘for me.’”

From this passage, when we juxtapose guilt in Heidegger’s sense with green guilt, one finds that Callicott must feel guilty for anthropocentric environmental degradation even though he has distanced himself from being the cause or author – he nevertheless remains bound to “being the occasion” for such degradation. As a result, he acts as if he is at least partially responsible for environmental problems. However, since the ecocentric position favors (to put it in a Leopoldian sense) being a plain member and citizen of the biotic community instead of being a good environmental steward engaging in animal husbandry, the stressed focus of responsibility that is normally embedded within notions of responsible anthropocentrism, shifts from the individual and is dispersed and put on the entire Western worldview. And this is the point that we find in the last sentence in the passage above. For example, by being a good member of the biotic community, one *feels* a sense of responsibility yet the ownership is shared instead of appropriated for oneself to deal with in an appropriate fashion that looks at degradation straight on and accepts the responsibility as a personal manifesto of indebtedness to the planet.

Yet, aside from whether ecocentrists feel personally responsible or the degree to which they feel guilty for the environment’s troubled condition, according to Heidegger (1927,2010), they are always and already situated within a framework of guilt whether they are aware of it or not. Heidegger (274, 1927, 2010) holds: “Beings whose being is care can not only burden themselves with factual guilt, but they *are* guilty in the ground of their being. This being guilty first gives the ontological condition for the fact that Dasein can become guilty while factically existing. . . .Only because Dasein is guilty in the

ground of its own being, and closes itself off from itself as thrown and fallen prey, is conscience possible, if indeed the call basically gives us to understand *this being guilty*.”

From this passage, one sees how this guilt is essentially existential guilt because one has to be in a position of authenticity in order to recognize the structure of what it is that they care about from the outset of the necessary recognition of their authentic self. Yet, once one discovers that the nature of this guilt resides independent of how the care about the world, they see how their they-self was always already surrounded with the conditions that contribute to their guilt-stricken situation. And for the ecocentrists, this guilt takes refuge in the fact that anthropogenic environmental degradation is a condition that they were thrown into considering the world’s state at the time of their birth and subsequent upbringing. All things considered, ecocentrists – or any of us for that matter – did not choose to be born into a world with a troubled environment that has become subject to wanton ecological destruction and economic exploitation. And Heidegger’s (272, 1927, 2010) thoughts give credence to this last thought: “The being of Dasein is care. It included in itself facticity (thrownness), existence (project) and falling prey. Dasein exists as thrown, brought into its there *not* of its own accord. It exists as a potentiality-of-being which belongs to itself, and yet has *not* given itself to itself.”

At this point, we discover that the culmination of the structured organization of care as (authentically) embedded within one’s being, which in this case concerns the ecocentrists, exhibits to us the specific characterization of the driving force behind ecocentrism’s guiding principles. And while these guiding principles (such as shifting the locus to the entire ecosphere as the grounds for moral consideration) answer Heidegger’s “call” in the form of normative imperatives or dictums. For instance, Aldo Leopold’s (224-225, 1949, 1968) famous dictum that has become the backbone of the ecocentric position holds: “A thing is right when it tends to preserve the integrity, beauty, and stability of the biotic community. It is wrong when it tends otherwise.” This simple dictum is the manifestation of the care-structure put forth by ecocentrists. It remains embedded within their authentic selves and reflected in

their arguments supporting ecocentrism. As ecocentrists come to understand how they must reconcile living in a world with continued ecological problems while maintaining a system of values that puts the teleological goals of the non-human world along side the self-directed interests of the human world, we run into calamity. This calamity, however, gives the ecocentrists their green guilt without which their position would lack the possibility of merit. Yet, independent of the epistemic conditions surrounding ecocentrism, adopting the ecocentric position for an ecocentrist gives him or her authenticity and the opportunity to answer the call of their own Dasein. For example, Heidegger (275-276, 1927, 2010) maintains: “Then the correct hearing of the summons is tantamount to understanding oneself in one’s ownmost authentic potentiality for becoming guilty. When Dasein understandingly lets itself be called forth to this possibility, this includes its becoming free for the call: the readiness for being able to be summoned. Understanding the call, Dasein listens to its ownmost possibility of existence. It has chosen itself.”

One benefit of looking at Heidegger’s existential phenomenological approach as a way to understand the motivation behind the ecocentric mindset lies in the notion that we can apply the underlying structure of his insights to the specific “being-in-the-world” world that Callicott cares for. This world, of course, is the world of environmental philosophy exactly and not the environment *per se*. And this is the primary manner in which he cares for – or at least it is the world that he finds himself in. This is an interesting “meta-environmental-philosophic” point because it is important to demarcate between the being-in-the-world-of-the-environment and being-in-the-world-of-academic-environmental-philosophy. And this puts Callicott in an interesting position because the principles that he defends must be characterized in a twofold manner: his philosophic writing has to embody the principles which dictate his approach to the physical environment.

Considering that the overall structure of Callicott’s concern is ultimately the environment and his care is embodied within his philosophic writings and the position that he defends, his approach to

environmental philosophy has to agree with his actions toward the environment more than his ethics has to conform to the metaethical structure of his position. And while this last section brings up more questions than it give answers, it nevertheless spotlights the notion that Callicott, despite how well or poorly his arguments function within academic philosophy, has to deal with his own call.

Jonas' call for us to live in an entirely new sense that requires us to appropriate the anthropocentric view of the non-anthropocentric world entails that we must firstly define "health" of the non-human world. "Health" for an ecosystem can only be defined by the manner in which it stands in relation to human community global health. For environmental ethics-proper, what this means for the allied-ethics aspect of the discipline is that when we answer Richard Routley's question concerning the need for a new environmental ethic, the answer must take the shape of a paradox: On one hand there is the need for us to consider Jonas' advice. The non-human world must be brought to the forefront with a view for its care as an appropriated anthropocentric concern. And since most environmental problems are seen as having anthropogenic roots, this part of the paradox says "no" there is not a need for a new environmental ethic because all that is necessary is to widen our view of responsibility. Yet, on the other hand, the other side of the paradox answers in the affirmative because we must have a specific study of environmental ethics to isolate the appropriate amount of attention required to carve out an academic niche. Isolating this niche will thereby facilitate the study of moral responsibility for the non-human world since the non-academic human world only views the seriousness of said endeavor with a cursory glance – usually if and only if for the most part it is a lucrative expenditure. In other words, "green business" is done for economic reasons instead of anything along the lines of respect for the intrinsic values of the non-human world. For the non-academic business world, instrumental value always wins over intrinsic. Therefore, when we want to look at the possible avenues that allow us to implement a manner of social living that is consistent with Jonas' call, then we must turn to two different avenues that ease the tension of incorporating sustainability into urban infrastructures: public and private.

III. The Benefits of Viewing Environmental Policy as a Closed System: Exploring the Public Realm for a Direct Method of Incorporating Sustainability into Urban Infrastructures

Turning our attention toward the public realm for questions concerning how to incorporate sustainability into urban infrastructures, we find ourselves dealing with the most effective means: laws and policies. Laws and policies, embedded with values, follow a pattern: the more we value something, the greater the extent to which we aim to protect it. Usually, what we protect are rights such as free speech. As society changes, however, we change what we value and want to protect. For instance, evidence of global climate change started with scientists putting forth evidence-based claims that anthropogenic environmental degradation has put the Earth and humankind in danger. As the public starts to understand the degree to which we are in harm's way, the public starts to value other rights more, such as the right to breathe clean air and drink clean water. Yet, we need policy and laws that protect these rights because we cannot depend on industries to consider the best interests of the planet. The purpose at this point is to show that if we understand how environmental policy functions, then we also understand how to expedite the process that allows us to incorporate sustainability into urban infrastructures and safeguard against additional anthropogenic environmental degradation. It is argued here that viewing environmental policy and law as a closed system, even though difficult at times, offers an avenue to ensure that our environmental values have a means for protection. We will see how environmental law, as an autopoietic (self-regulating) system, evolves in order to account for the expanding desires of a dynamic society that is consistent with Jonas' call.

Making a case that distinguishes law as a closed system is complex; yet, Niklas Luhmann (2004) argues that if we can achieve this view, then we have a better way to see law's function within a

society. This view helps us see how environmental law can serve us and the environment by promoting positive environmental values. Therefore, the question concerning how law can be distinguished from other systems becomes paramount. Luhmann (2004, 70) argues: “The question can be solved if one succeeds in describing law as an autopoietic, self-distinguishing system. A theory design of this kind implies that the law produces by itself all the distinctions and concepts which it uses, and that the unity of law is nothing but the fact of this self-production, this ‘autopoiesis’. Society, then, must be seen as the environment [surroundings] that makes such a self-production of law possible and, moreover, tolerates [or encourages] it.”

We can unpack and apply the passage above by saying that society, seen as the source of values, makes it possible for law itself to extend its boundaries to include laws that concern the well being of the planet. However, since laws concerning the environment are – fundamentally – laws that reflect humankind’s interests, then all environmental law is simply in the interest of humans and concern for the environment is a direct consequence of that interest. In turn, each instance of an environmental law or policy serves a function that can be traced back to the original environmental values held by society that rests on scientific research.

For instance, California’s Electronic Waste Recycling Act is a prime example of policy/law extending its boundaries; thereby, this extension exhibits the evolving nature of law, which is indicative of a closed and self-regulating system.²⁰ California, as a society, initially had environmental values that became embedded within the laws. The law responded to the external stimuli, environmental values held by society, and this move allowed the law to evolve and extend its boundaries, which makes it consistent with an autopoietic system. It is moves like this one, according to Luhmann, that allow us to

²⁰ This policy had four primary aspects that show how law can regulate itself by extending its boundaries: reducing hazardous materials used in electronics, facilitating electronic recycling, alleviating the cost of recycling electronics, and it set standards for the purchase environmentally friendly electronics. For more information, see: www.ciwmb.ca.gov/Electronics/Act2003.

look at law as a closed system. This move is a complicated one. Upon an initial viewing, it seems as if Luhmann has made a *faux pas* in his reasoning because it appears that law is not a closed system if external stimuli have an influence. However, Luhmann explains the conditions that allow us to make this move and still view law as a closed system. Luhmann (2004, 106) argues: “In contrast to the usual understanding of autonomy, we distinguish strictly between questions that relate to a casual dependence or independence. . . . Therefore, external reference is not an indication for us that the autonomy of a system is limited because the operation of referring remains an operation of the system. . . . [E]xternal reference. . . simply characterizes the system itself, and does so in exactly the way in which it manages its autonomy.” We can reconcile this passage in terms of California’s Electronic Waste Recycling Act. For instance, the law was able to operate within its means. Yet, it was able to look toward an outside source: environmental rights advocates with political influence. These groups, as they found a voice via popular vote, were referenced by the law. The law was able to access this voice as an external reference as a way to proceed and make a slight change in its boundaries. This change exhibits the self-regulating nature of law because California’s law was able to regulate itself using voters as an external reference while maintaining its autonomy.

III.I Environmental Law: Synthesizing Legal Coding and Environmental Values

One of the recurring themes present in Luhmann’s work (2004) says that law must be capable of producing reliable expectations; which, as a language, it does by coding actions in a binary fashion: actions are either legal or illegal.²¹ Luhmann (2004, 173) argues: “As has been pointed out, the function of law produces a binary scheme in which normative expectations, whatever their origin, are fulfilled or disappointed as the case may be.” Therefore, in an environmental context, we can assume that illegal

²¹ With exception to the binary means of communication of the legal system, Luhmann (2004, 107) makes law’s function clear with the following: “The legal system must provide sufficiently reliable consistency in its decisions and, in this respect, in its function as a unity.”

actions are ones that have a negative impact on the environment. Since our social values are evolving in a manner that views sustainable approaches as more ethically sound than previous approaches, we can trace environmental law back to these values that are subtly embedded in environmental law/policy – even if said values are negative ones.

For instance, Aldo Leopold shaped how many regard the non-human realm, the resources that we use, and the overall approach that we employ toward the non-human world. Leopold (1949, 224-225) argues, “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.” We can unpack Leopold’s dictum in a way that exhibits a binary system. As being a precursor to law, his normative guide holds that by “a thing,” which for the purpose of society is an “action.” And, actions are either right or wrong depending on how they relate to preserving the “integrity, stability, and beauty of the biotic community.” When we juxtapose the views of Leopold and Luhmann, we discover that the value system put forth by Leopold (and others) has embedded itself in our laws over time. This view, by consequence, gives environmental values a voice with authority. In effect, some of the actions deemed “wrong” under Leopold’s dictum become “illegal” under the binary system identified by Luhmann. However, once environmental values become laws, they no longer have ethical claims. Although this seems false, it is a consequence of making the move from “environmental ethic” to “environmental law.” For instance, Luhmann (2004) holds that law is free from any notion of ethical claims. Luhmann (2004, 99) maintains: “Only code-oriented communication belongs to the legal system proper, only such communication that assumes an attribution of the values ‘legal’ and ‘illegal’; for only a communication of this type looks for and assumes a recursive networking in the legal system; only a communication of this type employs coding as a form for its autopoietic openness for further communication in the legal system.”

We can apply Luhmann's line of thought to environmental law. Consider sustainability in terms of the Facility Response Plan (FRP) Rule: "Certain facilities that store and use oil must submit plans to respond to a worst-case discharge of oil and to a substantial threat of such a discharge."²² When we consider this law – as only a law – it says that it is illegal for facilities to not submit plans concerning how to respond to a disaster if they plan to store and use oil. Therefore, this act is simply legal or illegal under the positivistic notion that is consistent with Luhmann's description of the functioning of law. Law, as a social system, determines whether an act is legal or illegal for society. If we compare the FRP to the way in which Luhmann describes the functioning of law and its binary system, we find that there are not any ethical claims present; there is only legal and illegal.

However, although the above-mentioned demarcation between ethical and legal appears somewhat problematic for those who address the overall sustainable soundness of an action with respects to the soundness of an environmental law -- this is not cause for alarm. Law does not have the last word on a subject or itself. For instance, Luhmann (2004, 225) asserts: "A clear division between justice and moral judgment and ethical reflection is not only a matter of the autonomy of the legal system. It also guarantees that a moral judgment on law can be made independently from law, and finally yet importantly, it allows for the possibility of moral dissent in the assessment of legal issues. And this is the precondition for understanding such issues when questions of the moral-ethical quality of justice arise." From this passage, we can assume that a law's soundness can be called into question through "moral authority."²³ This "moral authority" serves as an external checks and balances system that prohibits law from becoming too powerful. In terms of environmental law, if a law is found to be

²² For more information, see: <http://www.epa.gov/oilspill/lawsregs.htm>.

²³ Moral authority could stand for any party that has relevant ties to the law in question. For example, animal rights activist could see laws pertaining to puppy mills as unsound. Therefore, they could lobby for the revision of the law. Therefore, the cycle of law responding to its environment could start anew, and law could redefine its boundaries and still maintain its closed-system status.

unethical (with embedded notions of sustainability) by society, then the greater the influence the relevant parties would have on law as it responds to its surroundings. For instance, as the system of law responds to pressure from those promoting sustainable measures or environmental rights groups, over time, it will regulate itself and the distinction made by the binary nature of law will accord with the new criteria for what is considered legal or illegal.

III.II Environmental Law, Challenges, and Society.

During the discussion at hand, we have seen how environmental values slowly migrate from environmental ethics to become part of the fabric of law. Although it is difficult to argue that law does not have embedded environmental values, it has been shown that environmental law functions in a binary manner. This mechanized feature provides hope for those who champion for sustainability because the functioning of law can mirror the principles present in Leopold's dictum without being subject to holding any values. Yet, unlike Leopold's dictum, it has authority. And this authority can ease the tension of incorporating sustainability into urban infrastructures because it has means that are equipped with factors that influence behavior such as economic incentives (tax cuts) and deterrents such as fines and other sanctions.

If society wishes to implement sustainability into urban infrastructures quickly, then society must expedite the process by which law uses it as an external reference. The challenges that society faces regarding sustainability might not be well suited and met by a "slow-but-steady-wins-the-race" attitude. However, we have to work within the system of law. After all, we have to understand the nature of the legal system in order know how to use it to our advantage. It is often said that we make technology, and, in turn, technology makes us. Law is a technology, a technique. It may not be an ideal tool, but it is one of the best that we have for incorporating sustainability into urban infrastructures because other measures lack an aspect of enforceability.

While the idea of using laws and polices once would have sounded dim in the past, recent advancements in environmental consideration and by extension sustainability efforts, exhibit that groups such as The Sierra Club and grassroots organizations such as El Paso's "Get The Lead Out" network prevented industry from continuing to operate when their operations proved to be detrimental to human and ecosystem health and had a blatant disregard for primary or auxiliary resources such as minerals and fresh and ground water.²⁴ And, as a result, a multinational copper smelting factory, Asarco, was denied a permit to continue operations. Although these organizations are limited with respect to how much they can accomplish, they have proved that they can get the job done, which in turn ease the tension of incorporating sustainability into urban infrastructures and let us answer Jonas' call in a more effective manner that is conducive to the permanence of "genuine human life." Looking at the public realm does exhibit how collective concerns about sustainability and developing a manner of social living that supports the imperative put forth by Jonas exhibits how we can, as a society, promote and facilitate actions that allow us to direct the ways in which we define "progression." Yet, we cannot have a collective community without a collection of individuals, and this is the direction towards which we must now turn.

²⁴ For more information, see: www.gettheleadout.net.

IV. Existential Environmental Ethics: Calling for Responsible Anthropocentrism in the 21st Century

Concerning the private realm, the realm of the individual, we have to develop a manner of living that is consistent with Jonas' call. And while this approach readily appears in the public realm, we must look at what it means to have an individual value system that embodies the requirements for incorporating sustainability into urban infrastructures. We can mine this type of thinking – which in turn answers Jonas' call – out of the phenomenologically existential structure given to us by Jonas. Yet, we can also find the pattern of this structure to be visible – despite being sporadic - at times within the history of existentialism. And we will now turn toward the past as a way to guide us to a sustainable future.

For example, if we look toward Sartre as a bridge, we discover that the pattern of his existentialism provides us with a foundation for approaching topics such environmental stewardship, which has embedded notions of sustainability-as-a-mindset with a focus on individual responsibility. For instance, according to Sartre, his existentialism stands on the foundation of “existence proceeds essence.” Considering that we are left to our own intentions, actions, and devices, to determine our individual “environmental identity,” we are in turn accountable for our actions that contribute to the formation of our identity. Yet, whether or not we choose to self-validate our environmental identity does not depend on self-acknowledgement because our actions and therefore our values have an empirical means of validation that are external to one's self and orientation toward the environment. In other words, one's personal environmental ethics maintain residence within a realist's position. Considering that our orientation toward the environment means that we must consider ourselves as we relate to it, and, in turn, the manner in which we treat the environment ultimately reflects on humankind and our values, we have to take responsibility for our actions toward the environment.

Given Sartre's contention that humans have ultimate freedom, humans are ultimately responsible for their actions. Humans can plan for the future and how their choices affect the environment because everyone else depends on the condition of the environment being in good shape. Therefore, everyone is responsible for the environment and for himself or herself when they consider their involvement with the environment. Yet, according to Sartre, we are limited by "bad faith." Bad faith involves us going against our absolute freedom for something else. For instance, our surrounding conditions might limit how we choose; such conditions cannot make us choose one way over another. Yet, the choice is always ours to make. So, in a sense, freedom itself limits us because not making a choice is still a choice. Therefore, we have to take responsibility for how we approach and deal with the environment and sustainable measures as they relate our choices and means of living. And, recalling our examination of Callicott's principles from earlier, we see that our freedom – independent of our choices – is always already situated within an anthropocentric framework. This is the ultimate situation that we encounter: individual responsibility for our actions as our actions relate to the entire environment. By focusing on the individual, the individual can take account of his or her actions as they relate to the health of the planet.

IV.I The Ecological Imperative for Technology: Appropriating Jonas for the 21st Century and Beyond

Thinking over the notions discussed in the previous sections, the overarching and not-so-subtle connecting theme suggests that what is good for the environment is in turn good for humankind. This is the case even when the consequences of an act do not appear to be in our short-term interest. Yet, in fact, such actions, once proven to be in our long-term best interest, are seen as the best possible avenue because they do work in our favor. This notion of course relies on the fact that an action does not commit reverse anthropocentrism. And the history of technology, with regards to anthropocentric environmental degradation, provides us with a plethora of examples showing how we do not always think through the ecological consequences of our technological actions. As a result, we have been made vividly aware of how we ought not to act. Therefore, normative guidelines that lead humankind in the right direction are required now so that the future does not resemble the past.

This is the point where we arrive at a crossroads. On one side we have the continuation of ecologically unsound designs of technology. On the other side, the desire to change the paradigmatic structure of consumer-driven technology motions us toward the future, which indicates the point in the past when our best technological thinking fell short. And the results are shown by the wide-scale ecological devastation plaguing the planet. Down this road we find the desire to not only salvage technological innovations, but to also reorient the ways in which we look at technology as a mode of revealing the concealed powers of the world and how they can be harnessed. By doing so we discover that we can escape the standard revealing/enframing dichotomy proposed by Heidegger. Instead, we encounter sustainable technologies.²⁵ One could argue that taking the path requiring more ecologically

²⁵ At this point it might seem as if, compared to my work in the past, that I now disagree with a notion that I once defended, which argued that we should avoid enframing technologies by favoring those that are more similar to revealing technologies. Yet the notion that I am supporting is still the same. It is simply a matter of abandoning the utility of the revealing/enframing dichotomy. For more information,

sound diligence answers a call of paranoia parading as a call for survival. And while one could argue, such as those stationed within the ecocentric camps have, that all dealings with technology should simply respect the intrinsic value of the non-human world, this is not a feasible goal even for environmental philosophy itself, not to mention the world of commerce.²⁶ And it is the latter that is of the most concern. After all, commerce is the driving force behind the demand for technology. Of course, advances in business rely on advances in technology. This is the visible point where the exploration and criticism of technology's impact on the non-human world must start. And, following suit, we must study technology's final resting places such as landfills and third world "recycling centers" to look for different methods that can replace environmentally unsound methods. On the other hand, we can exhibit that humankind has the ability to move beyond the revealing/enframing dichotomy and can come up with new approaches to old problems. These approaches, namely sustainable technologies such as solar power, show us how we can think and work ourselves out of the technological pitfalls of the past and avoid additional anthropogenic harm to the non-human world.

While assessing technology from several angles to study its affects on the non-human world is not only a daunting task, it is also a superfluous one. Instead, an overarching guiding principle covers all the relevant points of concern, and I introduced this in a previous article; now I want to elucidate the embedded notions within the ecological imperative of technology, which states: "approach technology in a manner that is conducive to the permanence of genuine human life, which requires ecological sustainability."²⁷ Within this guiding principle, we encounter several of the notions present throughout this discussion. Namely, that "human life" should be the primary priority upon which all other notions

see : Epting, Shane, "Questioning Technology's Role in Environmental Ethics: weak anthropocentrism revisited," *Interdisciplinary Environmental Review* 11, (2010): 18-26.

²⁶ Keep in mind the argument refereed to previously by J. Baird Callicott about loggers and old growth forests.

²⁷ Epting, Shane, "Questioning Technology's Role in Environmental Ethics: weak anthropocentrism revisited," *Interdisciplinary Environmental Review* 11, (2010): 18-26.

rest and depend upon. Without it, well, everything else pales in comparison because – independent of questions concerning ethical realism or the intrinsic value of non-human entities – obligation to our species overrides any other obligation that would otherwise place us in harm's way with the fallacy of reverse anthropocentrism.

Secondly, out of the importance of “human life,” we must address the “permanence” as the surrounding condition for it. In order for humankind to have the conditions for permanence, we must have resources, which means that we must hold ourselves accountable for the environmental conditions that make resources available: this means protecting the integrity of nature, biodiversity, and all aspects that facilitate the ability to use and maintain them now and into the future. This is a complicated move. And while the history of environmental ethics concerns itself with establishing grounds for environmental consideration for the non-human world, establishing arguments for the allocation of resources for future generations is almost as complicated as arguments for the former. Arguments for valuing, conserving, protecting, recognizing, and respecting the environment are abundant.²⁸ Natural resources are of course included in this arena for both instrumental and intrinsic reasons. Establishing the need to have them now is overly apparent. We do not have to justify wanting to drink clean water. Yet, justifying sustainability for future generations takes more work. Keeping in step with the normative notions in the ecological imperative, we must consider that if we have an obligation to ensure the permanence of ‘genuine’ human life, then we have to ensure that future generations have the necessary resources for it. Even though Jonas was thinking more along the lines of the problematic conditions of technology, we can extend his arguments to include the manner in which we conceive of sustainability and the importance we place on it. If we do not think that sustainability is a worthwhile goal, then we have already failed at preserving human life. Jonas (1984) embraces this notion: “Never must the existence or essence of man as a whole be made a stake in the hazards of action.” In the case

²⁸ For an account that shows the history of the environmental preservation and conservation, see Norton, Bryan, “*Unity Among Environmentalists*,” (New York: Oxford, 1991).

of sustainability, however, we must consider that our failure to take action by making our resources sustainable in the future puts the existence of humankind at stake.

At this point, one can object that an obligation toward humans that do not exist is impossible because, as Jonas (1984) points out, there is not a sense of reciprocity from non-existent humans. The common-sense view, on the other hand, argues that our possible grandchildren should have the conditions that make life possible. However, this view does not go beyond the superficial and fails to see the underlying reasons that give it credence. Instead, Jonas (1984) argues that we have an obligation that starts with *our* mere conception of future generations and how our actions can affect them negatively; they could accuse us of making the conditions of life unbearable. Yet, for Jonas (1984), this is not the worst case. The worst case is that there are not humans in the future, and we owe it to ourselves – not necessarily to them – to ensure that future generations exist because *we* want there to be a future with humans in it. Jonas (1984,3) argues: “Thus, it could be that we would rather have to accuse ourselves of the fact that no accusation against us issue hence. The absence of protest would then itself be the gravest accusation; but the accuser in that case would not be the future injured party, but rather we ourselves. . . .To make it impossible for them to be what they ought to be is the true crime, behind which all frustration of their desires, culpable as it may be, takes second place.”

This passage elucidates the real importance behind the future-oriented aspect of sustainability. Jonas (1984) argues that one pressing aspect of today’s ethics, influenced by technology, dictates that we must consider how the consequences of our innovations and actions will affect future generations. This kind of imaginative thinking includes reflective ethical critiques of our technologies, methodologies, and techniques as they relate to and impact future generations – either directly or indirectly. Looking at ourselves, at humankind that is, as autonomous moral agents fails to be sufficient for ethical contemplation because our actions cannot only be assessed within the temporal framework

that we are accustomed to.²⁹ Considering, as Jonas does, that we have a duty to ourselves to ensure the conditions for genuine human life in the future, then we must create the conditions that makes sustainability possible. And this point brings us back to the notion of caring for nature as a way to care for ourselves and in turn care for future generations in tandem. This elucidation goes beyond the previous point that we can only live and thrive if the environment lives and thrives. Instead, keeping in mind that we have a responsibility toward ourselves to secure the conditions for possible human life, we have to make the somewhat imaginative leap and say that future humans can only live and thrive if today's environment, which has our and future resources, lives and thrives. The problem is that today's environment and resources are not thriving. Therefore, when reflecting on ourselves now, and thinking about how natural resources are in peril, we, considering our responsibility to future generations, must fulfill our obligation by conserving, restoring, and sustaining resources. In this imperative and normative sense, we must use our imagination coupled with innovation as a weapon in the battle of implementing sustainability into urban infrastructures.

This notion brings us to my last point in closing: our "environment," the environment of human beings, is not thriving in a sustainable sense. If we are to prioritize the manner in which we have a design for living in this entirely new sense as outlined throughout this discussion, we need to start with the surroundings that we are closest to – our cities. Considering that the structures of our cities in turn give us structure and part of our identity, we have to acknowledge that we must give our cities a new feel and a new essence. Winston Churchill noted that we shape our buildings and our buildings shape

²⁹ At this point it might appear that I am endorsing a future-oriented utilitarianism because the concern seems to reside within maximizing happiness for the greatest amount of humans both existent and non-yet-existing. This point, however, is only coincidental. It is simply a coextensive feature that happens to parallel a potential product of a well-carried-out deontological ethics. Since we, the humans alive today, cannot verify the outcomes of our actions, we have to endorse the intentions behind our actions. While some might object that this puts any future-oriented ethics more akin to pragmatism than deontology, I counter this objection by arguing that simply because we will not be able to verify the outcome does not discount the idea that one can employ sustainable actions out of a duty toward future generations independent of the outcome.

us. The same pattern applies to cities because we shape them and they shape us. Thinking that cities need a force of life, we must find a way to implement sustainability in our urban infrastructures. And when we do, we redefine their identity, and in turn we redefine ourselves.

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Vita

Shane Epting, a former Venice Beach street performer and music journalist turned interdisciplinary environmental philosopher of technology and cultural critic, earned his B.A. in philosophy from the University of North Texas. He has published and presented on a number of topics including environmental ethics, environmental justice, phenomenological architecture, phenomenology, environmental policy and law, and sustainability ethics. After completing his M.A. at the University of Texas at El Paso, he joined the Ph.D. program in philosophy at the University of North Texas. He plans to type and delete numerous words on a keyboard in a sequential manner, which he hopes make sense and, somehow, saves the world.

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This thesis was typed by Shane Epting