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ABSTRACT

RECONSIDERING RESTORATION

by
Brian Hoffner

What does the process of ecological restoration actually produce? For some restoring nature is a point of no contention. By replacing ecosystems that have been damaged by human interference, humans are taking proper responsibility for their actions. However, the environmental ethics community is all but in agreement over humans' obligations to damaged ecosystems. Some in the field claim that it is human's responsibility to perform "wild gardening", through restorations, to "*our*" environments. While other philosophers insist that these acts produce "faked nature".

This thesis offers a compromise vision of the meaning of restoration. The author uses the concept of Autonomous Biological Culture (ABC), defined as the point where an ecosystem is self-functioning but a product of human interference, as an *ideal* goal of any restoration practice. Although certain restorations are accepted in some situations—with the ideal goal of ABC in mind, restoration is not accepted as an *appropriate* goal of an operative environmental ethic.

Justification of restoration is considered beyond anthropocentric—human-centered—reasons. The author argues that restorations are valuable beyond human necessity. Natural relational values or non-anthropocentric instrumental values are considered, as a means of justifying restoration obligations. In this sense, environmental pragmatism is broadened to include the consequences experienced by non-anthropocentric entities.

If environmental protection is deemed morally correct, then restorations—which admittedly do not re-create nature—that protect an ecosystem and its surrounding areas also must also be morally correct. In this same vein, if environmental protection is deemed morally correct, then restoration *promises* that aid in the destruction of natural environments, violate the moral duty of environmental protection, and are thus, morally incorrect.

RECONSIDERING RESTORATION

by
Brian Hoffner

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Live life with integrity and compassion.

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CHAPTER 1

INTRODUCTION

1.1 Ecological Restoration

The ecological footprint of modern human societies is enormous. Human activity one way or another has altered nearly all non-human environments. These alterations may degrade the environment or they may just "change" the character of the area. Either way, in almost all cases, the trajectory of the environment will undergo a forced change of course and its natural influences will be compromised because of human interruption.

Historically, human nature has been to move away from the environments that they have damaged. The idea has been to leave the unhealthy, contaminated sites and focus on preserving and cherishing the healthy areas. However, as William Throop writes, "now we must worry about global decline of biodiversity, global depletion of energy resources, global warming, and the gradual poisoning of the global environment." Human actions are overwhelming so much of the surrounding environment that there are few unstained resources left. Humans can no longer "[make] do with whatever new ecosystem arises, moving on to other lands."[1]

Ecological restoration has emerged as a response to this dilemma. The Society for Ecological Restoration defines ecological restoration as, *"the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed."*

> Ecological restoration is an intentional activity that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity and sustainability. Frequently, the ecosystem that requires restoration has been degraded,

> damaged, transformed or entirely destroyed as the direct or indirect result of human activities. In some cases, these impacts to ecosystems have been caused or aggravated by natural agencies such as wildfire, floods, storms, or volcanic eruption, to the point at which the ecosystem cannot recover its predisturbance state or its historic developmental trajectory.

Restoration projects consist of deliberate actions, which generally are intended to restore the environment to its historic trajectory. "Interventions employed in restoration vary widely among projects, depending on the extent and duration of past disturbances, cultural conditions that have shaped the landscape, and contemporary constraints and opportunities."[2]

At first glance, ecological restoration does not seem controversial. Intuitively, one does not recognize *"the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed"* as a contested point. Ecological restoration is a way of "righting" a wrong that may have been inflicted on the environment. Isn't this a *good* thing? Quite possibly it is, however the clarity of this point becomes increasingly muddled when considering the question, "What does the process of ecological restoration actually produce?"

The philosophical problems that arise (problems which will be examined in great detail) in restoration stem from dichotomy, which classifies natural and cultural values separately. There are disagreements as to which form of value—natural or cultural—is benefited through ecological restoration. Eric Katz claims that ecological restoration

produces artifacts. He argues that restorations have direct human-oriented goals; therefore, the end results of restoration projects are nothing more than artifacts created for and by humans. Nature is valuable and important because of its non-human design, its autonomous existence. Katz's arguments, and a description of natural and cultural values will be presented in greater detail later in this thesis. However, for now this narrow sketch of Katz's argument—that restoration projects ultimately serve human ends—represents a rejection of restoration policy because it undermines what is valuable and important in nature. William Jordan, in quite opposite fashion from Katz, argues that humans must stop removing themselves from nature with preservation policy, but rather, maintain a participatory relationship with nature through ecological restoration. "If gardening provides a model for a healthy relationship with nature, then restoration is that form of gardening concerned specifically with the gardening, maintenance, and reconstitution of wild nature, and is the key to a healthy relationship with it" (20). Jordan's arguments are also discussed in great detail later in this thesis; however, for now this sample represents an acceptance of restoration policy, because of its ability to re-create natural value and foster a healthy relationship between nature and culture.

Ultimately, these philosophical differences come from two concepts that are not new to environmental ethics: contingently valued nature and moral conflict.

1.2 Contingently Valued Nature

Contingently valued nature states that natural environments are *only* important and worthy of value if there is human desire for these natural environments. If restoration practice is deemed an important goal of environmental policy, then—in light of Katz's

arguments—an important step is being taken away from valuing original nature. Accepting restored nature for some—like Katz—is similar to accepting completely artificial nature.

In Martin Krieger's essay, "What's Wrong with Plastic Trees", he challenges the adequacy of all anthropocentric—human-interest—based environmental policy. Krieger argues that the preservation of rare areas cannot be based on human interest because humans desires for natural environments, and human needs for natural environments are both contingent upon cultural context. According to Krieger, it is foreseeable that humans will be able to create artificial environments, which accommodate humans' need for natural environments; artificial environments will be adequate substitutes for natural environments. Furthermore, humans have the ability to manipulate—through education—human desires and preferences. Thus, in time the public can actually "be educated" to prefer the lower cost, more abundant artificial environments to the rare and costly natural environments. For Krieger, reality is not important, experiences and perception of reality is all that matters.

Thus, the ability to manipulate people's desires and to create artificial environments, for Krieger, means that natural environments need only exist on a contingent basis. In other words, Krieger argues that there is nothing wrong with natural environments satisfying human interests but there is nothing inherently right about this either and conversely there is nothing wrong with artificial environments.[3]

In his essay "Utilitarianism and Preservation",[4] Eric Katz depicts Krieger's point, "The simple fact of the matter is that the interests of humanity are not necessarily connected with the preservation of the natural environment. Any ethical theory which

places its emphasis on the satisfaction of human needs, can support a policy of preservation only on a contingent basis."[5]

1.3 Moral Conflict

Ultimately, contingently valued nature is a contested concept because some people only recognize nature as a human resource. For example, if a natural environment makes us healthier than it would be similar to hospital, if it offers us recreation than it would be similar to an amusement park. For those of this school of thought, nature is valuable only as far as its abilities to improve human life. For these people, nature is considered to be *instrumentally* valuable *to* humans. However, there are others who recognize *actual* natural value, independent of human relationships. In this view, nature is similar to a doctor not a hospital. A doctor may be instrumentally valuable because he/she has the ability to heal; however, doctors also have personal, inherent value because they are experiencing their own lives. Similarly, from this point of view, nature's worth does not end with its ability to serve humans' needs. There is value separate from humans within nature. For these people, nature is *intrinsically* valuable *in it of itself*, regardless of its instrumental worth to humans.

Thus, there is a conflict between environmental philosophers concerning where and if value exists within nature. Were this conflict resolved, most of the philosophical dispute over restoration would also be resolved. For example, if it were proven that there was no value in nature other than human-centered utilitarian values, ecological restoration would be justified whenever human desires were met. However, if it were proven that nature holds value in it of itself—intrinsic value—then the priority of any

restoration project would be to recognize and restore these natural values.* Any manipulation of the environment otherwise would be a clear oppressive act against an entity with moral standing (if it were proven that nature holds value in it of itself).

Krieger—with his artificial environments—has challenged environmental philosophers to formulate an environmental ethic that is not based on human needs. Otherwise, natural environments are only contingently valuable. For its opponents, this challenge extends from artificial environments to restored environments. Thus, in dispute of restoration practice, some environmental philosophers—like Eric Katz and Robert Elliot who are highlighted in this thesis—have appealed to natural values.† This argument seems to state that when environments are restored, cultural values may be enhanced, but natural values are certainly not re-created, and furthermore, the still existing natural values in the area may in fact be compromised by the restoration act.

These claims by restoration opponents *must* be based upon a justifiable non-anthropocentric environmental ethic. However, while trying to formulate an environmental ethic that transcends the boundaries of the human community, a "moral conflict" occurs when considering where humans' obligations exist, and how the operation of this ethic should be understood. In the past, when ethics have been extended to include all people (i.e. women, blacks) this conflict was overcome. It was realized that skin color or gender were not justifiable reasons for the oppression of one group by another; thus, on ethical grounds people should be seen as equal regardless of their race or sex. Once this transition was made, it was then rational and appropriate to recognize *all people* as moral agents; individuals that can conceptualize when they have right or

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* Whether natural value can be restored is a major debate that will be visited in this thesis, for now however that argument is sidestepped.

† Including Eric Katz and Robert Elliot who are highlighted in this thesis.

wrong done to them, and when they do right or wrong to others. Thus, moral obligations exist *equally* between all people. Regardless of your race or gender, you have certain obligations to the other people with which you share communities, and likewise they have equal obligations to you, other things held constant.

When extending ethics to non-human entities, understanding where and to what or whom, obligations are owed becomes problematic. This conflict exists because ethics are no longer being structured for communities with moral agent to moral agent relationships. Now, relationships between moral agents (humans) and amoral non-human organisms and entities are being considered. No claim is made here about natural entities ability to have a conscience, or even that non-human individuals are necessarily amoral. The important point is that ethical dialogue cannot occur between humans and non-humans, thus, when forming relationships with natural entities, there are one-sided obligations. In other words, humans cannot expect natural entities to act "morally" just because an environmental ethic has been constructed.

The reasons for this "value problem" are consistent with the notion that an environmental ethic, fundamentally, seeks to understand relationships between moral agents (humans) and amoral subjects (natural entities). In other words, when we extend our obligations to all people, we do so recognizing equality among all the bearers of rights (all people). Thus, values and rights exist in the same way for all agents being considered. Therefore, it is much *less* problematic for humans to understand the value of and in other humans, than it is for humans to understand the value of and in natural entities. With natural entities the values and rights are not the same (regardless of whether or not they are equal) for all subjects being considered.

The operation of an environmental ethic brings conflict because it is difficult to determine *if* natural value exists within nature. In other words, it is unclear whether nature is only instrumentally valuable *to humans* or if it is intrinsically valuable *in it of itself*. Thus, it is difficult to determine whether humans have moral obligations to nature itself, or if they may utilize nature strictly as a human resource. As a final example to highlight this point, consider a hospital that was partially damaged by a fire and a forest that was partially logged. There would be few, if any, philosophical problems with the restoration of the damaged building that contained the hospital.[‡] The value of the hospital is only *for* the human community that it supports. It has no value for itself, therefore, the community has the right to decide if it chooses to invest in the hospitals restoration or not. However, with the logged forest there are some who argue that natural values, not just human resources, were lost. Thus, it is not unanimous as to what the human community has the right to do, and what obligations they have to the damaged nature.

1.4 A Sketch

It is this point of contention, regarding human obligations to damaged ecosystems, that is addressed in this thesis. The thesis starts by giving attention to the question, *what does the process of ecological restoration actually produce*? However, after examining the differing viewpoints as to what ecological restoration *does* produce, the thesis moves

[‡] There may be philosophical issues if the hospital was an historic building, however here the author is only considering the building as a functioning hospital.

attention to what ecological restoration *should* produce and more importantly when it should produce it.[§]

Part 2.1 of Chapter 2 discusses the different views found in this debate over what is produced by ecological restoration. Robert Elliot argues that restoration practices do not end up cooperating with conservation principles but rather can act as a way of undermining the arguments of conservationists. They provide humans and the environment they are introduced to, nothing more than "faked nature".[6] Eric Katz with similar arguments calls restoration practice the "big lie".[7] Katz does not use the analogy of art or any other replications as Elliot does, rather he calls restored nature not a fake but an artifact. Katz argues that restoration projects create artifacts that have some sort of human purpose, while true nature exists with no form of human blueprints or planned being. On the other end of the spectrum, William Jordan argues that it is human's obligation to the natural world to control, and in essence perform "wild gardening" on natural areas. Jordan, concerned with the effects of "hands off" preservation policy, suggests that we can create a mutually beneficial relationship between humans and nature through restoration.[8]

Part 2.2 of Chapter 2 presents the concept of Autonomous Biological Culture (ABC), a compromise within this spectrum of visions. This compromise is based on the belief that there is clear distinction between non-living artifacts, such as a building or art—which Katz refers to—and artifacts that are alive, such as a restored ecosystem. Autonomous Biological Culture possesses values independent of human relationships, while at the same time it is missing many of the qualities that we value in original nature.

[§] The author feels that restoration should produce Autonomous Biological Culture. This is a concept endorsing restoring environments to autonomous systems and is discussed in great detail starting on page 24.

In Part 3.1 of Chapter 3 the pragmatic method is introduced as a departure from "first principles or metaphysical antecedents in which to ground meaning and truth"[9] and rather rested upon a philosophy of consequences and events. The application of this method in environmental philosophy is introduced as Environmental Pragmatism; environmental pragmatists are not concerned with whether nature's value is intrinsic or instrumental, they "want to know simply how this value relates to others and can form an organic part of our lives."[10] Traditionally, environmental pragmatists have only considered how nature relates *to humans* while determining its pragmatic significance.

In Part 3.2 of Chapter 3, a comparison of the duties owed by a physician to his patient and those owed by a restorationist to a damaged ecosystem are used to show how restorations can be justified, using the pragmatic method. However, the pragmatic consequences are measured using non-anthropocentric values, creating a form of non-anthropocentric environmental pragmatism. Thus, the argument follows that the moral decency and appropriateness—with regards to non-human environments—of restoration practices, should be evaluated using a pragmatic case-by-case sensibility. However, approaching ecological restoration from an environmental pragmatic perspective is useful beyond just endorsing the development of human relationships with nature, as has been traditional with environmental pragmatists approach to ecological restoration. The justification of restorations, must concentrate on finding *non-anthropocentric relational values* or *non-anthropocentric instrumental values within* non-human environments, rather than seeking intrinsic or inherent values within the natural world.

CHAPTER 2

THE ABC'S OF ECOLOGICAL RESTORATION:
A Comparison of the Garden, the Artifact and Autonomous Biological Culture

2.1 "Dual-ing" Viewpoints

What does the process of ecological restoration actually produce? Eric Katz has argued that restorations create artifacts; systems of human design, similar to any other product of human plan.[11] On the other end of the spectrum, William Jordan has argued that it is humans' moral obligation to rebuild and control nature, to restore ecosystems into "wild gardens".[12] This chapter offers a compromise vision of the meaning of restoration. The author discusses nature/culture dualism, and offers broad but effective classifications of both nature and culture. It is argued that the practice of "wild gardening" in effect dominates and destroys the natural world. The author also argues that living artifacts, such as restored ecosystems and non-living artifacts are profoundly separate from each other. This separation exists because living artifacts will have autonomously changing, dynamic futures and contain value independent of human interpretation; non-living artifacts carry neither of these characteristics. The term Autonomous Biological Culture (ABC) will be used to describe independently developing ecosystems. Autonomous Biological Culture will deepen the content of the notion of a nature/culture dualism by considering the separation between living and non-living artifacts.

Ecosystems that require constant management and human control exist only within the sphere of human interpretation. These ecosystems create cultured living artifacts that are not much closer to nature than a garden. At the same time, a restored

ecosystem is more than just an artifact in the sense that a painting is an artifact. By grouping a piece of art and a functioning ecosystem—even a restored ecosystem—in the same category, important values that exist within the ecosystem go unrecognized.

Autonomous Biological Culture lies somewhere in between the garden and the artifact and may provide a new vision for restoration goals.

2.1.1 Fakes and Artifacts

Robert Elliot's essay, "Faking Nature"[13] has for many served as the starting point for critiques of restoration ecology. In this essay, he defines what he calls the "restoration thesis"(in his later work called the replacement thesis):[14] "the destruction of what has value is compensated for by the later creation (recreation) of something of equal value." Elliot claims that this is the premise upon which many restoration decisions may be based.

Elliot considers a mining company that is seeking to extract minerals from beach sands.[15] In order to do so, they must clear large dune systems and vegetation. The public, scientists, and the mining company commonly agree that the dunes have value "quite apart from a utilitarian one"; therefore any radical alterations to the dune area would be a bad thing. The mining company offers its "willingness, indeed its desire", to fully restore the dune system to its original state after extraction of the minerals. The company's argument, which is based on the restoration thesis claims that "any loss of value is merely temporary and that full value will in fact be restored".[16]

For Elliot, the dangers here lay in the fact that restoration practices do not end up cooperating with conservation principles but rather can act as a way of undermining the arguments of conservationists. Elliot claims that because of this fact proponents of

restoration or rehabilitation are "in fact effective in defeating environmentalist protest."[17] In his later work, Elliot tones down this strong argument to only include certain restorations, in particular "replacement" restorations where destruction is justified by the promise to restore and replace the lost natural values when the degradation is complete (as with the beach mining example).

To provide justification for some restorations, Elliot considers a cleared forest for mining.[18] The mining company fully extracts the land's resources. In time, however, the deforested area is restored to some version of the original. The area reclaims its original contours and recaptures the natural processes that had characterized the area in its pristine state. Elliot claims that the value of the restored forest is inherently less than the pristine original, because "a crucial relational property to do with genesis is absent"[19] (a notion that will be returned to later). However, he argues, "Without a doubt it is better that restoration took place than that the area remained a wreck".[20]

Elliot uses analogies of forged artwork to restored nature to prove that an entity's origins effect one's perception of that entity.[21] If someone were promised an original painting from a desired artist, they would be quite excited upon receiving the gift. If the painting were only a replica of the original, even if the recipient was initially fooled, their joy would be diminished upon finding out the truth. This example highlights two of Elliot's main arguments against the "restoration thesis", and why he feels ecological restoration is merely "faking nature".[22] It shows how the painting's origins will effect the recipient's perception and ultimately the value of the painting. Even if the replication of the painting is perfect and the recipient is not able to tell the difference between the replication and the original from an aesthetic standpoint, the recipient will

still feel a loss of value when told the truth because of the intangible value associated with the genesis of the art. It also shows us how knowledge is inevitably wed to evaluation and therefore perception. Perception will in turn determine how an entity is valued. As an ignorant art observer may be fooled by a replication that would not fool an expert, an average hiker may not notice the subtle differences between original and restored nature that an expert ecologist may observe. This is because knowledge effects evaluation and perception.

As Elliot alludes to in his more recent arguments, there also will be a loss of value from time lost between destruction and regeneration.[23] If an area is degraded by human activity, it has lost its continuity with the past regardless of whether or not restoration takes place. If the area is left to regenerate on its own account or if the area is restored, either way the result will not have a continuous connection to the past. An additional loss of value will come from the loss of value that would have been, during the time period between degradation and regeneration or restoration. In other words, there would have been a certain element of present value that existed during that time that was subsequently never experienced because of the interference, resulting in lost value.

Within the debate over ecological restoration, Eric Katz's arguments based partly on the work of Robert Elliot have been in the forefront of criticisms. In his most famous essay "The Big Lie"[24], Katz critiques the restoration thesis, as an extension of Elliot's "Faking Nature", which was published almost a decade before. Katz does not use the analogy of art or any other replications as Elliot does, rather he calls restored nature not a fake but an artifact. "The recreated natural environment that is the end result of a restoration project is nothing more than an artifact created for human use".[25]In related

arguments, he constructs a polar spectrum with nature and culture/artifact at opposing ends. "The dualism is not absolute, for naturalness and artifactuality exist along a spectrum of various kinds of entities".[26] A more specific discussion of what constitutes nature or culture will be provided later, but for now it is sufficient to present the notion of a nature/culture distinction that does not refer to a "complete dualism." To show this more clearly, Katz considers two artifacts, a plastic chair, and a wooden chair. As will be shown later, both entities are clearly artifacts, however the wooden chair, being more closely related to the natural material that comprises its formation is more natural than the plastic chair. The important distinction is that there are varying degrees of nature and artifact, and an entity may hold characteristics of each.

Katz claims to be "outraged" by the arrogance that is revealed by the human race thinking they have a technological fix over the nature they destroy. Katz claims that any restoration project is a form of manipulation and domination over nature, thus restricting the very freedom its advocates claim to be liberating. As noted above, Katz argues that restoration projects create artifacts that have some sort of human purpose, while true nature exists with no form of human blueprints or planned being. Restoration takes this chaos and, in essence, freedom, away from nature and provides it with a plan. Restoration, for Katz, is thus domination. Finally, Katz is worried about the consequences of restored nature being thought of as an equal replacement for the real thing. If people felt that any damaged ecosystem could be made whole again, there would be no incentive to preserve the existing natural areas that are left in the world. As indicated earlier, fear of replacement policy is the point that Elliot is most concerned with in his recent arguments, as the "restoration thesis", has transformed to the "replacement

thesis". Katz extends the points brought up by Elliot that origin and knowledge will affect one's value judgment. Built into Elliot's argument is the assumption that restorationists can create exact replicas and as noted earlier he advocates certain restoration projects. Katz on the other hand, unconditionally rejects restoration, even if an exact replica could be produced. Furthermore, he takes the stance that creating exact replicas is "fanciful" and argues that since restorationists do not have the capability to restore, restoration must be rejected as part of human moral obligations.**

2.1.2 Nature and Culture/Artifacts

The first characterization of the nature/culture dichotomy is the notion that there is no dichotomy. On this view, everything is natural.[27] The argument states that if humans are the result of natural biological processes, then everything that is a result of humans subsequently is natural as well. It implies an all-inclusive governing "law of nature", to the extent that everything that occurs in the universe, from flourishing ancient forests, to the building of cities, occurs within the laws of nature and is thus natural. This stance may have some element of truth to it, however, it cannot hold up under more examination. There are certain capacities of humankind that certainly create a distinction between humans and other organisms. The ability to manipulate, exploit and destroy other entities within the universe (biotic and abiotic) at such awesome magnitudes and

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** For a discussion of Katz's arguments See:
Katz, E. (2000). The Big Lie: The Human Restoration of Nature. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp. 85-88). New York: Humanity Books.
Also See:
Light. A (2000), Restoration or Domination: A Reply to Katz. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp. 95-111). New York: Humanity Books.

great speeds that human's technology allows them certainly offers some distinction between humans and other organisms.

As Elliot points out, "this is not to deny, of course, that the capacities that differentiate us from other things are capacities that emerged from natural processes: culture is a product of nature".[28] In other words, culture is a product of nature and the capacities that allow humans this dominance is a product of culture. Just because culture is a product of nature does not mean that it is necessarily a part of nature. Consider as an example, an entity that is a product of humans, a shirt. Just because a shirt is a product of humans does not mean that the shirt is a part of humankind. Now consider a man and woman having a baby. This child is a product of humankind and is certainly a part of humankind. The distinction between products of humankind that causes one product to be apart from humans (shirt) and one to be a part of humankind (a child) also exists in nature. It will be shown that this distinction within nature is established by design plans.

In Elliot's first presentation of the "restoration thesis" (replacement thesis), nature was defined as; "unmodified by human activity".[29] This is common language found in definitions/distinctions of wilderness areas, preserves and the like, among legislative and philosophical literature. Others in the field however, claim that this type of nature distinction is subjective and random.[30] In other words, human behavior would have to change for humans to become "part of nature"; however defining natural as lacking human presence as Elliot does is arbitrary. Humans' actions have taken them away from the natural world, however that does not justify characterizing humans as fundamentally apart from nature.

In his more recent argument, Elliot addresses whether or not this somewhat seemingly arbitrary assault on human presence when defining nature is justified. Elliot points towards three attributes—magnitude, intent, and rationality-[31]in order to formulate a justification for the arguably arbitrary definition of natural as "unmodified by human activity." As will be shown, consideration of any one of these attributes in isolation from the other two, will provide a weak argument for defining nature as separate from human activity. However, when magnitude, intent and rationality are considered in unison with regards to human activity, it becomes clearer why this separation between culture and nature exists. It is important to understand why certain activities and certain outcomes are more natural than others before endorsing preservation or restoration policy.

One could argue that human presence is not an arbitrary classification of nature and culture, due to the magnitude of interference. However, as humans can change natural processes at such awesome levels, natural occurrences can as well. Elliot points out that "spectacular" natural occurrences, such as eruptions, earthquakes and fire can "involve a significant loss of natural value".[32] Magnitude alone does not seem to justify the separation of human actions from natural processes.

Elliot offers intent as another argument for the distinction between natural and non-natural. This argument states that since the human actions that degrade the natural world are often intentional actions, humans thus, are separating themselves from the natural. Without getting into a debate over the ability of non-human creatures to act intentionally, it is easy to see that certain non-human actions are intentional and not just products of chaos. When a beaver builds a dam it is certainly an intentional action, with a strict plan, that can cause loss of natural value. Thus, by including the beaver building

a dam as a natural process, and excluding human actions solely on the basis of intent is seemingly arbitrary and not justified.[33]

Elliot adds to the argument of intention the aspect that humans are rational creatures. This argument states that since culture is are able to systematically alter and destroy the natural world, through its mechanisms (science and technology) the non-natural is "what has been modified as a result of people exercising their rational capacities".[34] This argument appears to be leading closer to a just assessment of natural versus non-natural. However, by this characteristic all human existence, even ancient indigenous cultures would be thought of as outside the natural world, assuming that humans have always been rational creatures. Humans are a product of nature at their origin, and countless actions through culture are causing the divergence between human and nature. Therefore, the fact that this argument sets human actions and ultimately humans *fundamentally* apart from nature is not justified. In other words, the modern day human is separated from nature; however, the human organism as a species is fundamentally at its origin part of the natural world.

Katz defines artifacts as "the physical manifestation of human purpose imposed on the world of nature".[35] An artifact would not exist if there weren't some plan, at some point for some human need or desire for the entity. The design may have flaws, and the artifact may not be created, or even another type of artifact may be inadvertently created along the way. Nevertheless, the artifact would not exist if it were not for some plan. This is not the case with natural entities; there are no blueprints for the design of nature. As Katz puts it simply, "Artifacts are the result of human intentions. Natural entities are not. What could be clearer?"[36] Of course, this view by Katz lends itself to the arguments

presented that choosing human intentions as a benchmark for naturalness is arbitrary, thus, such classification is not justified. Katz (and Elliot) resolves this, by the notion that this dualism is not absolute; there are degrees of naturalness. The attributes described by Elliot that may help to justify a definition of nature, which excludes humans, are intent, rationality and magnitude. Presumably, these attributes could be used to measure an entity along Katz's spectrum of nature and culture, which was noted earlier. Thus, Elliot's three attributes—intent, rationality and magnitude—all push humans towards the culture end of the spectrum. Still, whether considered individually or as aggregated arguments, these attributes will not fully define humans as "unnatural".

Perhaps it is appropriate to consider defining and classifying nature and culture by the aspects of them that are valued. When looking at nature, by no means are there haphazardly placed entities, and purposeless processes seen. There are magnificent patterns and order weaved throughout the constructs of the natural world. However, these patterns are independent of design and plan by creatures such as humans. There is a certain "otherness" exemplified by nature that appeals to humans and this aspect is valued.[37]

This is quite different from why the wonders of culture are valued. There is certainly some amazement that can be felt while looking at the skyline of New York City, or standing in midtown among the massive skyscrapers. This amazement that one may feel, this value associated with culture's accomplishments exists because one may be awed by the ingenuity of humankind. The awesome structures are an example of what culture can produce and there is value associated with it.

It is easy to recognize this clear distinction between why value is placed on the wonders of the natural world and why value is placed on the wonders of the cultural world. The natural world exists with no human plan; from an anthropocentric view there is a sort of organized chaos. Elliot alludes to this with his notion of "otherness". In quite opposite fashion, the cultural world is valued for its awesome exhibition of human plan, human ingenuity.

2.1.3 Wild Garden

There are some who feel that the dualism between nature and culture that has been discussed is not inevitability a dimension of human existence. On this view, it is the policy, in particular preservation policy, that is being implemented that creates the separation. Advocates of restoration such as Frederick Turner and William Jordan have spoken out about the inevitable dualism of preservation.[††] Their claim is that under preservation theory, human societies are either expelled from nature or destined to destroy it. They propose a more functional role for both humans and nature, suggesting an interdependent, mutually beneficial relationship between the two systems. Here they present a much more active role where humans can participate in the processes of ecosystems and allow ecosystems to participate in the processes of their own lives.[38]

"We have here the elements of a new kind of environmental ethic, one which accepts human participation in nature as essential for us and for the world, and which

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[††] See:

Jordan, W. (2000). 'Sunflower Forest': Ecological Restoration as the Basis for a New Environmental Paradigm. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp. 205-220). New York: Humanity Books.

Also see:

Turner, F. (2000) A Field Guide to the Synthetic Landscape: Toward a New Environmental Ethic. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp. 195-203). New York: Humanity Books.

actively seeks out ways in which that participation can be deepened and extended".[39] This message from Turner gives us some insight into the philosophical and psychological motivations of some ecological restorationists. Turner suggests that society not take a detached position within the natural world, but rather a participatory role. He urges societies not to attempt to define nature by what it was, but rather by what it can become. Turner argues that processes of burning prairies, and other forms of restoration can be psychological healers for the human spirit. The new naturalist can feel fulfilled and redeemed from the "ecological guilt" of yesteryear.[40] The rituals of restoration can allow humans to enter in a communal relationship with nature, which will facilitate both party's need for connection.

"If gardening provides a model for a healthy relationship with nature, then restoration is that form of gardening concerned specifically with the gardening, maintenance, and reconstitution of wild nature, and is the key to a healthy relationship with it".[41] Thus, Jordan portrays his belief that reconstructing nature will allow human societies to experience the most complete relationship and connection with the natural world. This will lead to a better understanding of ecosystems, which will lead to making humans better stewards of the natural world. Jordan, who appears to be a nature/culture dualist, feels that environmentalism, and ecological restoration, must, "provide the basis for a healthy relationship between nature and culture".[42] Jordan argues that the current environmental paradigm does nothing for this needed relationship. The "minimal impact" stewardship, inevitably forces everyone to become "users and consumers" of the natural world. Jordan envisions restoration being the "outdoor activity of the next century". In his eyes, if this were the case, people would not have to see nature or

wilderness as another place for us to go, like the supermarket. They would not have to check all of their guilt and the influences of culture at the door. They could be more themselves within the natural world, which will in turn enhance their relationship with it.[43]

This participatory relationship that they speak of may have a seductive, appealing quality engrained, but it just does not consider the elements of the natural and cultural worlds. The "otherness" that is valued in nature would be lost if the introduction of humans into the seemingly undisturbed areas left in the world was allowed. Preservationists do not hold these views out of preference, but out of necessity. As Elliot argues, humans in a sense have become exotic species of certain natural areas through their use of technology.[44] According to Kane, preservation has been labeled as unnatural behavior because of its proponents desires to limit human impact on certain wilderness and pristine areas. However, Kane offers, "Preservation could be grounded on the much more innocuous premise that there are limits to the freedom of human beings to use nature solely for their own purposes".[45] This does not imply a sense of human removal or separation but rather constraint, a constraint that any organism would need to have after reaching a certain capacity.

The type of relationship that has been presented here by Jordan and Turner presumably is an attempt at creating a more natural existence. This perspective is fanciful, and utterly disregards everything that is unique and wondrous about the natural world. The whole essence of the wild is its ability to exist free from the constraints of any one organism's design, while at the same time existing in such great order. Jordan claims that gardening is the way to a healthy relationship with nature and calls restoration

the gardening of wild nature. This could not stand in greater opposition to the characteristics given to the natural. How can Jordan suggest gardening (control) something that is wild and expect its wild attribute to remain? If you tame a lion for a circus is it still a wild animal?

Furthermore, Jordan's whole position lies on the premise that gardening in any sense has some important *natural* quality. To consider this notion, it will be appropriate to once again consider the concept of a nature/culture spectrum. As far as lifestyles go, it is without question that creating a garden in your yard and growing your own food is more natural than going to the supermarket. However, both are certainly direct creations of human design and intention, they are products of culture not nature and are artifacts. The author is not making any claims against home gardening, he claims that a home garden is an artifact, and that undoubtedly a "wild garden", if such thing could even exist, would also be an artifact.

Thus, the last two sections have shown that modern cultures are at a point where claiming that everything is natural is missing a serious distinction between that of the natural and cultural. It must be recognized that there is a distinction between nature and culture and that the distinction stems from the fact that culture is a product of nature not a part of nature. Humans are making rational decisions that intentionally alter natural processes. The magnitude of these rational decisions cause humans to transcend the natural world and its processes. They enter into the cultural world. An important value is associated with nature because of its non-designed order. Any policy that seeks to regain nature by controlling its destiny is in fact self-defeating and moving the area further towards the cultural end of the spectrum.

2.2 A Compromise: Autonomous Biological Culture

Restored nature is not of equal value to that of the original. As argued by Elliot and Katz the value that is associated with past continuity and with "otherness" is lost in restored nature. When human interruption takes place and alters an area, there is automatically going to be a disconnection of genesis existing in the area that is left as a result of the disturbance. Regardless of the future policy implemented at that site (restoration, regeneration), the discontinuous characteristic is there. The "otherness" talked about earlier stems strictly from the fact that nature consists of unplanned order, patterns that occur without any human design or intention. Restoration at any level will have a certain amount of design and plan for the direction of an area. The mystical, mysterious aspect of the natural world is one of its defining characteristics and when all or part of that is lost through restoration there is natural value lost.

Nevertheless, there is a clear distinction between non-living artifacts, such as a building or art, and artifacts that are alive, such as a restored ecosystem. As was shown earlier, Elliot's original argument compares restored nature to art forgery, and Katz's argument claims that restored nature is an artifact, similar to any other entity of human design.

Katz addresses the concept of living and non-living artifacts by placing the living artifact closer to the natural side of the spectrum than the non-living artifact (Figure 2.1). Now even though it is further on the spectrum Katz would designate a restored area and say, a statue, both as artifacts. Katz is correct; the restored area is by no means equal to the original natural area in terms of content or value, but it certainly has a different character to its structure than to a static artifact such as art.

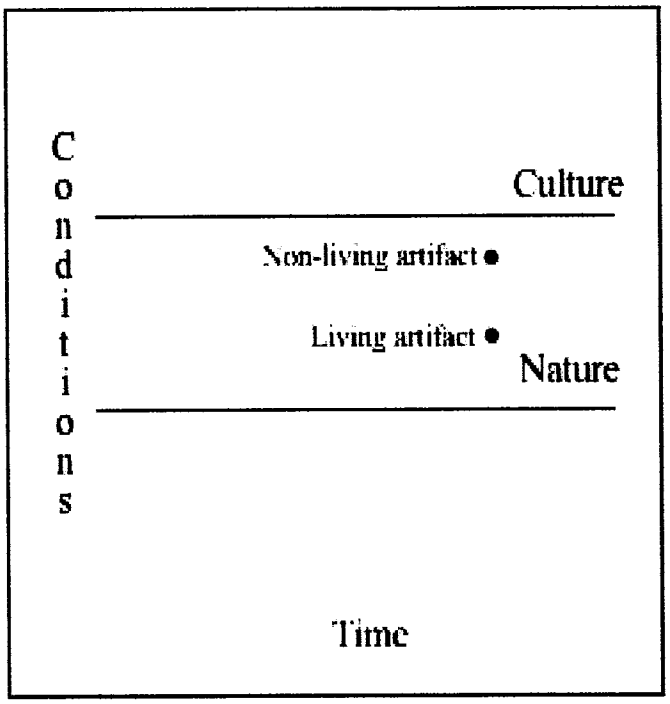

Figure 2.1 Nature/Culture Spectrum 1.

The difference between living and non-living artifacts is the dynamic future of living artifacts. Nature is valuable partly because of its ability to maintain certain relationships between different entities, biotic and abiotic. Artifacts are not able to do this, as Elliot points out, " Humans create artifacts...and their value...[The] value of those artifacts disappears when humans disappear".[46] For example, if all humans disappeared a piece of art would no longer have any intrinsic value. Regardless of the type of art, whether it was dynamic performance art or a static painting, without human evaluation it would subsequently lose all value. It may still consist of extrinsic value depending on the material it is made of, but that is not necessary to discuss for this argument. This same thing is not true of nature; if all humans disappeared there would still be great value within nature.[47] It is also justifiable to say that if all humans disappeared there would still be value left in certain restored areas. For example, if a forest was restored and functioning on its own account (meaning it does not need human

interference to maintain itself) and all humans disappeared, it would continue to function and still maintain value within its own existence. Therefore, this particular forest (even without humans disappearing) has its own autonomy. It possesses values independent of human relationships, while at the same time it is missing the "otherness" and continuity to its origin that is valued in nature. The term "Autonomous Biological Culture" or ABC represents areas with these characteristics.

This is not to say that all living artifacts are necessarily ABC. Consider some of the ideas of Jordan and Turner. Kane expresses them well: "Turner explicitly states that it is time for us to renounce what he calls false ecological modesty, recognize that we are the 'lords of creation,' and 'take responsibility for nature'—a responsibility, he thinks, that extends to creating "man made nature"'[48] ‡‡. This sort of area—man-made nature—should simply be considered an artifact of humans. It is likely that if humans were to disappear, the type of restored area that Turner speaks of would crumble. It would not have any self-maintaining qualities; the "man made nature" as well as any value associated with it would not exist were humans to disappear. This notion is quite similar to that of value being diminished in art were humans to disappear. With this in mind, an area of ABC exists as soon as natural self-healing and natural self-maintenance is possible.

The concept of ABC can be understood as a point within the spectrum of nature/culture (one of the gray areas). But it might be better portrayed as its own spectrum, a spectrum of ABC and nature. Autonomous Biological Culture must be

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‡‡ Kane is commenting on:
Turner, F. (1985). Cultivation of the American Garden: Toward a Secular View of Nature. Harper's 51.

considered as distinct from culture because non-living artifacts do not have the characteristic of being valued independently from humans. As can be seen in Figure 2.2, ABC does not run parallel to nature as culture does in Figure 2.1.

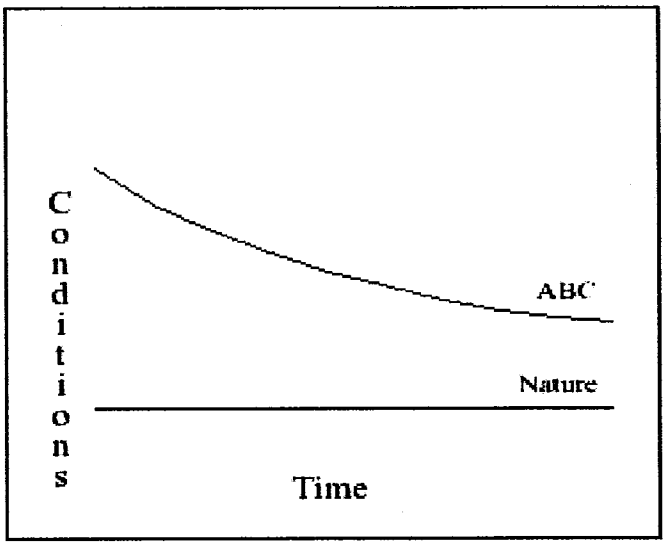


Figure 2.2 Nature/Culture Spectrum 2.

In time, it is possible for ABC to move closer to the value of original nature, in a way that cultured restoration (as presented by the ideas of Jordan and Turner) cannot. If culture were to be a part of this spectrum, it would be before the ABC point further in the past as seen in Figure 2.3.

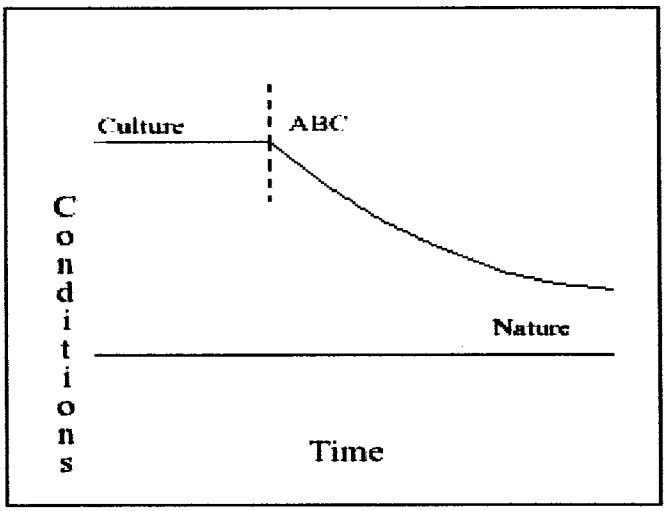


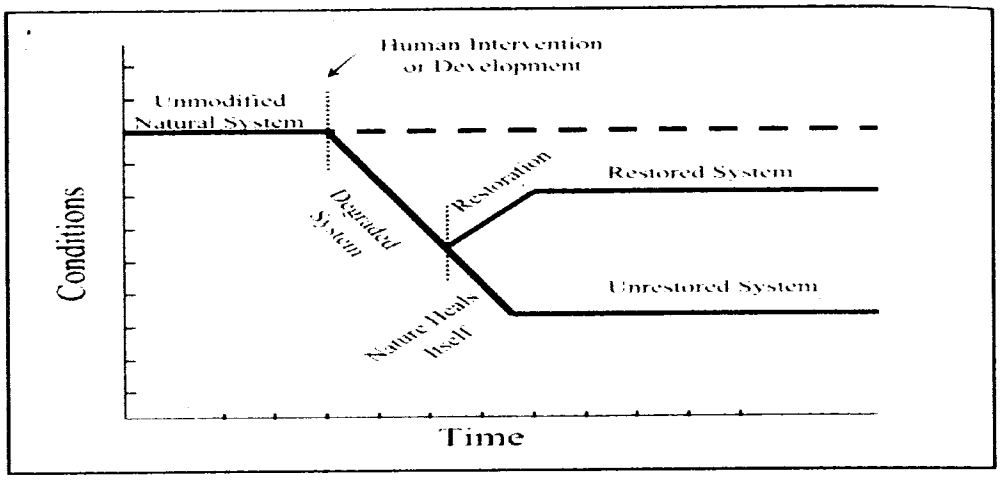
Figure 2.3 Nature/Culture Spectrum 3.

The concept of ABC may seem to be stating that it is possible for *humans to create* a value within nature, which at the same time is *independent of humans*. This is not really the case. If a restoration seeks to produce ABC, the design mimics what nature is physically (trees, birds, plants etc.). By doing that, it is certainly creating a designed ecosystem, a living artifact. If it is done properly then the restoration produces a self-functioning ecosystem, ABC. This is what humans have produced. In other words, humans have simply created a preferable situation through a restoration project. There is no value independent of human value associated with the *creation* of that situation.

There is however, value independent of humans in the *ongoing existence* of the restored area. Consider an individual bird that exists within this human created situation. The quality of life for this individual bird presumably will increase in the ABC ecosystem over the prior damaged one, assuming everything else is equal (i.e. there is not a food shortage or harsh weather conditions in one situation and not the other). Therefore, one may argue that humans have created this situation, and thus, have created the increased value this individual bird now experiences. However, this is not the case; humans have restored a situation, ABC, which in turn helps the individual bird realize the increased value. The value of immediate and ongoing existence, which the bird realizes, is related to but certainly separate from the creation of an ABC ecosystem.

Again, the restoration if effective creates a situation, ABC. The value of the area that takes shape independent of human interpretation is value that the natural world realizes through ongoing existence as the area moves towards the natural end of the

spectrum. This value is independent of human interpretation and will exist even if humans disappear.



Nature versus Restoration Time Line (after Sylvan 1994).

Figure 2.4 Nature can reclaim itself.

From a policy standpoint, it is important to point out that ABC does not need human interference in order to occur. It is possible that if a cultured area is left to regenerate, at some point in time it will reclaim its own functionality and become ABC. It is by no means the case that every cultured ecosystem should be restored to reach this point of ABC. Katz uses a timeline developed by Richard Sylvan (figure 2.4) to show that nature can in fact reclaim itself.[49] The idea is that "nature itself can... in time wash out human influence".[50] This is compatible with the notion that natural responses can produce ABC.

CHAPTER 3

PRAGMATIC RESTORATION:
Can Restoration Practice be Justified When Considering Non-Anthropocentric Values of Nature?

3.1 Pragmatism: From Origin to Environmental Ethics

3.1.1 A Brief Look at American Pragmatism

From an historical perspective Pragmatism is often seen as the product of original American philosophical and intellectual thought of the earlier parts of the 20th century. Its proponents hold pragmatism as possibly the only, and certainly the most important, original philosophical contribution to come from the Americas. However, one would be hard pressed to find a working definition of pragmatism or establish a description of pragmatic thought that appealed to the majority of its contemporary scholars and was true to the intent of *all* its innovators.[§§] Pragmatism is often misrepresented as "a doctrine holding that the meaning and truth of thought is determined (somehow) by practical *usefulness*."[51] When articulating the breadth of pragmatism, generalization conveys a flagrantly superficial message (such as the doctrine above), and precision seems nearly impossible. Thus, presenting the movements visionaries is the clearest way to express its motives.[***]

Charles Sanders Pierce was the first to introduce the term Pragmatism to the public in his essays, "The Fixation of Belief" and "How to Make Ideas Clear". Pierce

[§§] These two introductory sentences paraphrase the history of pragmatism from the website: Genato, K. (1999, July). American Pragmatism. *History.* http://www.angelfire.com/on2/ph103herm/index.html (1 November 2002).

[***] Although many others have presented pragmatism in this way, the idea of introducing Pragmatism by presenting its innovators was inspired by the aforementioned website http://www.angelfire.com/on2/ph103herm/, which was put together by students of Ateno de Manila University.

introduced Pragmatism as a method of deciphering truths and looking at reality. Pierce's method was to look at the consequences that any particular idea or action would bring about in any given situation. "The resulting consequences, if any, are then to be interpreted as indicative of the meaning...The *formulation* of those consequences is understood as...its" "pragmatic significance."[52] In this way, the pragmatic method represented a departure from "first principles or metaphysical antecedents in which to ground meaning and truth"[53] and rather rested upon a philosophy of consequences and events. In this way, value (whether positive or negative) of an action is situational, depending upon its consequences in a particular situation. In his essay "How to Make Our Ideas Clear", Pierce, while trying to convey his method of thought—the pragmatic method—declares the statement "we understand precisely the effect of force, but what force itself is we do not understand!"—completely "self contradictory". The idea is that force *is* its effects, as any other action is defined by *its* consequences. "Consequently, if we know what the effects of force are, we are acquainted with every fact which is implied in saying that a force exists, and there is nothing more to know."[54]

John Dewey is known for his claim that philosophy—as his time knew it—was in dire need for reconstruction of its methods and a reconceptualization of its purposes. This reconstruction of philosophy—as Dewey saw it—should result in a shift from universal to specific consideration of actions. Dewey applies this logic when considering rational humans desire for health; "How to live healthily or justly is a matter which differs with every person. It varies with past experience, his opportunities, his temperamental and acquired weaknesses and abilities. Not man in general but a particular man suffering from some particular disability aims to live healthily, and

consequently health cannot mean for him exactly what it means for any other mortal."[55] Dewey's term for this specific method of inquiry is "instrumentalism". Instrumentalism is a form of reasoning that allows one's thoughts to bring desired and specific outcomes. Instrumentalism as a method of inquiry has two main objectives. The first has to do with thought as any other "human behavior" or as one of many "life processes". In this way, instrumentalism is "setting out an accurate description of the phenomena of thinking"—universal thought.[56] The second objective is a product of the first. Where the first objective conceptualizes the purpose of thought, the second objective translates that purpose into a guide for action. The "instrumental role [of thought] in establishing consequences...has to do with the specific traits of the situation"—situational thought.[†††]

The following two quotes by William James are from his book of lectures Pragmatism, the first quote a plea for a certain philosophy and the second an answer to that plea.

> "What *you* want is a philosophy that will not only exercise your powers of intellectual abstraction, but that will make some positive connexion with this actual world of finite lives."[57]

and,

> "The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be indeterminable. Is the world one or many?-fated or free?-material or spiritual?-here are notions either of which may or may not hold good of the world;

[†††] The description of these objectives is a summary of Thayer's commentary on Dewey's and William James's instrumentalism.

> and disputes over such notions are unending. The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences."[58] ‡‡‡

James is looking to stop *debating* over metaphysical truth, and start *developing* methods to find instrumental truth. In this way, James sees Pragmatism as a method to find truth, as well as a theory of truth. James's method to find truth rests on the premise that there is no separation between ideas that are good for us and ideas that are true. "Ought we never not to believe what it is better for us to believe? And can we then keep the notion of what is better for us, and what is true for us, permanently apart?"[59] The Pragmatic *theory of truth* is something similar to the instrumental view of truth "that truth in our ideas means their power to 'work'."[60] An idea that is *better for us to believe*—an idea that is good for us—will have the *power to work* and is thus, a true idea.

3.1.2 Environmental Pragmatism

Environmental philosophers have since adopted many of the ideals and visions of the early pragmatists. A segment of environmental ethics has embraced the pragmatic method, which as noted earlier, Pierce described as a departure from "first principles or metaphysical antecedents in which to ground meaning and truth" and rather rested upon a philosophy of consequences and events. These environmental philosophers seek to cease questions of absolute value within the natural world. They instead, look to answer more tangible, situational environmental questions.

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‡‡‡ James uses these two quotes in different lectures however it seems clear that the first quote is certainly referring to the pragmatic method that he is directly citing in the second quote.

According to Eric Katz and Andrew Light, "The *pragmatist* claim... is towards finding workable solutions to environmental problems now."[61] "[T]he view that makes it plausible to appeal to human motivations in valuing nature."[62] In Katz's essay "Searching for Intrinsic Value", he provides a fair representation of environmental pragmatism's fundamental values (although the essay in its entirety is critical of environmental pragmatism). For an environmental pragmatist, "there is no good in itself; there are only good situations in the real world." Environmental pragmatism is not concerned with traditional debates within environmental philosophy, i.e. intrinsic/instrumental, anthropocentric/non-anthropocentric etc. Thus, as Katz explains, environmental pragmatism is not concerned with defining and discovering natural value with concrete complex philosophical arguments; environmental pragmatism is concerned with establishing site and case specific "good situations". The question asked regarding policy then is not "Why preserve wilderness?", it is rather "Why preserve *this wilderness?*."[§§§] Anthony Weston argues that pragmatists are not concerned with whether nature's value is intrinsic or instrumental, they "want to know simply how this value relates to others and can form an organic part of our lives."[63] Weston goes on to articulate the pragmatists plea to policy makers: "The important questions for pragmatism are the ones posed by specific situations, and while the answers across different situations will probably bear a strong family resemblance, they will not always be the same."[64]

Environmental pragmatists charge the environmental philosophy community's quest to find some moral truth—as a guide to environmental policy—as the bottleneck

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[§§§] For both Katz quotes See:
Katz, E. (1996). Searching for Intrinsic Value: Pragmatism and Despair in Environmental Ethics. In E. Katz & A. Light, (Eds.), Environmental Pragmatism (p.313). New York: Routledge.

between environmental ethics and environmental policy. Bryan Norton is very critical of J. Baird Callicott's quest to find the "Holy Grail" which will direct environmental policy. "Callicott's theory of inherent value, which attributes to ecosystems their own inherent value, is offered to environmental activists as the fruits of his search for the Holy Grail of monistic ecocentrism."[65] Norton shows that under this reductionistic moral monism, "the basic strategy must be to reduce all moral concerns to a unified analytic vernacular in which solutions to specific moral quandaries are generated, by unavoidable inferences, from a single theory."[66] Norton, a strict environmental pragmatist, argues, " that the goal of seeking a unified monistic theory of environmental ethics represents a misguided mission"...thus, "An assessment of the contribution of environmental ethics to environmental policy in its first two decades is accordingly bleak."[67]

Norton offers solutions to the diluted, unclear recommendations that the environmentalist community has offered the wider community for the past twenty years. In his book, Toward Unity Among Environmentalists, Norton warns against the search for a single theory that can be applied to all environmental dilemmas. Norton takes an historic look at environmentalism, and documents the interactions of Gifford Pinchot and John Muir. Norton argues—as many others would—that these two environmental figures established two conceptions of the world: Pinchot seeing the world as a physical provider, a splendor of finite resources, and Muir embracing the earth as a living entity, the wilderness as a cathedral for prayer. This divergence in worldviews, establishes what Norton expresses as the environmentalists' dilemma. Environmentalists, are thus, forced to "pick sides"; whether they are practically grounded and lean towards Pinchot's

conservationist attitude or they are spiritually grounded and favor Muir's preservationist sensibilities.

Norton, however, goes on to express that "[t]he philosophical oppositions between Muir's and Pinchot's followers were by no means as simple and clear-cut as the rhetoric implied."[68] Muir "praised the concept of sustainable yield, explicitly cited Pinchot's approach to 'wise management,' and took European forestry as a model, insisting that optimal conditions exist when 'the state woodlands are not allowed to lie idle [but]...are made to produce as much timber as is possible without spoiling them.'"[69] "Pinchot...also expressed aesthetic, nonmaterial values [of nature]. When Pinchot encountered 'the gigantic and gigantically wasteful lumbering of the great Sequoias' he said, 'I resented then and I still resent, the practice of making vine sticks hardly bigger than walking sticks out of these greatest of all living things'."[70] It is not the case—as it is often perceived—that these two leaders had no similarities in their systems of valuing the world. "The competing value systems of Muir and Pinchot...represent...not so much incompatible systems of valuing, but systems emphasizing different portions of a shared value spectrum."[71] Norton then goes on to look at familiar environmental dilemmas where economic uses of the land are pinned against ecological and human vitality—including resources use, pollution control, protection of biological diversity and land use policy.

Norton shows how environmentalists of different stripes can find a "common denominator" to approach these problems in a more unified effort. However, the "common denominator...cannot be understood as a commitment to any particular moral principle." Rather the commonality is "structural", where environmentalists start reacting

to the effects of a particular action on the "larger context". Policies must be implemented that agree with this larger context and the processes of nature, which will in turn help to protect the vital needs of humans and ecosystems.[72] It is clear that Norton's move towards protecting the larger context and away from defending moral principles represents a pragmatic approach to environmentalism—Environmental Pragmatism. The task of environmental policy makers is to find policy options that blend economically and ecologically viable situations—with focus on the "larger context" of ecological well-being. "What once appeared as a war between two factions with opposed worldviews now appears as two protective strategies that are applicable in different situations."[73]

Andrew Light also questions how effective environmental philosophers can be if they continue to "search for a description of the non-anthropocentric value of nature."[74] When considering ecological restoration, Light calls for a type of environmental pragmatism that contains a more sensitive "public philosophy". "If environmental philosophers are interested in trying to appeal to the existing intuitions of the public, they must be open to making ethical claims about the value of nature in anthropocentric terms, or at least must give up their tendency to cut humans out of the picture entirely."[75] In this way, Light sees the possibility of restoration practice benefiting human's relationships with nature, rather than only benefiting the nature that is being restored. In other words, Light is committed to halting debate over the non-anthropocentric value of nature, in favor of discussing the potential benefit to the human/nature relationship inherent in restoration practice. This shift towards a more anthropocentric, public approach to restoration is grounded in the method of environmental pragmatism. "By [environmental

pragmatism Light] simply means[s] the recognition that a responsible and complete environmental philosophy includes a public component with a clear policy emphasis."[76]

In earlier work, Light argues that a "public component" inherent in ecological restoration is its potential democratic dimension.[77] "The problem is not simply to identify this [democratic] potential, but to make a case for why it is part of what makes restoration unique as good environmental practice." Throughout this essay Light (and Eric Higgs) argues that this democratic potentiality can be realized through human participation in localized restorations.

Light goes on to contrast the values associated with the environmental practices of restoration and those of preservation. He points to the fact that preservation does not necessarily need preservationists in order to occur. "One can imagine a situation in which a bit of value in nature is preserved without any preservationist needing to do the preserving." Thus, the "value in the act of preserving" and the "value in the nature that is preserved" are "distinguishable. However, in restorations "the good for nature produced by a restoration is distinctively bound up with the good for the human community of restorers." This connection can be directly attributed to the fact that restorations cannot take place by accident; somewhere a restorationist must make plans to restore the area, preservations are not necessarily so.

Thus, for Light—an environmental pragmatist—restorations are grounded in anthropocentric value. However, the ideal goal of Autonomous Biological Culture (ABC) is grounded in just the opposite. The concept of ABC shows how even restored nature can exist with its own autonomy, free from *needing* anthropocentric evaluation. Light is approaching restoration with the pragmatic method; like Norton, he is avoiding

the search for the "Holy Grail". In exchange for justifying restorations with "Holy Grail" arguments grounded in ecosystemic inherent value, Light offers a pragmatic method, where the pragmatic consequences are measured by human value. Light's environmental pragmatic approach seems to parallel the "wild garden" arguments of William Jordan and Frederick Turner (21). There may be a difference in the motivation behind the arguments presented by Light and Jordan, as Light, through restoration, seems to be "*interested in trying to appeal to the existing intuitions of the public*" (38), whereas Jordan sees restoration as "provid[ing] the basis for a healthy relationship between nature and culture"(21). Light seems to be using restoration as a way of cooperating with the institutional constraints that exist between people and the natural environments that surround them. Whereas Jordan seems to be arguing, not that restoration practice is a consolation prize offered to the public in a bad situation, but that restoration practice is truly the best way to benefit humans' relationships with nature. Either way the message is the same; restoration projects should be performed because humans will in some way be benefited.

Thus, the existing form of environmental pragmatism is completely incompatible with the ideals inherent in the concept of ABC. However, the pragmatic method itself is not necessarily incompatible with ABC. It becomes incompatible when it is applied by assessing consequences by only measuring human value. Is there any reason to assume that under the pragmatic method—in particular the environmental pragmatic method—that only human value should be the measure of pragmatic consequences? It seems that there can be a non-anthropocentric pragmatism. It also seems that to be true to its title, environmental pragmatism *must* be a form of this non-anthropocentric pragmatism.

Thus, to this point, Light and other environmental pragmatists, have justified restorations by arguing that the act of restoring can foster a healthy relationship between culture and nature. In this way, restorations are grounded in *human-to-nature* benefits. In other words, environmental pragmatists have offered anthropocentric values of nature as the sole determinants for restoration projects. However, there is no reason to assume that environmental pragmatism must have this anthropocentric grounding. Environmental pragmatism could be grounded, and restoration justified, in natural relationships with *non-anthropocentric instrumental values*, through a sort of non-anthropocentric pragmatism.

3.2 Can Restoration Practice be Justified When Considering Non-Anthropocentric Values of Nature?

3.2.1 Introduction

Most philosophical critiques of restoration seem to be that restoration policy will undermine environmental protection by disregarding the unique and irreplaceable characteristics of the natural world.**** Although critics that claim restoration policy is inappropriate as a platform for environmental ethics are accurate, *actual restoration practice* is often justified and quite appropriate.

In the next two sections, the author introduces three hypothetical cases concerning physician/patient relationships, and three hypothetical cases concerning restorationist/ecosystem relationships respectively. The duties owed by a physician to

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**** For a detailed discussion of these critiques of restoration and these unique characteristics of the natural world see pp. 12-24 of this thesis. For a more detailed critique of restoration see:
Katz, E. (1997). Restoration and Domination. In Nature as Subject (pp.93-146). Lanham: Rowan &Littlefield Publishers.

his/her patient, and the duties owed by policymakers to damaged ecosystems are compared. Through this comparison it is shown that in the same way a physician must rehabilitate and protect his/her patients on a cases-by-case basis, so must restorationists (policymakers) rehabilitate and protect ecosystems on a case-by-case basis.

In the fourth section, the author argues that Robert Elliot's turning of the "restoration thesis" into the "replacement thesis" should be seen as an "environmental pragmatic transformation" in the way Elliot considers ecological restoration.[††††] In the fifth section, it is shown how Elliot's argument against the replacement thesis makes a clear—and necessary—distinction between *pro-preservation* and *anti-restoration* arguments. In other words, to argue for certain restoration practice—as Elliot does—does not mean that you are against preservation policy. When evaluating *particular* restoration practices it is necessary to understand the important distinction between these two arguments.

Thus, the author argues that approaching ecological restoration from an environmental pragmatic perspective is useful beyond just endorsing the development of *human-to-nature* relationships. A non-anthropocentric pragmatism, grounded in non-anthropocentric instrumental values, will reveal the significantly valuable, but often overlooked natural-relational benefits that are the consequences of some restoration projects.

[††††] For explanation of the restoration and replacement thesis, See pp. 12-14 of this thesis, Also see:
Elliot, R. (2000). Faking Nature. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp.71-82). New York: Humanity Books.
also See:
Elliot, R. (1997). Faking Nature: The Ethics of Environmental Restoration (pp. 74-76). New York: Routledge.

The moral decency and appropriateness—with regards to non-human environments—of restoration practices, should be evaluated using a pragmatic case-by-case sensibility. Unlike Light however, the author argues here that philosophers and restorationists *must* continue to evaluate and consider non-anthropocentric *instrumental* values (not inherent or intrinsic) of nature if they are to truly understand when restoration practice is or is not justified.

3.2.2 Physicians and Restorationists

In his essay, "Restoration", Holmes Rolston compares the restoration of a damaged ecosystem to the rehabilitation of a broken arm. "When a doctor sets a broken arm, he just holds the pieces in place with a splint and nature does the rest. He is not really to be congratulated for his skills at creating arms. He arranges for the cure to happen naturally. One does not complain, thereafter, that he has an artificial limb. Likewise with restoration: It is more like being a midwife than being an artist or an engineer." Rolston makes this physician/restorationist comparison while responding to Katz's claim that restoration is "The Big Lie" and Robert Elliot's argument that restoration is "Faking Nature".‡‡‡‡ However, this analogy can and should be deepened. Rolston's broken arm case represents a very non-intrusive form of rehabilitation (when setting the broken arm), however, there are many cases where physicians must impose significantly more interference on their patients than just "arranging for the cure to happen naturally".[78] The

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‡‡‡‡ See:

Katz, E. (2000). The Big Lie: The Human Restoration of Nature. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp. 85-88). New York: Humanity Books.

Also see:

Elliot, R. (2000). Faking Nature. In W. Throop (Ed.), Environmental Restoration: Ethics, Theory, and Practice (pp.71-82). New York: Humanity Books.

way a physician deals with an injured arm is going to be very case specific. Consider three hypothetical cases.

First, as Rolston presents, the arm is only slightly broken, so the physician puts the arm in a splint or cast and allows for the arm to heal itself; "let nature do the rest". The physician is simply providing a preferable situation for the arms self-healing to occur. Second, and more intrusive, the arm is injured to such an extent that it cannot self heal—at least not in a time period that is acceptable to the patient. The physician must set a metal bar in the patients arm to compensate for the arms inability to fully heal itself. In the final case, the arm is mangled to an unfixable and unusable point. In this case, the physician must fully replace the patient's arm with a prosthetic one.

If you must have a broken arm (for some reason) it seems clear that the first hypothetical case, the one Rolston presents, is the most desirable. In this case, your arm is much less injured than in the other two cases, also the rehabilitation process is the least intrusive to your body. However, when the patient goes to the physician with his/her broken arm, the patient is not able to choose the level of damage that has been done, and subsequently is not able to choose the treatment that will ultimately be necessary.

Although the latter cases are less desirable, the physician still must recommend some treatment for the patient. The metal bar and the prosthetic arm are used in cases where autonomous self-healing is not possible (as it is possible in case one). In these cases, natural self-healing— the treatment that is used in case one — would not produce a properly functioning healthy arm for the patient. In case two—where proper treatment involves implanting a metal bar—a treatment of natural self healing will leave the arm partially injured and less functional for the rest of the patient's life. In case three, where

the arm has to be removed, the physician may be trying to prevent the spread of some degenerative virus or bacteria that would effect the health of the patients entire body, not just his/her arm. The important point, is that in either case two or three, a treatment of natural self healing will not only provide an inadequate cure, but can result in the injured arm causing even more harm to the patients entire body. Thus, if self-healing will not occur naturally, it seems very appropriate for the patients sake, to take other measures to bring health and function back to the arm.

Before arm rehabilitation is compared with ecosystem restoration in the next section, it is important to note certain qualifications. First, before the arm is broken it is presumably stronger, healthier and far superior to *any of the rehabilitated versions.* Second, once the patient's arm is broken it will never be the same; whether the difference is that the patient's arm is now more prone to break it again, whether the patient will always feel pain in the spot of the break, or even that a mark of the break can still be seen in X-rays; once broken the arm is never the same as its original form. Third, even if the functionality of the arm is equal in all three cases (naturally self healed, metal bar in place, prosthetic) the patient will prefer the first case. With a metal bar or a prosthetic arm the physician will have to conduct regular monitoring. Through medicines and appointments, the patient loses freedom; the patients arm functions as the result of outside sources.

Now, consider three damaged ecosystems. All three of these hypothetical cases exist on the same steep mountainside, which has a healthy stream ecosystem at its base.

In the first case, the forest on the mountainside has been selectively logged. The logging did not cause any disastrous or immediate damage to the forest or stream

ecosystems. However, it is clear that the removal of only a few trees has loosened the soil, and is causing incremental soil runoff into the low-lying stream. The rich soil is adding extra nutrients to the stream ecosystem, and early stages of algae bloom (which will smother certain aquatic life) are beginning to occur. At the same time this loss of soil into the stream is depleting the forest ecosystem of valuable nutrients and important soil used for root structure. The parks service intends to bring the runoff to a controllable level, and protect the stream ecosystem by replanting trees and letting nature do the rest.

In this first case, due to the minimal level of damage to the ecosystem, societies obligations to the ecosystem are not confusing; the damaged ecosystem must be restored to a system of ABC and then all interferences must be removed.[§§§§] Restorationists must help the forest become a properly functioning, self-sustaining ecosystem through processes of rehabilitation and restoration

In the second case, a much more intrusive form of high-grade logging has occurred on the mountainside. All of the larger trees have been removed—most of the medium sized ones. The same runoff problems and ecosystem effects are occurring as in the first case, however to a much greater extent. In this case, the high level of runoff is causing immediate damage to the stream. Along with planting trees to control the runoff, the parks service has been forced to put fences in place at the base of the mountain to help stop some of the soil that is running into the stream.

In the third case, the mountainside has been clear-cut, completely stripped of all substantial vegetation. The soil is left with no structure, completely unstable. In this case, the stream is left completely vulnerable to being overrun with soil during the first light

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[§§§§] For a detailed description of ABC, see pp. 24 -29 of this thesis.

rainstorm. The parks service has long-term plans to replant trees on the bare mountainside. Initially, however, the parks service must construct a hard wall at the base of the mountain to protect the stream ecosystem from being completely overrun with soil.

The author argues throughout this thesis that restoration goals must be to restore damaged ecosystems to systems of ABC, "defined as the point where an ecosystem is self-functioning but a product of human interference" (24-30), and to then remove human manipulation as soon as possible. This *is* restorationists' obligation, as an ideal goal, to damaged ecosystems. During hypothetical case one, as explained earlier, ABC is practical. However, as more damaged ecosystems are considered, this state of autonomy will not—at least initially—be able to be achieved. In case two, and even more so in case three, the area must be initially maintained, controlled and monitored by human design. For these two cases *any* sort of restoration will not be able to restore autonomy; in cases two and three a specific form of rehabilitation is needed.

Restorationists are then left with two choices in cases two and three. They can perform some version of ecological rehabilitation such as those described above, or they can condemn rehabilitation at this site for not producing systems of ABC, claim that the only restoration or rehabilitation that can occur on these sites will serve as representations of human domination of nature and they should thus, do nothing. However, society must decide, as Paul Thompson shows while paraphrasing the great American pragmatist William James, "We cannot remain uncommitted on matters such as what is right and wrong in the conduct of personal affairs; we must do one thing or another."[79] In other words, even in hypothetical cases two and three a policy decision must be made; in these cases, as in all, not deciding is in effect making a choice. It is important that philosophers

do take a stance—that they make recommendations of what is morally right and what is morally wrong on these hard policy dilemmas.

In case two, the level of disturbance is extensive, but it is still considerably less than in case three. Thus, the level of interference (restoration) needed, which is still high, is much less than the interference needed in case three. Therefore, the duration of interference in case two will be a much shorter time period than in case three. Thus, case two seems to be more easily related to an ideal goal of ABC than does case three. Since a state of ABC and the values associated with this state can be more easily foreseen in the future case two than in case three, it may be easier to recommend the rehabilitation process in case two—even though autonomy cannot initially occur.***** In case three, however, the area is so damaged, that there really is not even an ecosystem to rehabilitate. By planting new trees restorationists are re-creating an ecosystem that *used* to exist, not rehabilitating a damaged but still existing ecosystem. The wall that is put in place will protect the stream entirely by human technology; the stream ecosystem is directly controlled by human design.

Thus, in case three, policymakers are not realistically able to justify the rehabilitation process by claiming future autonomy. The protective wall will not be able to be removed until the forest has reached a certain level of maturity, where *it* (the forest) is structurally capable to protect the stream itself. Also, it will be decades before the replanted forest begins to function independently. In short, the stream ecosystem will need the human designed wall for protection, and the completely replanted trees will

***** It is essential to understand the comparison of ABC, artifacts and nature as outlined in the previous chapter. This full understanding of the values associated with ABC is needed for the arguments presented in this chapter.

certainly need the care of human stewards in order to mature. Thus, these acts of rehabilitation and restoration put the area completely under human care and maintenance—entirely lacking autonomy. Nevertheless, there is still an obligation to perform some sort of protective restoration—similar to those described above—for each case. It would simply be irresponsible to not only allow the damaged forest ecosystem to harm and degrade itself further, but to impinge upon surrounding ecosystems as well. Allowing this damage to occur would certainly be failing to acknowledge and protect the non-anthropocentric values that exist in the forest and its surrounding environments.

It is accepted that a physician should rehabilitate an arm with imposing means such as, implanting a metal bar or even replacing a lost arm with a prosthetic, when necessary. If the physician decided that these means were somehow morally incorrect, and thus, did not perform the operation, the patient (the entire system) would suffer the loss of a functioning or even partially functioning arm. Thus, without these artificial means the patient would certainly be worse off. This same reasoning can be applied to ecosystem rehabilitation and protection when dealing with areas that are damaged to a point where self-healing simply is not possible.

In case three, the park rangers recommend constructing a wall to serve the function of protecting the stream from soil runoff. In a *natural* setting, the structure of the forest would serve this purpose. When a patient loses his/her arm the physician recommends using a prosthetic arm to perform the functions of a real arm. The physician is not claiming that the prosthetic arm will even come close to being an acceptable substitute for the patients lost arm, nor is the physician trying to fool the patient into thinking that the prosthetic is in fact his/her real arm. However, in the patient's particular

situation, the metal bar or the prosthetic is the best that can be done. The physician is attempting to protect the patient—as best as possible—from the loss incurred from not having an arm. The restoration policy in cases two and three must attempt to protect the entire system (stream, forest, etc.) from the vulnerability that was caused when important trees were removed. Restorationists need not try to pass the rehabilitated ecosystem off as the original in order to justify the restoration practice. In fact, this attempt is precisely what makes any restoration practice problematic. Rather, they should acknowledge that a particular restoration is producing something less than the original, not only unequal to "nature" but inferior as well. However, it must also be acknowledged that this particular restoration *may* produce an area that is in fact superior to the damaged ecosystem, in terms of health and ecosystem functionality.

3.2.3 Non-anthropocentric Environmental Pragmatism

Thus far, the arguments presented *for* certain restorations in certain situations have been based on dependent ecosystems. In other words, no arguments that justify the restoration of the forest for its own sake have been presented. In all three of the hypothetical cases, the forest has been deemed important and valuable for its sake as protector of the stream. The arguments have been framed this way deliberately, to place focus on the value of relationships within nature. Continuing with the patient/ecosystem analogy, this relational basis for value seems not only appropriate, but also necessary. The patients arm, although it is alive, it is certainly not living with its own autonomy—it is clear that the arm is *dependent upon* and *part of* the patients' life. Is this the same relationship that the forest has with the entire surrounding ecosystem? Is the relationship between the

forest and the stream one of mutual dependence and simultaneous connection? Or, is it a relationship closer to two human family members; relationships of certain mutual dependences however, clearly separate existences? Of course, answering these questions entails deciding upon intrinsic values. In other words, one cannot define relationships without first defining the two or more entities involved in the relationship. Following, the search for value within an entity in order to justify the preservation (or restoration) of its relationships with other entities entails deciding upon intrinsic values—something in which environmental pragmatism strictly warns against.

Furthermore, these questions are completely subjected to an arbitrary interpretation of nature—by the author. For example, as easily as it is asked whether the forest and the stream have separate existences, it could just as easily be asked whether a cluster of trees and a clan of squirrels all *within the forest* are separate entities. In other words, there is no more justification for searching for intrinsic value—and justifying restorations with it—in an individual tree, or an entire forest. Both subjects—the tree and the forest—could be either looked at as individual whole entities with their own intrinsic value or as parts of a larger entity, which is valuable in it of itself.

For example, suppose the hypothetical forest was logged by removing all Red Maples. The processes of the rest of the forest continue, however without the functions of the Red Maple. The parks service makes out a restoration plan that will essentially replace all the lost maples. Realizing the value of this restoration by looking for intrinsic value—either in the Red Maple species, in each individual Maple or in the entire ecosystem itself—will become confusing and controversial. However, by looking for *relational values* or *non-anthropocentric instrumental values* between the Maples to be

introduced—in the planned restoration—and the rest of the forest, it is easier to see the need for the reintroduction. This is the same method used to justify restoration in the earlier hypothetical cases—however, then non-anthropocentric instrumental values between the stream and the forest were considered, rather than the forest and the introduced trees. By searching for value not in particular entities (which as was shown are only definable anthropocentrically) but in the relationships between them, restoration justification is able to steer clear of the entire intrinsic value debate. Instead, focus is on these more manageable questions regarding non-anthropocentric instrumental values within nature. There are clear integrated, dependent relationships within nature, such as those between the forest and the stream in the hypothetical cases, or the entire forest and its trees as shown in this latest example. The ability to restore non-anthropocentric instrumental values or *relational values* within ecosystems and between ecosystems should be used to justify or condemn a particular restoration project. This reasoning is very different from justifying restorations with human-centered instrumental values of nature or even with intrinsic value found in nature itself. Therefore, the problems of contingently valued nature (associated with anthropocentric instrumental values) and the argument that restoration produces "faked nature" (associated with non-anthropocentric intrinsic values) are both sidestepped.

Again, the forest and the stream and the forest and its trees *are* undeniably valuable to each other. Thus, it is very possible—and seemingly justified—to search for and find non-anthropocentric instrumental values between *both* individuals in the ecosystem and the ecosystems themselves. Returning to the question that titles this section; *Can restoration practice be justified when considering non-anthropocentric*

values of nature? The answer is yes! However, the path to this answer does not go through intrinsic value, rather it is found through non-anthropocentric instrumental values or natural relational values. Furthermore, it should be clear that these relational values are not between humans and nature. A certain restoration need not be justified by proving it will facilitate a better relationship between humans and nature—anthropocentric reasons. However, certain restorations can and should be justified by proving that the restoration will facilitate better relationships within the ecosystem, independent of how humans are affected by performing or after the restoration—non-anthropocentric and non-intrinsic justification. As Weston writes, "Pragmatists, however, want to know simply how this value relates to others and can form an organic part of our lives."[80] This reasoning is valid, however, it should be used *within* nature, not just *about* nature. After all, when one decides to have their arm restored after a break, they do not give any attention to how the restoration process will affect the relationship between their physician and them.

This is the spirit of a non-anthropocentric environmental pragmatism. This brand of pragmatism uses the same method of reasoning as depicted by the original pragmatic method. However, whether particular consequences are good or bad, whether thoughts are true or untrue and whether situations are favorable or not, is decided by considering the effects on non-anthropocentric value.

3.2.4 Reconsidering Elliot

When Elliot changed the "restoration thesis" to its more current version, the "replacement thesis", he seemed to be going through some sort of environmental pragmatism transformation. He seemed to be alluding to a form of non-anthropocentric environmental pragmatism, similar to the one presented in this thesis. While considering a cleared forest area (a similar version of one of the hypothetical cases) Elliot clearly states, "Without a doubt it is better that restoration took place than that the area remained a wreck."[81] Elliot is moving beyond the fact that restored areas have less value than their pristine originals. More interesting though, is the fact that Elliot is not arguing that the particular restoration will result in an enhanced human-to-nature relationship or a re-creation of natural intrinsic values. Elliot is wise to narrow down his critiques of restoration; by doing this it becomes clearer how his thoughts can answer practical policy dilemmas.

Elliot acknowledges that restoration policy is inappropriate when it leads to restoration practice that is intended to justify the destruction and later replacement of existing natural areas. In his 1997 book, Elliot seems to find fewer problems with restorations that intend to rehabilitate damaged areas, than he did in his original essay. For Elliot, if there are natural values that are irreplaceable (because of relational properties), then "we will have a decisive reason for adopting policies of prohibiting the destruction of areas of wild nature."[82] It seems Elliot is arguing that the profound difference that exists between natural and restored areas should direct us to preserve pristine areas, it does not however mean that the need to rehabilitate damaged areas should be neglected. "While the process is not natural, much of what it results in, and

much of what it utilizes is. While value is not fully restored, what natural value remains is preserved. And that is undeniably a good thing."[83]

Elliot is correct, the protection or rehabilitation practices in any of the hypothetical cases will not compensate for the loss of value from the original degradation. The pristine forest is inherently more valuable than any of the restored ones. Despite this disparity in values—of the pristine and restored areas—it is a mistake if restoration policy is determined, in any of the three cases, by comparing the *restored* area to the *pristine* area. The value of the pristine area is lost, whether the decision to restore is reached or not. Restorationists *should* be comparing the value of the *damaged* area to that of the *restored* area. To better see this point consider a physician decides not to implant a metal bar into a broken arm by comparing the arm *before injury* to the arm *after surgery*. This would be entirely inappropriate. Rather the physician should (and presumably would) compare the *current* state of the injured arm, to the predicted state of the arm *after* surgery.

3.2.4 Reconsidering Katz

As outlined earlier in this volume, Katz argues against restoration policy being the framework of an operative environmental ethic.[†††††] Katz argues that restorations create artifacts, systems of human design. These restored systems are fundamentally separate from natural systems. "We cannot (and should not) think of natural objects as artifacts, for this imposes a human purpose or design on their very essence."[84] Thus, Katz's argument goes, if environmental policy is to protect natural environments, restoration

[†††††] See pages 14 -16 of this thesis.

policy is unacceptable because it seems to permit the destruction and later restoration of natural areas.

These criticisms of restoration policy presented by Katz are accurate. If restoration were used as a basis for environmental ethics and ultimately for environmental policy, critical aspects and values of the natural world would be ignored. Once natural ecosystems are damaged, there is irreplaceable value lost, that cannot be re-created through restoration. Thus, restored ecosystems are inherently inferior to their pristine originals.

Nevertheless, decisive policy decisions must be made for the three hypothetical cases. Even in light of Katz's sharp (and accurate) criticisms of restoration; some sort of protective restoration/rehabilitation is justified in all three cases. Again, the important point to recognize is that when making these policy decisions the state of the *damaged* ecosystem must be considered against the state of the *restored* system to be. When considering already damaged areas there is no need to look—as Katz does—at the state of the restored system against the state of the pristine original; for in these cases regardless of the policy decision the original is gone!

Although restoration cannot be the *goal* of environmental policy—for the reasons Katz argues—restoration can still be the correct policy choice in certain situations—as in the three hypothetical cases.

Katz's argument seems to state that if restoration policy is endorsed, preservationist claims are severely undercut—'we can always fix any damage we

cause'.[‡‡‡‡‡] However, if a physician endorses a prosthetic arm for a patient who has lost his real arm, the physician is not saying it is acceptable to go off and chop other people's arms. In the same way, if restorationists implement restorations on ecosystems in need, they are not saying it is acceptable to destroy natural areas that do exist. Nor should these restorationists be saying that the restored area is of equal value to the pristine original. Similarly, a physician is not telling his patient that the prosthetic arm is equal to the original arm. Both the physician and the restorationist are performing the best practice possible under the particular circumstances. This does not change the fact that the patient would be better off without having broken his/her arm, and the ecosystem would be better off if it had never been damaged (in other words preservation took place). The fact that the pristine area is inherently more valuable than any type of restored area should be used as an argument for preservation, not against restoration.

In all fairness to Katz he does seem to be more concerned with restoration policy that justifies "replacement" restorations.[85] [§§§§§] In these replacement restorations—as Elliot describes them—the pristine area does still exist. Consider a fourth hypothetical case, where a virtually virgin, pristine forest exists on the mountainside. Loggers are proposing to selectively remove larger trees, and then completely "restore" the area. In this case, it is completely appropriate to consider the value of the *restored* area, against the value of the *existing pristine* area. In Chapter 2 the author of this thesis argued in

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[‡‡‡‡‡] See Katz, Nature as Subject, pp. 109-21 and pp. 133-146. In these two essays "The Call of the Wild" and "Imperialism and Environmentalism", Katz addresses the problem of contingently valued nature. Also see:
Krieger, M. (1973). What's Wrong With Plastic Trees? Science, 179, 446-55.

[§§§§§] In this section of "The Big Lie" Katz agrees, "Exxon should attempt to clean up and restore waterways and land that was harmed by its corporate negligence."

detail that a restored area cannot equal in value and content to its pristine original. Simply restoring the area –regardless of the restoration—would not balance the loss of natural value that would be incurred when the pristine area was logged. Thus, when considering natural values, logging is not justified in the fourth case. By taking this pragmatic approach to restoration policy, Katz's concerns with replacement restorations are addressed. However, the pragmatic approach used here is non-anthropocentric. The consequences of an act of restoration are measured using natural values. A pristine area *cannot* be destroyed just because there is a promise to perform a replacement restoration, for the same reasons that a good arm cannot be broken just because the person is promised that they will receive proper physician care.

CHAPTER 4

CONCLUSION: PERCEIVING RESTORATION

4.1 Support Nature

When restoration policy is implemented on a degraded ecosystem, the goal must be to create ABC and then remove human interference. If the area only exists with human confines and control as Jordan and Turner suggest, the area certainly is an artifact, a system of cultured living-artifacts, probably not much closer to nature than a garden. There is little value to such a system outside of human values.

The most important point may be that nature is inherently more valuable than a cultured ecosystem or an ABC ecosystem. The natural has a deeper continuity to its past and subsequently has a more valuable story hidden within its existence.[86] Also, original nature has an unexplained order and pattern to its processes that is independent of human design. Autonomous Biological Culture may have a future that is not of direct human plan, but its initial origin is certainly of human design. This difference between nature and ABC is profound and should not be taken lightly. Autonomous Biological Culture is by no means a replacement of original nature and thus, ABC is no justification for the destruction of nature. Preservation policy should be implemented to prevent restoration policy from even being necessary.

Finally, in some cases ABC, defined as the point where an ecosystem is self-functioning but a product of human interference, may not be able to be achieved. It is arguable that nature may always be able to reclaim its own functionality over time, but human ingenuity may not always be able to simply construct an ecosystem that functions on its own.

4.2 Revisiting Contingently Valued Nature

If environmental protection is deemed morally correct, then restorations—which admittedly do not re-create nature—that protect an ecosystem and its surrounding areas also must also be morally correct. In this same vein, if environmental protection is deemed morally correct, then restoration *promises* that aid in the destruction of natural environments, violate the moral duty of environmental protection, and are thus, morally incorrect. As Katz reminds us, "If some people do not respond to nature in a 'positive' environmentalist way, that is no excuse for them to violate the obligation to protect the environment."[87] In comparison, if Paul does not like Peter, that is no excuse for Paul to break Peter's arm.

The problem then lies in the word *if* in the statement "If environmental protection is deemed morally correct." For environmental protection to be considered morally correct, it is human interests that force this evaluation. Katz warns, "human desires, interests, or experiences cannot be the source of moral obligations to protect the environment. Human desires, interests, and experiences are only contingently related to the continued existence of wild nature as such."[88]

The presentation of certain valuable non-anthropocentric instrumental values in nature, which has been put forth in this thesis, does very little in response to this problem of contingently valued nature. The fact that two entities depend on each other to support a greater system, does not by itself prove that the greater system deserves moral consideration. For example, consider a wooden chair; one piece of wood may act as a leg of the chair, and is connected to another piece of wood that acts as the seat of the chair. If either component were removed, the chair—the greater system—would not function

properly. This shows how the relationship between the leg and the seat is valuable to the existence of the greater system—the chair. However, it by no means proves that the chair is in any way intrinsically valuable.

There is however, a clear distinction between a chair and an ecosystem—even a restored ecosystem. The difference has to do with design; the chair is an artifact. It is instrumentally valuable to those who use it in any way. The relationships within the greater system of the chair are set in place to perform specific functions that are instrumentally valuable to entities outside of the chair. In an ecosystem, however, the relationships *primarily exist* to maintain the greater system, which is the ecosystem. Outside entities—humans—may find instrumental value within the boundaries of an ecosystem; however, this does nothing to the fact that the natural relationships existed and will continue to exist *primarily*, to serve the ecosystem. Thus, the ecosystem, which is a web of these non-human based relationships at its origin, exists with its own autonomy, and *primarily* exists with *its own* value, value that is independent of any outside entities.

It is at this juncture, when stuck in theoretical debates over contingent natural values, that philosophers must turn to broader definitions of what is morally correct in order to protect real environments in real situations. For any ethical systems to evolve it seems that there must be times when the public, including philosophers, proceed despite uncertainty. Katz is correct; the moral considerability of natural environments exists on a contingent basis. However, the problem of contingent value is not a philosophical phenomenon unique to environmental ethics. All systems that humans interact with,

including other humans will be determined morally relevant, or not, based on cultural trends.

Fundamentally, environmental philosophers are *all* interested in environmental protection. However, the hypothetical cases have shown how theoretical debates over what ecological restoration actually produces can prevent philosophers from possibly providing unified recommendations regarding *particular* restoration practices. Two environmental philosophers who oppose each other in theoretical debate can still offer unified recommendations. This is because presumably both are concerned with environmental protection. There will of course be times when theoretical differences will cause two philosophers to offer different accounts as to what defines environmental protection in a particular situation. For example, the restoration recommendation of a philosopher who finds non-anthropocentric value in individual organisms, may differ entirely from the recommendation of a philosopher who finds non-anthropocentric value in natural communities—a philosopher who values ecosystems. Nevertheless, it is regrettable if these potential discrepancies discourage the environmental ethics community from using their talents to offer unified policy recommendations, when the correct policy for environmental protection is clear.

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