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WILDERNESS AND EPISTEMIC WILDNESS

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Thesis

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Introduction

The traditional concept of wilderness was a product of the time out of which it came. Times have changed. The social context of conservation, how humans affect nature, and scientific understanding of how ecosystems function have all shifted in ways that make the wilderness idea problematic. The values that people found in wilderness are still relevant, however. It is the way that they are tied together in the concept of wilderness that has become a problem.

I propose a revised concept of wilderness that meets the concerns of critics of wilderness, and accounts for the tension between the wild and the pristine, by making wildness the sole necessary feature of wilderness.

Part of the justification of this reconception comes from what I call "epistemic wildness." While we normally think of wildness in terms of things that exceed our control, things are also wild in how they exceed our representations of them. Much of the value of wilderness, especially in meeting contemporary environmental concerns, comes from its epistemic wildness.

In chapter one, I will look at the traditional concept of wilderness. In chapter two, I'll look at some of the criticism that this idea has received. In chapter three, I'll outline a revised conception of wilderness that responds to these criticisms. In chapter four, I'll examine the nature and value of epistemic wildness.

Chapter One: The Naive Concept of Wilderness

1.0 Introduction

On April 10, 1963 the Wilderness Act passed the United States Senate by a vote of 73 to 12, and on July 30, 1964 it passed the House of Representatives by 373 to 1. (Nash 2001, p.226) At the time, at least, people liked wilderness and wanted to preserve it. Part of the reason for the popularity of wilderness was that it unified a number of different values into one concept. With changes in our understanding of the natural world and human effects on it, and changes in the nature and scale of those human effects, however, the various values that were unified in the traditional concept began to pull in different directions. In this section I lay out the traditional concept of wilderness: what was taken to be wilderness, why this was valuable, and the relation between wilderness preservation and environmentalism.

1.1 Terms: Pristine and Wild

There are two fundamental parts to the concept of wilderness: pristineness and wildness.

Pristineness refers to a natural system being unaffected by humans. That is, like how it would be if humans never touched it. This usually translates into fidelity to an historical baseline: a system is pristine if and only if it is the same as it was at some point in the past, usually when first encountered by some group of people. As I use the term, it is synonymous with *ecological integrity*, which Callicott et al. define as "native species populations in their historic variety and numbers naturally interacting in naturally structured biotic communities." (Callicott et al. 1999, p.25) This is not necessarily static and can include a range of past states: the "Historical Range of Variability." (Keane et al., 2009) This is also often called "naturalness," and even "wildness," but I will avoid these usages.

Wildness, or "untrammelledness," refers to the quality of a natural system of being uncontrolled by humans. The word trammel comes from the Old French word *travail*, which was a net for catching fish. Thus, untrammelled means unrestricted, free, autonomous. Ridder defines it as "an absence of rationally planned human intervention." (Ridder 2007, p.9) This might also be called "naturalness," but I will avoid this usage.

An area where intense human intervention maintains fidelity to an historical baseline would be pristine but not wild; an area that diverges from its historical state but is not the subject of intentional human intervention would be wild but not pristine.

1.2 Wilderness

In this section I lay out a formulation of the way that people have traditionally thought about wilderness. I do this in terms of precise logical relations. This is not intended to say that everyone thought about wilderness in exactly these terms, nor that the relations I identify were taken to be exactly as specified. This is only intended to generally and approximately capture in a clear way the intuitions that informed talk about wilderness.

1.2.1 Pristine and Wild Lands

Pristineness and wildness were taken as individually necessary and jointly sufficient for an area to be a wilderness. An area had to be both the way it was before humans altered it, and it had to be free from active human intervention; if it was both, it was a wilderness. This can be seen in the 1964 Wilderness Act, where wilderness is both "an area where the earth and its community of life are untrammelled by man" and "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." (Wilderness Act 1964, 2(c)) Sutter characterizes the wilderness conservation movement as viewing both wildness and pristineness as fundamental to the concept of wilderness. "The founders of the Wilderness Society did see wilderness areas as places meant to preserve pristine nature... [but]... wilderness was as much about 'wildness,' the

absence of human control, as it was about pristine ecological conditions." (Sutter 2002, p.14) Aplet and Cole reflect this when they say that "Landscapes can express any combination of human control and historical fidelity. Where they are most untrammelled and unaltered, they are called wilderness." (Aplet and Cole 2012, p.12)

Wildness was thought of as sufficient for pristineness. That is, avoiding human intervention in nature would preserve it in its historical state. This connection was a product of the historical context of conservation during which wilderness preservation came of age. "A century ago, the only way to halt the violence was to draw a line around a place and protect its objects from the commercial onslaught. Preservation of natural conditions was equated with protection from exploitation." (Aplet and Cole 2012, p.15)

Further, the ecological understanding at the time reenforced this connection. In the influential theory of early 20th century plant ecologist Frederick Clements, "the surface of the planet is divided into distinct natural units that he called plant formations. ... Each unit is defined by a climax community, the community that with sufficient time and in the absence of disturbance will occupy the site." (Cooper 2007, p.37) Using this understanding of ecology meant that managing with wildness—avoiding disturbance—would preserve and restore an area to its pristine historical baseline, the climax. As Aplet and Cole put it: "Climax theory held that all vegetation was at, or was returning to, a fully developed climax stage of succession that was natural and characteristic of the region. All one needed to do to preserve natural and historical conditions was to avoid disturbances such as logging, grazing, fire, and insect outbreaks." (Aplet and Cole 2012, p.15)

This sufficiency connection between wildness and pristineness meant that "eliminating human impacts, maintaining historical fidelity, and not 'trammeling' the land could all be achieved simultaneously on the same piece of ground." (Aplet and Cole 2012, p.18) This perceived close connection often led to thinking of the wild and the pristine as synonymous, or nearly so.

1.2.2 Wilderness Values

There are a number of valuable traits associated with wilderness. Unlike untrammelledness, however, these values were not seen to constitute wilderness. Rather, they were seen to arise out of pristineness. As we will see, however, this connection is often quite tenuous.

1.2.2.1 Aesthetic

"Halvor Steenerson of Minnesota declared that it was nonsense to claim that an artificial lake would add to the beauty of the valley. 'You may as well improve upon the lily of the field by handpainting it,' he pointed out, and added that all the city offered was a power plant making a 'devilish hissing noise' and a 'dirty muddy pond.'" (Nash 2001, p.175) This quote from Nash, discussing the Hetch Hetchy dam debate, gives us a good example of the aesthetic considerations that were one of the first and most common justifications for wilderness preservation. But this is still obscure. Certainly, human-affected things can be beautiful. Why are wilderness areas thought to be beautiful? How is the beauty of an area connected to its untouched character? Why can not we improve the lilies?

We can get an answer to this question by looking at art history and aesthetic theory. Wilderness was not always appreciated. "It was not until Englishmen became familiar with the landscapes of Claude Lorrain and Salvator Rosa, Ruysdael and Hobbema, that they were able to receive any visual pleasure from their surroundings." (Hussey 1967, p.2) In contrast to classical and Renaissance understandings of beauty that relied on harmonious proportion and appealed to the understanding, by the eighteenth century the West's conception of beauty had come to rely on visual, formal aspects of the work of art that appealed to the passions or imagination. This change, and the features of landscape that were thought to appeal to the imagination, opened the possibility of pristine wilderness being found beautiful.

In Edmund Burke's *Inquiry into the origin of our ideas of the Sublime and the Beautiful*, he developed an aesthetic theory in which the objects perceived affected one of two

fundamental passions, bypassing the conscious mind, and resulting in two classes of aesthetically pleasing objects. The first of these was the Beautiful, which affected the passion for love and reproduction. "All those that were in any degree pleasing, attractive, smooth, and gentle affected the instinct for self preservation and were called Beautiful." (Hussey 1967, p.12) In terms of landscape, one might imagine a composed and rolling garden. In contrast to (and incompatible with) Beauty, was the Sublime, which affected the passion of fear and self-preservation. "All those that aroused passions connected with fear, infinity, difficulty, or pain appealed to the other [the instinct for self-preservation], and were sublime." (Hussey 1967, p.12-13) The Swiss Alps, encountered by young English aristocrats on the Grand Tour, were a frequent subject for paintings that appealed to this ideal, which represented its subjects as vast, obscure, powerful, infinite, and featuring darkness and silence. (Hussey 1967, p.59)

Burke's account was influential, but clearly left out a class of aesthetically pleasing objects that fit into neither category. William Gilpin and Uvedale Price developed the concept of the picturesque to fill this gap. "While the outstanding qualities of the sublime were vastness and obscurity, and those of the beautiful were smoothness and gentleness, the characteristics of the picturesque were 'roughness and sudden variation joined to irregularity,' of form, colour, lighting, and even sound." (Hussey 1967, p.14) This was a formal criterion, having to do with composition and sensual qualities of the work, but it lent itself particular scenes: "old gnarled trees, sandy banks, water and windmills, rough heaths, rustic bridges, stumps, logs, ruts, hovels, unkempt persons, and shaggy animals." (Hussey 1967, p.11)

The influence of these developments in aesthetics on the wilderness debate can be seen in the fact that American landscape artists during the development of the idea of wilderness, such as Thomas Cole and Albert Bierstadt, were still working in the aesthetic categories set out by Price and Burke. Both painting and descriptions of the American wild landscape followed the aesthetic tradition and vocabulary set out in the eighteenth century—the aesthetic appeal of wilderness was understood in terms of the Picturesque and the Sublime (wilderness was generally not thought of as beautiful in Burke's "smooth" sense).

(Nash 2001, p.73-84)

Since the aesthetic appeal of wilderness was understood in these categories, our original question now becomes "Why was pristine wilderness Sublime or Picturesque?" First, we should note that untouched-ness is neither a necessary nor sufficient condition for either kind of aesthetic virtue. Titanic architecture can be sublime, rural scenes can picturesque, and perfectly pristine swamps and grasslands could be neither. (As William Cronon notes, this is one reason that neither sort of ecosystem was designated as wilderness until quite recently. (Cronon 1996, p.6)) But there is a reliable association between these categories and the pristine.

The association is twofold. First, the appreciation of the sublime and the pristine "occurred at the point when an art shifted its appeal from reason to the imagination." (Hussey 1967, p.4) An aesthetic that was based on the understanding and reason, where beauty came out of moral truths and orderly proportion, so long as it also subscribed to the "long Western tradition of imagining wild country as a moral vacuum, a cursed and chaotic wasteland" (Nash 2001, p.24), could find neither order nor morality in wilderness, and thus no beauty. Only things that bore the mark of human improvement could fulfill these criteria. An aesthetic based on the non-rational, however, opened up the possibility of aesthetic enjoyment excited by landscape that had not been shaped by rational, human hands.

Second, the sublime and the picturesque have connections to unimproved landscape. The sublime invoked the power of nature, indomitable peaks wreathed in fierce storms—inspiring terror in the viewer at her own insignificance. Obviously, landscapes that do not bear the mark of human industry have an advantage in evoking this—a chairlift on the indomitable peak makes it domitable. The sublime, if it was effective, was simply too powerful and inhospitable to show the mark of human effect.

The picturesque, though often associated with partially wild rural landscapes and ruins, also has connections to pristine wilderness. Its characteristic feature was its irregularity, roughness, and contrast. Formally speaking, one of the things that humans tend to do when

"improving" a landscape is to smooth out such irregularities. Roads are made level, fields are planted in rows, buildings are made square—in general, the scene moves from the picturesque to the beautiful. The artificial, smooth lake at Hetch Hetchy replaced an irregular canyon. Pristine nature, wilderness, tends to preserve the sorts of contrast and roughness characteristic of the picturesque, and is thus one way that people might find the wilderness beautiful.

Thus we have an account of how preserving the pristine nature of wilderness might be understood to preserve its beauty. But the cracks in this connection already show. Not all untouched nature is beautiful; there's no hard and fast reason that human affected landscapes can not be sublime or picturesque. And, this understanding of aesthetics is highly specific and contingent on a particular time and place—it does not exhaust the possibilities of beauty. There may sometimes be a connection between the two, but pristineness is neither necessary nor sufficient for beauty.

1.2.2.2 Spiritual

In the previous section, we looked at the sublime as a purely aesthetic category. But there is more to it than that. The powerful and the infinite—towering mountains wreathed in storms—were held to be valuable because they reminded the viewer of the power and infinity of God. The terror invoked by the sublime landscape was divine terror, a reminder of mortal fragility in the face of God's creation. As Cronon puts it:

In the theories of Edmund Burke, Immanuel Kant, William Gilpin, and others, sublime landscapes were those rare places on earth where one had more chance than elsewhere to glimpse the face of God... Although God might, of course, choose to show Himself anywhere, He would most often be found in those vast, powerful landscapes where one could not help feeling insignificant and being reminded of one's own mortality. (Cronon 1996, p.10)

Wilderness, then, is thought to be valuable because the aesthetic experience of landscape that it involved was also a spiritual experience of landscape—wilderness was valuable because it was beautiful, and beautiful because it was an experience of the divine. This was

frequently understood in contrast to the more secular values evoked by civilized landscape, as evidenced in Muir's quote: "These temple destroyers, devotees of ravaging commercialism, seem to have a perfect contempt for Nature, and instead of lifting their eyes to the God of the Mountains, life them to the almighty Dollar." (Muir 2010, p.261-62)

But, the sublime was not the only spiritual value found in nature. For the Transcendentalists—Emerson, Thoreau, Muir, and others—"a correspondence or parallelism existed between the higher realm of spiritual truth and the lower one of material objects. For this reason natural objects assumed importance because, if rightly seen, they reflected universal spiritual truths." (Nash 2001, p.85) This is similar to how Lynn White characterizes the early Church's relationship to nature. "But since God had made nature, nature also must reveal the divine mentality... In the early Church... nature was conceived primarily as a symbolic system through which God speaks to men: the ant is a sermon to sluggards; rising flames are the symbol of the soul's aspiration." (White 1967, p.5) For both Emerson and Thoreau, this correspondence of natural facts with higher truths is the source and possibility of language and art: "He would be a poet who could impress the winds and streams into his service, to speak for him; who nailed words to their primitive senses, as farmers drive down stakes in the spring, which the frost has heaved; who derived his words as often as he used them..." (Thoreau 1862)

As noted in the previous section, the sublime has a particular connection to the the pristine. Thoreau's sentiment on top of Katahdin—"It was vast, Titanic, such as man never inhabits." (Thoreau 1864, p.640)—would hardly be possible in the presence of established hiking trails worn by throngs of eager peak-baggers. In order for nature to symbolize the infinite majesty of the divine and the fragility of mortals, it has to be unobscured by the works of mortals. But, the less dramatic spiritually symbolic value of nature also relies on pristineness. If one was trying to learn about the Creator from studying creation, then of course the best site for this endeavor would be nature that was in a state as close as possible to how it was created. That is: pristine wilderness. "[W]ilderness, as pure nature... [was] the

clearest medium through which God showed His power and excellency. Spiritual truths emerged most forcefully from the uninhabited landscape, whereas in cities or rural countryside man's works were superimposed over those of God." (Nash 2001, p.46)

However, this understanding of the spiritual value of nature relies on a certain—generally transcendentalist—understanding of spirituality. This understanding is not universal. People certainly do have spiritual experiences in disturbed natural areas. Again, there may be a connection between pristine nature and spirituality, but this is neither a necessary nor sufficient connection.

1.2.2.3 National Character

The idea of wilderness, especially wilderness preservation, has a particularly American resonance. It has often been argued that the distinctive character of American institutions and culture are due to contact with wild land, and thus that preserving wilderness would preserve the national character. Gertrude Stein, for example, said that "In the United States there is more space where nobody is than were anybody is. That is what makes America what it is." (Stein 2013, p.17-18) The connection between American identity and wilderness is complicated, but can usefully be divided into two senses. Both can be connected to the pristine character of wilderness; thus, preserving pristine wilderness preserves American national character.

The first connection comes from the American search for national pride following independence, especially the search for some way in which the new nation might get a leg up on the old and culturally developed powers of Europe. "Creation of a distinctive culture was thought to be the mark of true nationhood. Americans sought something uniquely 'American,' yet valuable enough to transform embarrassed provincials into proud and confident citizens." (Nash 2001, p.67) The nascent culture in the former colonies greatly lagged behind that of long-settled Europe, but "in at least one respect Americans sensed that their country was different: wilderness had no counterpart in the Old World." (Nash 2001, p.67) Thus, the very

lack of development of the continent came to be a point of pride in American uniqueness.

This pride in the unspoiled state of the country is obviously connected to pristineness. The difference with Europe, here, was specifically that the American landscape did not have a long history of (what the European colonizers thought of as) civilization. If the whole country were to be tamed and remade to suit Euro-American needs, it would just be another Europe, only without the castles or history. Preserving wilderness in its pristine state, then, was seen as preserving one of the unique and irreplaceable features of the nation.

Wilderness was also seen to have an effect on the society and institutions of America. This was a large part of Frederick Jackson Turner's thesis in *The Frontier in American History*. "This, at least, is clear: American democracy is fundamentally the outcome of the experiences of the American people in dealing with the West. Western democracy through the whole of its earlier period tended to the production of a society of which the most distinctive fact was the freedom of the individual to rise under conditions of social mobility, and whose ambition was the liberty and well-being of the masses." (Turner 2008, c.IX) Open space and "free" land (again, ignoring the original inhabitants), where people had the opportunity to make a place for themselves through their own efforts, served to promote equitable and merit-based distribution of resources, and provided an open space in which people could break out of old patterns of social organization and begin a new society. "Western democracy has been from the time of its birth idealistic. The very fact of the wilderness appealed to men as a fair, blank page on which to write a new chapter in the story of man's struggle for a higher type of society." (Turner 2008, c.IX)

Related to this is the idea that the wilderness of the frontier shaped the characters of the pioneers in ways that were conducive to the flourishing of democracy. "Turner believed, in short, that democracy was a forest product. Living in the wilderness, 'the return of primitive conditions,' fostered individualism, independence, and confidence in the common man that encouraged self government." (Nash 2001, p.146) Thus, the character of the society—encouraging equity and merit over oligarchy—and the character of the citizens—encouraging

independence, creativity, and vigor—were positively affected by contact with wilderness, and this is what gave American society its distinctive virtue. Naturally, if this were true, the disappearance of the frontier would be a serious threat to American culture, and the preservation of wilderness would be one way to preserve something of the frontier character. "Thus, in the myth of the vanishing frontier lay the seeds of wilderness preservation in the United States, for if wild land had been so crucial in the making of the nation, then surely one must save its last remnants as monuments to the American past—and as an insurance policy to protect its future" (Cronon 1996, p.8)

The importance of preserving wilderness for shaping society and citizens was also understood in terms of its untouched nature. First, it was an attempt to preserve a piece of the frontier past. Since we're trying to recreate the virtues of our forbearers that came out of their encounter with wilderness, it is important that we preserve wilderness in the state that they encountered it. Wilderness preservation, then, is understood as the preservation of an historical baseline. "Public wilderness areas are essentially a means for allowing the more virile and primitive forms of recreation to survive the receding economic fact of pioneering." (Leopold 1925, p.79) Second, one of the primary characteristics of wilderness that had a salubrious effect on American society was its "blankness," its lack of human cultural footprints that let the idealistic pioneers break the patterns of Old World monarchy and establish a new democracy. "Indeed by virtue of being wild, the New World was a clean slate to which idealists could bring their dreams for a better life." (Nash 2001, p.146) While people can not literally begin new societies within designated wilderness areas, they do serve the function of providing a non-cultural space where people can escape and think new thoughts. In order for there to be this kind of blankness, wilderness needs to not only lack inhabitation, but also not show the impact of human works.

The connection between national character and pristineness relies on an understanding of pristineness as a historical blankness that ignores the presence of Native Americans. If the settling of the frontier is understood instead as a conquest and a

colonization of already inhabited lands, then the pristineness of these lands is questionable, as is the value of preserving the “virtues” of the colonizers.

1.2.2.4 Health

Wilderness has often been linked to vitality. Theodore Roosevelt touted wilderness experience as promoting "that vigorous manliness for the lack of which in a nation, as in an individual, the possession of no other qualities can possibly atone." (Roosevelt 1926, p.xxxi) Thoreau recommended that "If you would get exercise go in search of the springs of life. Think of a man's swinging dumb-bells for his health, when those springs are bubbling up in far off pastures unsought by him." (Thoreau 1862, p.3)

One way to understand the sort of vitality supposed to be inculcated by wilderness experience is in terms of evolutionary adaptation. Humans evolved physiologically and psychologically to survive in conditions much like wilderness, and not in the highly industrialized environment of modern life. Thus, periodic returns to wilderness areas would perhaps allow a return to a more "natural" and healthy state. Inherent in this idea is the connection to the past, a return to the world as humans first encountered it; this has connections to the pristine.

In terms of physiology, this is not hard to see. Wilderness excursions generally involve the sort of exercise that our bodies evolved to require in order to function well. Humans crave fat, sugar, and salt. In a relatively sedentary environment, this urge can result in various health problems. Strenuous physical activity in the back country, however, burns up large amounts of calories, and sweating depletes electrolytes. These conditions—exercise and perspiration—are more similar to the conditions for which our desires evolved, so that what one wants to eat and what one should eat are more in harmony in wilderness, improving health.

Sufficient, regular sleep is important for mental and physical health. This can be problematic in a society with night shifts and electric lights. "In other words, people in the

modern world not only get light during the night, they get far less light during the day inside electrically lit buildings. This can lead to circadian confusion and de-synchronization of the rhythms throughout the body." (Richards and Zhu 2015, p.3) There has also been research indicating that disrupted circadian rhythms are associated with higher risk of cancer. (Richards and Zhu 2015, p.4) Subjects who spent two weeks camping in Colorado without electric light—that is, under conditions similar to human prehistory—showed normalization of circadian rhythms. (Wright et al. 2013)

Recent research has suggested that the increasing prevalence of auto-immune disorders and allergies may be the result of a lack of exposure to the parasites and microorganisms in whose presence our immune system evolved: the "old friends" thesis. Exposure to parasitic worms has been shown to be beneficial to asthma sufferers. (Rook et al. 2003) Exposure to wilderness conditions might include beneficial exposure to such microorganisms.

The principle is similar in psychology. We evolved under different social conditions than the ones we currently live under. As Nelson puts it: "...Sigurd Olson, Robert Marshall, and even Sigmund Freud have argued that civilization represses, frustrates, and often breeds unhappiness and discontent in humans that can best be alleviated by periodic escape to what they took to be wilderness." (Nelson 1998, p.11) Humans evolved living in small, closely knit bands. The suite of emotional responses that developed under these conditions are sometimes ill suited to life lived amongst throngs of anonymous strangers in modern cities. Entering wilderness with a small group could recreate the sorts of social conditions for which we are adapted. Research on the rise in developmental disorders in children that have little contact with the natural world (Louv 2008) and the benefits of wilderness exposure for psychiatric patients (Lowry 1974) support this connection.

Pristine environments are neither sufficient nor necessary for health. Returning to a wilderness will bring what we should do for health more in line with what we tend to do, but one could imagine any number of human-made environments where this is also true—sleeping

on a rooftop would wake one up with the sun, agricultural labor would burn calories, and children could beneficially play in forests of invasives. And, it is of course possible to get sick or injured in the wilderness. Still, it might be argued that land unaltered by humans would provide the most thorough similarity to the conditions for which humans evolved, and thus the most health benefits.

1.2.2.5 Ecological Value

One of Aldo Leopold's arguments for the preservation of wilderness areas is that land science needs them for the same reason medical science needs healthy people: as an example of normal functioning. "According to Leopold, wilderness areas serve as a measure 'of what the land was, what it is, and what it ought to be,' providing us with both an actual ecological control sample of healthy land and a normative measure of what we ought to strive toward." (Nelson 1998, p.17) That is, we can not gauge the effects that people have had on an area if we don't have a relatively unaffected area with a similar climate to compare it to.

The idea that pristine wilderness is the norm of land health implies that it is functionally optimal. Leopold's assumption seems to be that, due to evolutionary adaptation to climate, wild ecosystems will be maximally efficient in terms of diversity, productivity, stability, resilience, water filtration, carbon fixing, erosion prevention, and so on. Wilderness areas are valuable both because they provide these functional characteristics, and because they provide a standard by which to measure the functional characteristics of human-affected lands. They might also provide information about how to improve the functioning of humanized landscapes—agriculture in dry areas might imitate some of the ecological structures that improve water retention in deserts, for instance. "The whole object of conservation is, of course, to emulate nature's successes; this is not to make tamed land wild, but to make subnormal land normal." (MacKaye 1950, p.243)

Wilderness as an ecological baseline provides data for how an area of land "should be." If we are trying to manage for historical fidelity (one of the management goals of the the

National Park Service is to maintain the "natural condition" of parks, "used here to describe the condition of resources that would occur in the absence of human dominance over the landscape" (NPS 2006, p.46), wilderness can serve as a proxy that tells us what the "natural condition" of an area looked like, what species lived there and how they interacted.

It is both necessary and sufficient that a wilderness area be pristine in order for it to be able to be used as a proxy for untouched nature. Questions might arise about *how* untouched an area has to be—completely or just the best available sample—in order to be used in such a way, but, as long as we don't let the perfect be the enemy of the good, this is not a serious problem for management.

There are a number of presumptions about ecology inherent in the idea that may cause trouble, however. Leopold's "health" idea seems to assume that pristine nature is functionally and compositionally optimal; it's as diverse as possible, as productive as possible, etc. These assumptions might not always be true—novel ecosystems might be better at fixing carbon than native ones, for instance. Further, the health idea assumes that there is a single "natural" state, or at least a historical range of variability, for an area. The advent of non-equilibrium dynamics in ecological theory raises questions about this assumption. And, the value of a historical baseline in a world with a drastically altered climate is called into question.

However, it does seem true that pristineness and biodiversity go hand in hand. Unless humans genetically engineer new species, the only possible effect of human interaction on biodiversity is negative, at least on non-geologic time scales. Preserving areas in their historical baselines will preserve the species that historically lived there.

1.2.2.6 Recreation

Recreation is one of the values of wilderness that is most often talked about. Recreation value is perhaps best understood as mixing the other values talked about already into a unifying experience. A single backpacking trip involves exercise, sublime vistas,

reconnecting to the human evolutionary past, immersion in an untouched ecosystem, and a reminder of the national history of the frontier. Exemplifying this holism, Aldo Leopold favorably compared the holistic character of the American hunting expedition into wilderness via pack train to European hunting, in which the killing of the game was the sole recreational objective. "...[O]ur test of skill is primarily the act of living in the open, and only secondarily the act of killing game." (Leopold 1925, p.84)

If recreation value is an amalgam of other values, then its connection to pristineness depends on the connections of these other values. However, if each of the individual values that make up recreation are only partially connected to pristineness, but they tend to co-occur in the presence of pristineness, then this seems to underscore the connection of recreation to the pristine. Beauty and health benefits occur in non-pristine areas. But, if recreation is better in areas that have both, and pristine areas are more likely to have both, then the connection to between recreation and the untouched is strengthened.

1.3 Wilderness and Environmentalism

Wilderness preservation has been considered one of the most important goals in environmentalism, if not *the* goal of environmentalism. "The influential poet Gary Snyder, for example, would like to see a 90 percent reduction in human populations to allow a restoration of pristine environments, while others have argued forcefully that a large portion of the globe must be immediately cordoned off from human beings." (Guha 1989, p.73)

One cause of the importance of wilderness preservation in American environmentalism is due to the role wilderness historically played in the conservation movement. One of the major sources that the American environmental movement grew from was concern over the preservation of specific unspoiled places—Yosemite and the Hetch Hetchy dam controversy in particular.

Another reason for the primacy of wilderness conservation in environmentalism is theoretical. The biocentric perspective of Deep Ecology has been influential in

environmentalism (or perhaps captured an intuition that was important already), and the preservation of untouched wilderness is one of the most effective ways to preserve nature, understood in terms of biodiversity, for its own sake, rather than for human interests.

Finally, the unifying power of the traditional concept of wilderness serves as an argument for its primacy. As I have laid out in this chapter, wilderness seems to unite a large number of the things that people value about the environment under one banner. Whether one is interested in recreation, beauty, wildness, or a connection to America's frontier past, wilderness preservation promises to achieve your goal.

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Chapter Two: Criticisms of Wilderness

2.0 Introduction

The traditional conception of wilderness has received an impressive amount of criticism. In this chapter, I will examine some of the key critics of wilderness. There are two questions brought up by criticism of wilderness. Should we abandon the idea of wilderness? If not, how should we reconceive wilderness to deal with the problems raised? After answering "no" to the first question in response to Callicott, from each other criticism I will draw a desideratum for what a reconception of wilderness must include. I will lay out a reconception based on these desiderata in chapter four.

2.1 Callicott: Should We Abandon Wilderness?

Unlike many critics of wilderness, who generally have problems only with aspects of wilderness, J. Baird Callicott would like to do away with the concept of wilderness entirely, though he takes pains to state that "I am as ardent an advocate of those patches of the planet called 'wilderness areas' as any other environmentalist. My discomfort is with an idea, the received concept of wilderness, not with the ecosystems so called." (Callicott 1991, p.339)

In "The Wilderness Idea Revisited," Callicott presents a three point critique of wilderness, and recommends replacing it with an ideal of "sustainable development." Though I, like Rolston in his response to Callicott, think "he is on the right track about sustainable development and I readily endorse his positive arguments for developing a culture more harmonious with nature"¹ (Rolston 1991, p.367), I do not find Callicott's justification for the abandonment of wilderness compelling. I will examine each of his three arguments in turn.

Callicott's first argument is that the concept of wilderness "perpetuates the pre-Darwinian Western metaphysical dichotomy between 'man' and nature, albeit with an

¹ So long as "sustainable" is understood in environmental rather than economic terms.

opposite spin." (Callicott 1991, p.348) That is, wilderness is based on preserving nature apart from humans—preserving nature *from* humans—and this rests on a radical metaphysical separation between humans and nature that has its roots in Descartes and Christian theology. However, according to Callicott, an acceptance of Darwinian evolution undermines the metaphysical distinction between "man" and nature.

If man is a natural, a wild, an evolving species, not essentially different in this respect from all the others... then the works of man, however precocious, are as natural as those of beavers, or termites, or any of the other species that dramatically modify their habitats. And if entirely natural, then the works of man... in principle may be, even if now they are usually not, beneficial—judged by the same objective ecological norms—to the biotic communities which we inhabit. (Callicott 1991, p.350)

Wilderness rests on an ontological distinction between humans and nature; since this distinction is false, wilderness does not make sense. More specifically, because humans are natural, human actions should be understood as of the same kind as the actions of animals that alter their environment. Thus, human actions, including those in "wilderness," shouldn't be understood as bad simply because they're human; they should, instead, be evaluated based on their effects on the ecosystems affected. This is an argument against the value of human non-intervention in nature.

The first problem with this argument is that Callicott is trading on the ambiguity between two different senses of "natural"; nature as the world described by science, and natural in distinction to culture. That is, because humans are not supernatural, there is no distinction between nature and culture. However, even if we grant that there is no ontological difference between humans and other animals along the lines of Descartes' substance dualism, it does not follow that there is no morally relevant difference between them. In his response to Callicott, Rolston plausibly locates such a difference in the ability of humans to transmit information culturally and neurally rather than just genetically. (Rolston 1991, p.368) Even if one does not endorse Rolston's location of the distinction, the impossibility of making some such distinction does not follow from the fact that humans are the natural result of evolution. Nor does it follow that because we are the same sorts of things as nature, we have

no duties to avoid intervention in nature in some cases. Humans are the same sorts of things as humans, but we do seem to have duties to sometimes refrain from interfering in other humans' affairs, even when such interference would benefit them.

It is also unclear what "objective ecological norms" Callicott would appeal to to evaluate the effects of human actions on ecosystems. In "Current Normative Concepts in Conservation," Callicott recommends *ecological integrity* as "the most comprehensive as well as the most rigorous of current norms in conservation." (Callicott et al. 1999, p.25) Ecological integrity—"native species populations in their historic variety and numbers naturally interacting in naturally structured biotic communities." (Callicott et al. 1999, p.25)—is synonymous with pristineness. Thus, Callicott seems to be saying that the problem with wilderness is wildness—avoiding intentional intervention—and that we should focus instead on pristineness. However, his next two attacks on wilderness are attacks on the value of pristineness.

Callicott's second argument is that "the wilderness idea is woefully ethnocentric. It ignores the historic presence and effects on practically all the world's ecosystems of aboriginal peoples." (Callicott 1991, p.348) Something has to be pristine in order to be wilderness; because of the effects of aboriginal peoples in changing the fire regime, their ecological effects as an apex predator, and direct effects on the landscape from city-building and path making, almost no areas of earth are pristine. Thus, there is no such thing a wilderness.

There are two assumptions that Callicott makes about pristineness here. The first is that, in order to be considered pristine, the baseline to which we compare the current state of an area must be before any human effects. The second assumption is that that pristineness must be absolute—that *any* deviation from the pre-human baseline destroys the pristine character of a landscape. Neither of these assumptions is essential to pristineness as a value, and neither seems to accurately characterize the position of wilderness advocates. We might instead think of pristineness as a fidelity to conditions at some significant point in history, even if that involved humans. And, people do indeed seem to value wilderness that looks

something like it did before European settlement, even if this is different than what the landscape looked like before Native American settlement. We should also think of pristineness as a more-or-less spectrum, rather than an either-or binary. The Bob Marshall Wilderness was indeed profoundly affected by Native Americans, but it functions much more like it did in the past than, say, downtown Manhattan now does. Thinking of pristineness this way is a requirement for a sensible reconceptualization of wilderness, but this is not an argument for abandoning the idea.

Callicott's third argument against wilderness is that "it ignores the fourth dimension of nature, time. ... trying to preserve in perpetuity—trying to 'freeze-frame'—the ecological status quo ante is as unnatural as it is impossible." (Callicott 1991, p.349) Natural systems are dynamic, they change. If we're trying to maintain an area so that it looks exactly as it did in 1492, we both won't likely be successful, and we'll have a human construct rather than a natural system. "Designated wilderness areas, paradoxically, must be actively restored and managed if they are to remain fit habitat for native species." (Callicott 1991, p.353)

This argument can be understood as a conflict between wildness and pristineness—sometimes, in order to maintain one we have to compromise the other. That is, this is really an argument against the view in the traditional concept of wilderness that wildness is sufficient for pristineness. It is true that this relationship does not always hold, and that we frequently have to make a choice between the two. But, that we have diverse values in wilderness, and that they sometimes conflict, is grounds for abandoning neither wildness nor pristineness, but calls instead for elucidation of how to resolve conflicts when they arise.

Callicott's dualism argument is invalid. His argument that no wilderness is totally pristine calls on us to avoid thinking of pristineness as an absolute. His argument that wilderness ignores dynamic change highlights a flaw in the traditional understanding of wilderness—wildness and pristineness sometimes conflict—but is not an argument against either value. Callicott does point out some ways that we should avoid thinking about wilderness, but does not provide sufficient reasons to abandon the idea.

2.2 Guha: Wilderness and Social Justice

In "Radical American Environmentalism and Wilderness Preservation: A Third World Critique," Ramachandra Guha presents several criticisms of Deep Ecology and its association with wilderness preservation.

The first of these might be called the Imperialism Argument. Guha finds fault with the tendency of Deep Ecology, and American Environmentalists in general, to equate environmentalism with wilderness preservation, and to export this goal to areas of the world where it is inappropriate. The centrality of wilderness in Deep Ecology is due to deep ecologists' emphasis on the distinction between anthropocentric (protection of the environment for their value as instruments to the satisfaction of human needs) and biocentric (protection of natural things for their own intrinsic value, irrespective of human needs); for Deep Ecology, wilderness protection is the most important form of environmental concern because it protects nature for itself, rather than primarily for human use. However, Guha claims that the anthropocentric/biocentric distinction, and the emphasis on wilderness that it justifies, is irrelevant to solving environmental issues that are of primary interest to those in the Third World; locating wilderness at the heart of environmentalism results in these concerns not being dealt with. "Until very recently, wildlands preservation has been identified with environmentalism by the state and the conservation elite; in consequence, environmental problems that impinge far more directly on the lives of the poor--e.g., fuel, fodder, water shortages, soil erosion, and air and water pollution--have not been adequately addressed." (Guha 1989, p.75)

In addition to shifting focus from the concerns of the poor, wilderness protection in "long settled and densely populated" countries like India, "in which agrarian populations have a finely balanced relationship with nature, the setting aside of wilderness areas has resulted in a direct transfer of resources from the poor to the rich." (Guha 1989 p.75) The local agrarian communities that have lived in and with the land have been displaced to make room

for "pristine" nature reserves, and had their traditional use of the land curtailed in favor of the interests of rich foreign tourists.

Guha highlights the way that wilderness conservation in the Third World has conflicted with social and environmental justice concerns, and has actively harmed those least well off, and least responsible for ecological degradation. If we are to save wilderness conservation, we will need to, minimally, work out a way that it can be compatible with social and environmental justice. Ideally, we might also develop an understanding of wilderness that actually reinforces concern for justice. I will argue for a reconception of wilderness that does both.

2.3 Guha and Cronon: Wilderness and Consumerism

Even in America, Guha sees Deep Ecology's focus on biocentrism and wilderness as harmful in that it enables people to feel that they are preserving nature without examining their own day to day lives of overconsumption—what we might call the Dualism Argument. That is, rather than being a radical counterpoint to consumer society, wilderness and national parks function merely as "a special institution within an industrialized society." (Guha 1989, p.78)

Here, the enjoyment of nature is an integral part of the consumer society. The private automobile (and the life style it has spawned) is in many respects the ultimate ecological villain, and an untouched wilderness the prototype of ecological harmony; yet, for most Americans it is perfectly consistent to drive a thousand miles to spend a holiday in a national park. They possess a vast, beautiful, and sparsely populated continent and are also able to draw upon the natural resources of large portions of the globe by virtue of their economic and political dominance. In consequence, America can simultaneously enjoy the material benefits of an expanding economy and the aesthetic benefits of unspoilt nature. The two poles of "wilderness" and "civilization" mutually coexist in an internally coherent whole, and philosophers of both poles are assigned a prominent place in this culture. (Guha 1989 p.79)

Guha is questioning both the supposed radicalism of wilderness preservation and its ability to counteract the developed world's consumerist over-consumption that is the source of most environmental problems—in practice it is merely another form of consumption rather than a challenge to a lifestyle of over consumption.

Guha's argument here is similar to William Cronon's argument that wilderness enables escapism, and may have been the inspiration for it. Cronon argues that wilderness allows its advocates to think of themselves as expatriates of the wild exiled to live in modern consumer society, but with their "true home" in the wilderness. This allows wilderness advocates to avoid taking responsibility for their everyday lives—driving hundreds of miles to visit wilderness areas with expensive, state of the art camping gear made from petrochemicals. "Worse: to the extent that we live in an urban-industrial civilization but at the same time pretend to ourselves that our real home is in the wilderness, to just that extent we give ourselves permission to evade responsibility for the lives we actually lead." (Cronon 1996, p.17)

How wilderness areas affect those who visit and advocate for them is an empirical question. It is possible that wilderness areas function as a sort of specialized consumer resource, and it is possible that wilderness experiences cause people to question their everyday lives. However, that the concept of wilderness leaves this an open question is a problem with the concept. If Guha is right that "overconsumption by the industrialized world and by urban elites in the Third World" (Guha 1989, p.74) is one of the most important environmental problems, and that consumerism is injurious to the good life (Borgmann 2012), what we need is an understanding of wilderness that makes clear how wilderness can be a counter to consumerism.

2.4 Marris: Problems With Pristineness

Emma Marris' *Rambunctious Garden* is a sustained attack on pristineness, the "correct state, the holy baseline" (Marris 2013, p.24), as the default goal of all conservation efforts. "This faith that native ecosystems are better than changed ecosystems is so pervasive in fields like ecology that it has become an unquestioned assumption." (Marris 2013, p.14) The problems that she finds with pristineness have important implications for how we think of pristineness with regards to wilderness.

The first problem with pristineness is that it requires an historical baseline, a reference

state with which to compare the current state of the system, and there are number of problems regarding this baseline. The first is that there is no non-arbitrary point at which to set it. It was generally thought that the conditions that obtained before European contact represented a "balance of nature," the stable state that the ecosystem would naturally return to. The first problem with this assumption is that local ecosystems were profoundly affected by the non-European people that were already living there. For instance, if we're trying to restore an area of Hawaii back to its pristine state, we might use 1777, the date Captain Cook first landed, as the baseline. "But restoring the islands' ecosystems to the way they were in 1777 would be restoring them to a state very much shaped by the polynesians who had been living there for at least one thousand years..." (Marris 2013, p.4) The second problem with when to set the baseline is that "[e]cosystems are always changing, whether humans are involved or not. ... We are a short-lived species with a notoriously bad grasp of timescales longer than a few of our own generations." (Marris 2013, p.4) That is, ecology has largely moved past the "balance of nature" hypothesis; just because an area looked a certain way in the past does not mean that it would look like that today if no humans had affected it. "Ecosystems are fundamentally stable entities afflicted by changes from without and within about as much as a ballet is a fundamentally static object afflicted with motion." (Marris 2013, p.34)

The second problem with baselines is that we often don't know what ecosystems looked like in the past. Captain Cook did not take a survey of the flora and fauna of Hawaii when he landed. "Even when we use all the scientific tools available to look backward in time, from fossil pollen records to the climate information enshrined in tree rings, we do not always know what places looked like thousands or even hundreds of years ago." (Marris 2013, p.5)

Finally, it is often too difficult to preserve or restore an area in its baseline, especially in an era of global climate change and ubiquitous invasive species. "We have definitively changed the entire planet, and it is getting increasingly difficult to undo all these changes at any one place." (Marris 2013, p.5)

The second problem with pristineness as the default goal of conservation is that, while "putting things back the way they were" seems to handily cover any other goals we might have" (Marris 2013, p.153), these other goals do not depend on pristineness. "We can cherish evolution in action even if all the species struggling for existence are not 'native.' We can protect ecological processes like soil formation and water filtration that benefit us. We can marvel at the diversity of life and fight its disappearance, even if that diversity occurs in unfamiliar places. We can find beauty in nature, even if signs of humanity are present. We can see the sublime in our own backyards, if we try." (Marris 2013, p.3) The importance of this for wilderness is that many of the reasons that people value pristine wilderness turn out not to depend essentially on pristineness.

One problem here is that Marris hedges on the difference between local and global biodiversity. When she says that "With eight to eleven tree species per hectare, L.A. is more diverse than many ecosystem types" (Marris 2013, p.151), what she fails to mention is that while introducing non-native species might increase the diversity in a *local* area, if any of these exotics drive a native species to extinction, then the *global* count of species has dropped. Biodiversity does indeed depend very closely on pristineness.

There are real and serious problems with pristineness and the way that it functions in the traditional wilderness concept. Marris points out that many of the various values traditionally associated with pristineness do not actually depend on it, that pristineness is often practically impossible to achieve, and that setting a baseline is supposed to be objective but is not. However, there are still good reasons not to simply discard pristineness: people do in fact value it, and it has important connections to biodiversity. We need to reevaluate what pristineness is, and its centrality for wilderness.

2.5 Cole and Yung: The Dilemma of Wilderness Management

As we saw in section 1.2.1, in the traditional conception of wilderness pristineness and wildness were seen as individually necessary and jointly sufficient for wilderness, and that,

due to the direct character of human effects on nature at the time the idea of wilderness was formulated, as well as the influence of Clementsian climax ecology, wildness was seen as leading to pristineness.

However, both the character of human effects on nature and our understanding of natural systems have changed. As we saw in the last section, ecology has moved towards the notion that "[t]here is no single 'natural condition' toward which the system would tend if left alone." (Aplet and Cole 2012, p.19) This means that lack of intervention will not always lead to a recovery of pristine historical conditions. Thus, "In altered ecosystems, neither historical fidelity nor lack of human effect can be achieved without human control. Maintaining historical ecosystems or keeping ecosystems on the trajectory they would be on in the absence of human effects entails intentional and repeated human intervention." (Aplet and Cole 2012, p.21) Sometimes, we're forced to choose between managing a wilderness for wildness or pristineness: this is called "the dilemma of wilderness management."

In addition to the failure of the connection between wildness and pristineness, the character of human effects on nature has changed. While the primary danger in the past was direct, such as logging, development, or relatively local pollution, the most potent contemporary human effects on wilderness are what Aplet and Cole call "ubiquitous and directional human change." (Aplet and Cole 2012, p.23) This is human effects that are omnipresent, indirect, and tend to move systems outside of their range of historical variability. This includes widely dispersed invasive species, global climate change, pollution, and habitat fragmentation. The upshot of the introduction of this sort of change is that it virtually eliminates the possibility that non-intervention will result in a return to historical conditions. "In the face of such pressure, recovery of historical conditions, unaided by human intervention, is not likely to be effective, even where human influence was historically minimal; consequently, the ideal approach to park and wilderness management is lost." (Aplet and Cole 2012, p.24)

If not only are wildness and pristineness not linked, but are often in conflict, and wilderness has been traditionally defined as land that is both pristine and wild, then we'll

either have to say that wilderness no longer exists or we'll have to change the definition.

2.6 Rewilded Wilderness

Elizabeth Kolbert describes the Oostvaardersplassen as "a wilderness that was also constructed, Genesis-like, from the mud." (Kolbert 2012, p.50) The Oostvaardersplassen is a fifteen thousand acre area in the Netherlands built on land reclaimed from the North Sea by draining a shallow inlet, and designed to mimic what the local terrestrial ecosystem might have looked like during the Paleolithic. Imported red deer, wild (really, feral) horses, foxes, geese, and egrets populate the park. Since the Auroch—*bos primigenius*—the wild ancestor of the domestic cow and one of the major grazers of the Paleolithic, was hunted to extinction in Poland in 1627 (Monbiot 2014, p.206), Heck cattle, bred to resemble their wild fore-bearers by a pair of brothers in Nazi Germany have been introduced to the area. "Like genuinely wild animals, those in the Oostvaardersplassen are expected to fend for themselves. They are not fed or bred or vaccinated. Also like wild animals, they often die for lack of resources; for the large herbivores in the reserve, the mortality rate can approach forty per cent a year." (Kolbert 2012, p.55) Reintroduction of wolves is stalled by politics, but reserve managers are optimistic that some will find their way in without assistance.

The Oostvaardersplassen is an example of "rewilding." The word has varied and contested meanings, including the release of animals back into the wild, the restoration of wild ecosystems, and the reintroduction of large carnivores. The sense that is most interesting for our purposes is the one championed by George Monbiot in in *Feral*: "Rewilding, to me, is about resisting the urge to control nature and allowing it to find its own way. It involves reintroducing absent plants and animals... pulling down the fences, blocking the drainage ditches, but otherwise stepping back. ... Rewilding has no end points, no view about what a 'right' ecosystem or a 'right' assemblage of species looks like. It does not strive to produce a heath, a meadow, a rainforest, a kelp garden, or a coral reef. It lets nature decide." (Monbiot 2014, p.9-10)

Rewilded areas are clearly wild, but their relationship to pristineness is either problematic or non-existent. What Monbiot advocates is to restore the elements that make certain important ecological processes possible and then see what happens—he explicitly avoids any connection to pristineness. Frans Vera, the architect of the Oostvaardersplassen, does have the goal of restoring the ecosystem he thinks predominated in Paleolithic Europe. This, however, seems more of a general model for what a truly wild landscape would look like rather than a criterion for the success of the project. Since the area the Oostvaardersplassen is built on was under the north sea, an historical ecosystem there would be aquatic.

Rewilded areas are plausibly and intuitively described as wildernesses: Kolbert does so when she first introduces the Oostvaardersplassen. In highly developed areas like Europe, rewilded areas might be the only direct relevance that the idea of wilderness conservation has to most people's lives. However, they are wild and not pristine, and the traditional concept of wilderness requires both. In our reconception of wilderness, we will need to find a way to include rewilded areas as wildernesses.

2.7 Conclusion

Callicott points out some of the ways we should not think about wilderness, but is not convincing that we should abandon the concept. Our approach should be to update the concept. Guha's imperialism argument highlights the need for wilderness to be compatible with social and environmental justice at minimum, and ideally supportive of justice. Guha's and Cronon's dualism arguments highlight the need for wilderness to serve as a counter to consumerism rather than simply a specialized recreation resource. Marris raises troubling questions about the nature of pristineness and its role in conservation. Aplet, Cole and Yung point out that changing human effects on nature and changing understanding of how ecosystems work mean that we are often faced with a choice between wildness and pristineness. Rewilded areas do not fit the classic definition of wilderness, but should be included. A revised conception of wilderness will have to satisfy all of these requirements.

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Chapter Three: Reconceptualization of Wilderness

3.0 Introduction

The concept of wilderness was a product of the time out of which it came. Times have changed. We understand differently how nature functions. Our environmental concerns, and the ways that we affect nature, have changed. The values that people found in wilderness still exist, and it is possible for wilderness to address contemporary concerns. We should not give up on wilderness; rather, we should update the concept to deal with our changed understanding and current problems. I will propose such an updated conception in this section.

Much of the problems that critics have found with the concept of wilderness have to do with pristineness. My proposed reconception will involve changing how we think about pristineness, and its primacy for wilderness. It is still valuable, but not necessary for wilderness. This leaves wildness as the sole necessary condition of wilderness. We need to justify this, and I will examine the value of wildness in the next chapter.

3.1 Revised Concept

The most important feature of my proposal to reconceive wilderness to change the role of pristineness. (We also need to change how we think about pristineness; what constitutes it and why it is valuable. This will be taken up in the next section.) Wildness should be thought of as the only necessary feature of wilderness. Pristineness should be "demoted" to be one among the various values that wilderness is held to have—beauty, spirituality, health, cultural value, recreation, etc.—though pristineness is the most important of these. Enough of any combination of these other values, combined with wildness, is sufficient to make an area a wilderness. There is no algorithm that specifies how much wildness is needed, nor the combination and amount of other values. This is inherently fuzzy, but comparison to examples

of wilderness and assessments of how people interact with and value the area in question can be used to make this judgement. Some compromising of wildness for the sake of preserving pristineness or other values is possible, but pervasively human controlled areas should be thought of as more akin to parks or gardens than wilderness.

Pristineness also needs to be understood as mostly independent of all of the various values that it was traditionally taken to be the source of. As Marris points out, novel ecosystems can be beautiful and spiritual, they can provide ecosystem services, recreation, and health benefits. Some of the cultural values identified with wilderness—cultivation of self reliance, for instance—can be had from non-pristine wild ecosystems. However, global biodiversity is tightly connected with pristineness, and pristine landscapes can be culturally important in themselves.

Wildness and pristineness have to be seen as independent of each other. Refraining from intervention will not necessarily result in maintenance of historical conditions. This is a recognition of fact; ecosystems are not as stable as once thought, and human effects are more broad scale than in the past. "[W]hen the Wilderness Act was drafted, there was an expectation that wildness was conducive to naturalness, whereas it is now understood that without active manipulation, natural areas are unlikely to conform to benchmarks of naturalness." (Ridder 2007, p.8)

One consequence of this separation of wilderness from pristineness and pristineness from (most) other values is that it undermines wilderness as the sole goal of environmentalism because the various features that are valuable about nature are no longer seen as dependent on pristineness. This addresses the requirement drawn from Guha that wilderness should be, at minimum, compatible with environmental justice concerns—wilderness advocates should understand wilderness protection as appropriate and important in some contexts, but not always. How wilderness can aid justice will be discussed in chapter 4.

A major reason for reevaluating the role of pristineness is that it provides much greater

flexibility for what counts as wilderness. Rewilded areas such as the Oostvaardersplassen, so long as they are mostly wild and have enough beauty, recreation potential, etc., can be considered wilderness. This recognizes landscapes that would intuitively be called wilderness and allows the concept of wilderness to be relevant to people in areas with a longer history of development, and, importantly, allows for the creation of wilderness in heavily humanized areas.

3.2 Pristineness

In wilderness where pristineness is one of the major values, we need to rethink not just the role of pristineness, but also its nature. The simplest way to do this is to think of it as a continuum rather than a binary—an area can be more or less pristine by degrees, rather than entirely soiled and fallen once it shows any human traces. Thus, even though most places in the world were significantly shaped by the people living there before Europeans showed up, they were relatively pristine compared to areas more heavily altered by mechanized societies, and this relative pristineness should be valued.

In part, this is what is meant by saying that pristineness is valuable but not necessary for wilderness; we should value what is there, and possibly increase it though minimally invasive intervention, but we should not require that wilderness be absolutely pristine. My position is stronger than this, however. Though the Oostvaardersplassen is inspired by an idea of what Paleolithic Europe was like, any reasonable baseline state for the area would be an aquatic ecosystem. Thus, it is *entirely* non-pristine. But it should still be considered a wilderness.

This does not solve the problem of when to place the baseline, however. As Emma Marris brings up, setting a baseline is somewhat arbitrary. But, we can still have reasonable guidelines that influence this choice. When to set baselines should be influenced by three factors: pragmatism, biodiversity, and cultural significance. Pragmatism is the most important of these—setting a baseline that we do not have a good understanding of or cannot effect is

pointless. Since biodiversity is one of the reasons that pristineness is valuable, we ought to set baselines for periods when systems had maximal biodiversity. Another of the reasons that pristineness is valuable is because of the connection between pristineness and culture. Many threatened native species of Hawaii are mentioned in the "Kumulipo," native Hawaiians' traditional genealogical chant, in which "plants and animals are named as ancestors of the Hawaiian people. Thus native species are not just used to make culturally significant objects such as canoes or leis; they are family." (Marris 2013, p.168) European contact is another culturally important marker. Arbitrariness only comes into play when these criteria conflict with one another.

3.3 North Brother Island

New York City Council Member Mark Levine has advocated for 20-acre North Brother Island the East River, just off the Bronx, to be a "'no-touch' and 'limited access' environmental education destination, which would also allow a number of visitors to appreciate [sic] its storied past." (Chung 2014) The island, once home to several quarantine hospitals and where "Typhoid Mary" was housed for over 20 years, has been abandoned since 1963 (one of 13 abandoned islands under the jurisdiction of the NYC Parks Department). The island is currently a bird sanctuary, off limits to the public. Photos of the island reveal a vibrant and elegiac beauty—overgrown forest contrasts with decaying buildings overrun with vines.

While large wild landscapes like the Oostvaardersplassen seem to be clearly wilderness, areas like North Brother Island might also be thought of, and managed for, wilderness. It is certainly wild. It is more pristine than the Bronx, and the cultural significance of its history might justify setting a relatively recent baseline. As Levine describes it, it is hauntingly, possibly spiritually, beautiful. The vine-covered ruins of quarantine hospitals is the definition of the Picturesque. "These ruins of the former hospital that have been overrun by nature. The experience of being completely isolated in this forest with these half decayed beautiful buildings as you faintly hear in the background the sounds of the city—honks from

the Bronx, loudspeakers from Rikers..." (Chung 2014) Health benefits might be somewhat reduced due to air and light pollution from the city. It has recreation potential, though different than that of larger wilderness areas. Though not the frontier, it provides a connection to the past, and group identity. As Levine points out: "New Yorkers don't really think about how we're on an island... we don't appreciate it." (Chung 2015) It's not perfect, but North Brother Island has all of the values associated with wilderness. Though obviously the wilderness act is inapplicable, many of the ways that it makes sense to care about wilderness apply to the island.

In short, New York City has a wilderness area. That is, if it chooses to preserve it rather than doing as Council Member Fernando Cabrera suggests: "I would like to have Disneyland here." (Foderaro 2015) Being able to apply the idea of wilderness, with all its resonance, to debates like this is an argument for the value in reconceiving the idea.

3.4 What Is Left

We have not looked at the value of wildness, or justified its place as the sole necessary condition of wilderness. We have also not shown how wilderness can be conducive to justice, or a counterforce to consumerism.

The distinction between wildness and pristineness is predicated on a distinction between intentional human effects on nature, such as road building, and unintentional effects, such as the accidental introduction of exotic species. Without this distinction, except for dramatic natural shifts in ecosystems over time, this would make any deviation from an historic baseline also a reduction in wildness. This would resolve the dilemma of wilderness management in favor of pristineness in nearly all cases, such that human intentional intervention in order to control invasive species or mitigate the effects of climate change would be the clear choice. If we want to defend the value of non-intervention, we need to defend the distinction between intentional and unintentional effects.

These questions can be addressed by looking at wildness. I will do this in the next

chapter.

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Chapter Four: Epistemic Wildness

4.0 Introduction

The idea of wilderness came about in order to deal with the environmental problems of the time when it was formulated. Changing times necessitate a change in how we think of wilderness. De-emphasizing pristineness resolves some of the problems with wilderness. But, we still need to show how what has been proposed as the sole necessary component of wilderness—wildness—is able to address contemporary concerns effectively. Explicating the nature and value of wildness is a major part of justifying the reconception proposed in the last chapter.

In the academic literature dealing with the problems faced by professional wilderness managers, wildness is usually conceived exclusively in terms of intentional human control of nature. This is indeed how one manages for wildness. However, it does not account for the full value of wildness. In addition to what we might call "pragmatic wildness," the quality of things that exceed human control or manipulation, many philosophers have discussed what might be called "epistemic wildness," the quality of things that exceed human knowledge or representation. Much of the value of wildness is found in epistemic wildness, including how wildness can address some of our most important contemporary environmental concerns.

In this chapter I examine wildness. I first look at thinkers who have talked about epistemic wildness, then present an account of it in terms of representation, and its relationship to pragmatic wildness. Finally, I show how epistemic wildness can address justice and consumer culture.

4.1 Thinkers on Epistemic Wildness

Many philosophers have examined and defended the value of wildness. Many of the defenders of wildness have talked about it in terms of epistemic wildness, though they have

often not distinguished this from pragmatic wildness. How we make conceptual distinctions depends in large part on the problems that we are trying to address, and epistemic and pragmatic wildness are closely related, so failure to distinguish between them is not a problem in many cases. However, in the context of wilderness, talking about wildness solely in terms of pragmatic wildness fails to account for the full value of wildness, so this distinction is important. In the context of our current project, there are three questions to ask of each author. What is wildness? Why is it valuable? And, how does the nature and value of wildness relate to how we know the wild?

4.1.1 Jack Turner

In *De Ira*, Seneca says that anger is "a burning desire to avenge a wrong" or, according to Posidonius, 'a burning desire to punish him by whom you think yourself to have been unfairly harmed.' Some define it thus: 'anger is an incitement of the mind to damage him who has done damage or wished to do damage.'" (Cooper 1995, p.19-20) Of course, one might feel anger at wrong done to others, rather than just oneself. Which others? We can identify this group with what Martha Nussbaum calls this group an individual's "Circle of Concern," the people whose wellbeing is part of one's own scheme of goals and ends. This generally includes friends and family, and might be extended to local and national group identities, or even global concern for humanity, such that one would become angry when anyone in these groups is wronged. (Nussbaum 2013)

Jack Turner's project in "The Abstract Wild" is to call attention to the fact that one of the central reasons that environmental activism is ineffective is that real activism requires anger: "effective protest is grounded in anger, and we are not (consciously) angry. Anger nourishes hope and fuels rebellion, it presumes a judgment, presumes how things ought to be and aren't, presumes a caring. Emotion remains the best evidence of belief and value." (Turner 1996, p.21-22) But, we do not get angry at the destruction of the environment. This is because wild nature is outside our circle of concern, and this is because we have lost contact

with "real" wild nature, in favor of tamed, mediated simulacra of nature—what Turner calls the "abstract" wild.

From this sketch, we already have an answer to the question of the value of wildness. For Turner, the value of real wildness is that encounters with it are necessary to produce emotional attachment to wild nature. If Turner, and Nussbaum, are correct, and successful political action requires emotional commitment—requires that our circle of concern is involved in some way—then encounters with the real wild are necessary to protect wild things. Because "[t]he majority of people who feel anguish about whales have never seen a whale at sea," (Turner 1996, p.29) their sadness and anger are "the emotions of an audience, the emotions of sad entertainment, and they will pass as quickly as our feelings about the evening news or our favorite film," (Turner 1996, p.29) and this will not motivate the sort of sacrifice—giving up free time to activism, accepting the inconvenience of boycotting products—that would be necessary to actually protect them. Real wildness inspires emotional attachment, and this is necessary for effective political action to protect the environment.

But what is wildness, and how does it foster emotional connection to nature? Unfortunately, Turner does not answer this question explicitly. His notion of "the wild" is vague and inclusive, covering both pristineness—the presence of non-indigenous golden trout count against an area being truly wild—and wildness as lack of control—"the freedom that is the promise of the wild." (Turner 1996, p.28) In trying to understand just what we need to encounter in order to foster emotional connections to nature, what is most important in Turner is the distinction between the real and the abstract wild, and the different ways that we come to know them.

For Turner, the reason that the wild is not within our circle of concern is that we do not actually know it. Such knowledge is experiential—it is gained from direct encounters with the wild. "If anything is endangered in America it is our experience of wild nature—gross contact. There is knowledge only the wild can give us, knowledge specific to the experience of it. These are its gifts to us. In this, wilderness is no different from music, painting, poetry, or love:

you concede the abundance and try to respond with grace." (Turner 1996, p.26) This is contrasted with two ways that the wild is simulated. We might have direct experience with "a severely diminished wilderness animal or place — a caricature of its former self. Or we have extensive indirect experience of wild nature mediated via photographic images and the written word." (Turner 1996, p.27) That is to say, we, living in contemporary technological society, think that we have extensive knowledge of wild nature. But, most of our knowledge comes from either media representations—"[w]e are deluged with commercial images of wildness: coffee-table books, calendars, postcards, posters, T-shirts, and place mats." (Turner 1996, p.27)—or contact with tamed and limited nature that we mistake for the wild, like seeing an animal in a zoo, which Turner likens to a caricature of the real wild.

Real wildness is necessary for people to care about wild things. And, there is something that we learn from direct experience of wild nature that we do not get from tame or mediated nature, something that makes the former "really" wild. Turner does not say what this is. Why is not a documentary about whales enough to establish a real emotional connection to them? If Turner is right, we cannot hope to communicate the content that is missing, but an account of epistemic wildness might at least characterize what sort of knowledge is missing from mediated representations of nature, especially given the importance of the fact *that* something is missing.

4.1.2 Robert Chapman

In "Ecological Restoration Restored," Robert L. Chapman discusses wildness in the context of a response to what he calls the paradox of restoration. If, following environmental philosophers such as Eric Katz and Holmes Rolston III (Katz 1996, Rolston 1991), if we equate wildness with wilderness, defined as areas in which natural historical processes have been able to operate untrammelled by human influence, then it becomes contradictory to attempt to restore wildness through human intervention. As Chapman quotes Throop: "Restoration may recover lost value by returning some of the original wildness. For example,

a Yellowstone with restored wolves may be wilder than it was without them. This justification confronts a serious paradox, however. 'Wildness' is typically defined in terms of lack of human alteration. If so, how can additional human alteration of an ecosystem involved in restoration enhance wildness?" (Throop 2000, p.15) Chapman's solution is to draw a distinction between wildness and wilderness.

Whereas wilderness is defined by the wilderness act as areas where humans are visitors that do not remain, Chapman's account of wildness draws on Leopold and Thoreau to emphasize its essential connection to civilization and human activity. "Wildness is a catalyst for originality; encounters with it are inspirational and culturally enriching." (Chapman 2006, p.467) What Chapman is talking about here might be called the *progress* of civilizations; the founding of new political and social orders, and the overcoming of ossified and restrictive ways of life. What allows humans to transcend old concepts in this way are confrontations with wildness, because "... the wild speaks to the idea that there always remains a surplus that escapes our categories and organizational practices, even as it is generated by them" (Bennett 2000, p.xxi). Thus, "[c]ontact with wildness provides the inspiration for the conceptual structure out of which civilizational and cultural change occur." (Chapman 2006, p.468)

So far, we have an account of wildness as valuable for allowing change in the conceptual structures of civilization, and that wildness allows for this by somehow exceeding these conceptual structures. This leaves unanswered questions. What is wildness itself? Is this relationship to civilization all there is to wildness? How can we measure wildness such that we can say that one thing is more wild than another? Why are natural things more wild than human-made things?

In answering these questions, Chapman first emphasizes the "formidable obstacles of such an undertaking." (Chapman 2006, p.470) He quotes Aitken as saying that "... the notion of wildness is not amenable to being precisely defined, because it is an *experiential* phenomenon." (Aitken 2004, p.78) However, Chapman goes on to give a provisional working

definition of wildness. “Wildness is a natural qualitative source for endlessly adaptive metaphors portraying dynamic, unlimited relationships between nature and culture.” (Chapman 2006, p.471)

This definition has some merits and some drawbacks. What is good about it is that it gives us a measure by which to assess wildness: inspiration. Yellowstone with wolves generates more metaphors, calls more concepts into question, than Yellowstone without wolves, so that we could say that restoring wolves restores wildness. And, Chapman's definition draws attention to the value of wildness in culture. One thing that Chapman does not mention here is that the value of wildness for culture presupposes a certain 'open' relationship with the wild—we have to be willing to learn from wildness, rather than simply ignoring it or trying to beat it into submission. The main problem with this is that it seems more a measure than a definition; it tells us that wild things are a source for metaphors, but does not tell us why or how this is the case. It is also not exclusive; surely there are all sorts of sources of metaphors, not only wild things. Further, the wording seems needlessly limited. Why are only natural things wild? Why only metaphors rather than, say, models or concepts or laws? Why must the metaphors only portray relationships between nature and culture?

So, for Chapman, the value of wildness is that contact with wildness can allow for cultural change and progress. He defines wildness relative to this value as a source of inspiration. As Chapman makes explicitly clear, the sort of wildness he's talking about is not (directly) the sort of pragmatic wildness considered by wilderness managers when they consider whether to intervene in nature. Rather, wildness is how natural things exceed our concepts, and thus allow us to transcend them. It is implicit, however, that this sort of wildness is related to pragmatic wildness—uncontrolled things seem to be more inspiring than tame ones.

4.1.3 Tom Birch

Thomas Birch, in “The Incarceration of Wildness” is opposed to those that view

wilderness and wildness as synonymous. Birch views this traditional equivocation as an attempt to get wildness under control. That is, what Birch thinks is absent from modern Western society is precisely the open relationship to wildness that Chapman presupposed as enabling civilization to overcome its old concepts. Rather, for Birch, legal designation of wilderness areas is an attempt to make the system of concepts total and absolute; defining away wildness as wilderness.

This takes place in the context of society's relationship with otherness. And, "... the essence of otherness is wildness." (Birch 1990, p.450) In Birch's discussion of wildness as a key feature of otherness, we can see two of the themes that were prevalent in Chapman; wildness as essential for the progress of society, and wildness as what escapes definition.

If any other is to preserve its (his, her) identity as other, as other in relation to another person, society, species, or whatever, then it must at bottom resist accepting any final identity altogether. An other cannot essentially be what it is objectified, defined, analyzed, legislated, or understood to be if it is to be and remain an other. ... A finalization of the identification of the other is a (self-deceived) absorption or ingestion of the other into the subjectivity of the self, or, on the social level, into the "system." Such an absorption is also a finalization of self or of system definition that takes self or system out of the world into a state of alienation. Self-becoming in and out of dialectical response to others and to other-becoming is then no longer possible. ... This is why wildness, which contradicts any finalization in identification, is at the heart of otherness, as well, of course, as at the heart of any *living* self or society. (Birch 1990, p.450)

That is, wildness, and otherness, consists in not being fully reducible to the concepts that are applied to something. At a very basic level, this is what it means for something to be not merely a projection of a self or social system. The fact that other people are more than just what I think of them is a condition of their being *other* people and not just my own mental constructs. There is more to my friends than is contained in my thoughts or concepts of them; this is not true of imaginary friends. If an individual or society begins to take an other as fully defined by their representation—aside from this being a delusion—the ability to transcend, amend or alter those representations and thus to grow is lost.

Unfortunately, this reduction of the other to its definition is the whole project of Western imperial civilization, according to Birch. At its base is an assumption about our relationship to others: that they're our enemies. "The central presupposition is thus Hobbesian: that we exist

fundamentally in a state of war with any and all others. This is perhaps the most central tenet of our guiding mythology, or legitimizing story, about the necessary manner of relationship with others.” (Birch 1990, p.447) Thus arises imperial power, in order to get the hostile other under control. “The whole point, purpose, and meaning of imperial power, and its most basic legitimation, is to give humans control over otherness.” (Birch 1990, p.458) There is a pragmatic and an epistemic dimension to this imperial project; it achieves control both through eradication and through conceptual reduction; we kill off anything that might disturb us, and then retreat into a world of total control of pliant simulacra that are just what we define them as. At their worst, this is what wilderness areas and national parks can be. By setting bounds for wildness, parks and wilderness areas provide an excuse to pragmatically clamp down on wildness that gets out of its bounds; the National Park Service killed 900 Yellowstone Bison in 2014, a fifth of the herd, because of fears that they'd leave the park in the winter (Zuckerman 2014). And, "official" wilderness provides an image of nature that we can know fully; once we've driven through Glacier National Park, purchased a plush Grizzly at the gift shop, we think that we know what wildness is.

In contrast to this way of looking at wilderness preservation, Birch recommends an approach based on recognizing wilderness as bastions of wildness, that might jolt us out of our system of concepts. “The risk of the real is that in seeing the glance of the other, ... in attending to wilderness, one sees, or is likely to see, that the other is more than, other than, independent of, the definitions, models, and simulations that the imperium proposes as exhaustive of it.” (Birch 1990, p.459) This is similar to both Turner and Chapman. The direct contact with real wild things advocated by Turner allows us to see the shortcomings of our concepts of them, calling those concepts into question, which allows for the sort of conceptual re-assessment that Chapman thought necessary to progress.

So, we find in Birch further support for the idea of wildness as those features of objects that are surplus to conceptualization, and for the position that coming to terms with wildness and wild things is vital for civilization to progress. For Birch, however, the sort of open

relationship that would allow us to approach wildness in a productive way, not simply as something to be dominated and eliminated, is antithetical to the broad trend of the Western cultural narrative. But, it is also wilderness approached as a non-hostile other that allows us to overcome our cultural narrative of imperial power.

What is it about nature and wilderness that allows this? "Nature is wild, always wild, in the sense that it is not subject to human control. In this sense, humans are participants in a wildness that is far larger and more powerful than they can ever be, and to which human law bringing is so radically inappropriate as to be simply absurd." (Birch 1990, p.460-461) Because it is vast and outside of our control, and frequently unexpected, nature constantly reminds us of the limitations of our representations. If we think we know everything there is to know about the weather, we will quickly be reminded that we do not. Human created things, generally, are much more amenable to control, and so tend to remind us that they're more than we think they are less insistently.

The value of wildness for Birch is that, by reminding us of the inadequacy of our representations of others, encounters with wild things call the finality of these representations into question. Since, according to Birch, the project of western imperialism is to get others under control, wildness is thus a counter to imperialism. "When we see the real otherness that is there beneath the imperium's version of it, beneath all the usual categories of use and value, then we see an otherness that can never be fully described, understood, or appropriated, and the entire edifice of the imperium is called into question to such a degree that it becomes practically necessary to resist and deconstruct it, because it so epitomizes bad faith and delusion." (Birch 1990, p.460) Though physical human intervention and control does result in a compromising of wildness for Birch, much of the importance and relevance of wildness comes from its epistemic aspect—the chasm between our ideas about things and the existent thing itself. It is also important that we have an "open" relationship to the other so that we recognize and appreciate its wildness, rather than reacting with a will to control the other.

4.1.4 Jane Bennett

Jane Bennett's project in *Vibrant Matter* is to provide a novel account of causality and agency that moves the center of action away from the isolated human subject and towards distributed assemblages of quasi-agentic vibrant matter. An essential component of her account is what she calls thing-power, "...that which refuses to dissolve completely into the milieu of human knowledge." (Bennett 2010, p.3) For our purposes, Bennett's thing-power is synonymous with wildness.

Part of how Bennett talks about wildness—thing-power—is as what our concepts fail to capture, which was crucial but not explicitly discussed much in both Chapman and Birch. She approaches this in several ways, comparing it to similar ideas from a number of thinkers. One of these, "the absolute," from political theologian Hent de Vries, "...tries to point to what no speaker could possibly see, that is, a some-thing that is not an object of knowledge, that is detached or radically free from representation, and thus no-thing at all. Nothing but the force or effectivity of the detachment, that is." (Bennett 2010, p.3) However, where de Vries is talking about a limit to the knowledge of a human subject, Bennett is more interested in the thing itself, and its capacity to act independently. Even when we're not looking, things have "...the curious ability... to animate, to act, to produce effects dramatic and subtle." (Bennett 2010, p.6)

The question of how we are able to encounter something that we, by definition, cannot know or experience naturally arises. Speaking of an encounter with a particular assemblage of objects in a storm drain, Bennett notes that "[t]his window onto an eccentric out-side was made possible by the fortuity of that particular assemblage, but also by a certain anticipatory readiness on my in-side, by a perceptual style open to the appearance of thing-power." (Bennett 2010, p.5) There is an echo of Birch here, and the notion that we have to have a certain openness to otherness in order for objects to become present to us in a way that exceeds the ideas that we have of them. It would have been easy to look and see a collection of easily dismissed trash, but a willingness to stop and consider things from a different

perspective led Bennett to be astounded by the impossible particularity of that collection of things in that particular place. Chapman, drawing on an earlier work by Bennett, says that we meet the wild in uncanny experiences. “Uncanny experiences are clusters of the familiar and the unknown, lurking in the shadows of an epiphany, pulling us from the comfort of our habitual path. ” (Chapman 2006, p.468) We experience wildness when we encounter something of which we have a familiar concept, but which is exhibiting some new, unfamiliar aspect. The new aspect makes us aware of the inadequacy of the familiar concept. That is, wildness is not an encounter with the thing-in-itself, but with aspects of the thing that could have been conceptualized, but were not.

Bennett also draws on Theodore Adorno's “Nonidentity,” the gap between the thing and its concept. “For Adorno, this gap is ineradicable, and the most that can be said with confidence about the thing is that it eludes capture by the concept, that there is always a 'nonidentity' between it and any representation.” (Bennett 2010, p.13) “*Nonidentity* is the name Adorno gives to that which is not subject to knowledge but is instead 'heterogenous' to all concepts.” (Bennett 2010, p.14) We are aware of this failure of our concepts, however, and the discomfiting experience of it is the source of our impossible demand for knowledge and control over the world. Adorno's solution is to acknowledge and accentuate this experience in order to “...stop raging against a world that refuses to offer us the 'reconciliation' that we, according to Adorno, crave.” (Bennett 2010, p.14) This is also reminiscent of Birch—in an encounter with wildness, we can either respond with a will to mastery, or an openness to the limitations of our own control and understanding.

The value of wildness for Bennett is its connection to her ethical project. "The ethical task here is to cultivate the ability to discern nonhuman vitality, to become open to it." (Bennett 2010, p.14) Vitality in Bennett's sense might be described as teleological wildness. Whereas de Vries and Adorno were talking about the gap between things and how we conceptualize them, the emphasis in Bennett is on the gap between our purposes for things and how they act. That is, we think of the components and the whole of the electrical grid in

terms of their purpose and functional roles, but they do not always act this way. There is more to them than that, and this excess can sometimes result in unpredictable behavior. "[*Thing-power*] draws attention to an efficacy of objects in excess of the human meanings, designs, or purposes they serve." (Bennett 2010, p.20) We might view this as the connection between epistemic and pragmatic wildness—how our concepts allow us to control the world—but Bennett's wildness is more than just non-intervention. Becoming open to and aware of nonhuman vitality "may induce vital materialists to treat nonhumans—animals, plants, earth, even artifacts and commodities—more carefully, more strategically, more ecologically." (Bennett 2010, p.18) For Bennett, recognition of wildness inculcates a greater respect for the non-human world.¹

4.2 Wildness as Representation

Talking about the sort of wildness identified by Turner, Chapman, Birch, and Bennett in terms of representation will, I hope, provide a clear and unified account of, and a useful vocabulary for talking about, epistemic wildness.

4.2.1 Representation

What is a representation? Contrary to a naive view, resemblance is neither necessary nor sufficient for something to represent something else—a flag represents a country, but does not look like it. Nelson Goodman, in *Languages of Art*, says that "Denotation is the core of representation and is independent of resemblance." (Goodman 1968, p.5) Something, the *source*, represents something else, the *target*, when the source denotes the target. The intentionality and kind of denotation is generated by embeddedness within a symbolic system for Goodman: "Nothing is intrinsically a representation; status as a representation is relative to symbol system." (Goodman 1968, p.226) That is, whether a work is a representation or a

¹ I have not discussed the parts of Bennett's work that I do not find compelling, and have shifted emphasis to the parts that I do. She presents a nuanced and insightful account, and a worthy critique is beyond the scope of the current project. Briefly, I believe that she endorses a form of panpsychism—equating agency with efficacy—that is insufficiently justified, and raises more problems than it solves.

description depends on artistic and linguistic convention, not on the intrinsic features of the work itself.

Though it is better than the resemblance view and solves many of the problems of representation in art, Goodman's account is focused on artistic representation, and as such does not include things like descriptions or certain kinds of mathematical models as representational. It also would have trouble dealing with things like idiosyncratic representations not part of conventional symbolic systems—drawings by children unschooled in the conventions of art, for instance, are not clearly representational—and this complicates any account of mental representation.

Bas van Fraassen, in *Scientific Representation: Paradoxes of Perspective*, provides a broader account that is more useful for our purposes. He takes as the *Hauptsatz* of his account of scientific representation: "There is no representation except in the sense that some things are used, made, or taken, to represent some things as thus or so." (van Fraassen 2010, p.16) Whether something is a representation is determined by how it is used—but what is it to use something as a representation? "[S]cientific representations must allow us to go reliably from what we know to what we will or can encounter further on." (van Fraassen 2010, p.191) A model of a plane in a wind tunnel allows us to draw conclusions from the features of the model about features of the plane that is represented. The intentionality of the representation, and which features of the target are represented, depend on use as a representation, and this use depends on the ability to draw conclusions from the representation about the represented. Though phrased in terms of the scientific, this account is general enough to include most of the ways that we usually talk about representation.

The existence and nature of mental representations is controversial. Some (Millikan 1984, 1989, Dretske 1994, Tye 2002) have argued that representation is essential to mental content or intentionality. Others question the centrality of this role (Dreyfus 1991, Searle 1995), or question the existence of mental phenomena taken to be representational (Dennett 1989, Stich 1983). van Fraassen says that he "will have no truck with mental representation,

in any sense." (van Fraassen 2010, p.11) Though, contrary to his own statement, I think that functionalist accounts of mental representation are quite compatible with van Fraassen's *Hauptsatz* ("...what makes a thing into an inner representation is, near enough, that its function is to represent." (Milikan 1989, p.282)), for our purposes it is not necessary to endorse a comprehensive theory about what constitutes a mental representation, or a theory that accounts for all mental phenomena in terms of representation. All we need to usefully talk about mental representation is that there exist some mental phenomena that are taken or used as representations. This limited claim is relatively uncontroversial, and seems intuitively plausible.

Though the issues surrounding mental representation are complicated, we can give one simple argument that there are such things, at least as far as our purposes go. Representation depends on use, and this involves drawing conclusions from the features of the source to features of the target. A mental model can serve this function, and indeed can substitute for a physical model that would be considered representational. For example, shifting a cumbersome couch in the imagination can be used as a substitute for rotating a physical model when trying to find out how to move furniture through tight spaces. Since they have similar uses, and representation depends on use, the mental model should also be considered representational.

4.2.2 The Representational Deficit

To begin to talk about representation and wildness, we can note that for both van Fraassen and Goodman, representation is always representation *as*. "...[T]o represent something is to represent something thus or so." (van Fraassen 2010, p.21) "In other words, nothing is ever represented either shorn of or in the fullness of its properties. A picture never merely represents *x*, but rather represents *x as a man* or represents *x to be a mountain*, or or represents *the fact that x is a melon*." (Goodman 1968, p.9) For van Fraassen, this representation *as* often trades on selective resemblance or likeness. "For there is no point in

emphasizing that science presents us with representations of natural phenomena, if not to convey that success in science will consist in constructing an image of nature that is adequate in certain respects and trades on resemblance at best in part, as opposed to constructing a true and accurate *copy*." (van Fraassen 2010, p.187)

For our purpose, what is significant about this is that both Goodman and van Fraassen claim that representation is always representation *as*, and representation *as* is always partial. It represents some features but not others. A representation that included all of the properties of what it represented (if this were possible) would be a copy, not a representation. This is also supported by Plato. In his eponymous dialogue, Cratylus is asked by Socrates if a god "...copies all your qualities, and places them by you in another form; would you say that this was Cratylus and the image of Cratylus, or that there were two Cratyluses?" To this Cratylus admits that this would be another Cratylus rather than a representation. (Reeve 1998, 423a-d)

Any representation represents some characteristics of what it denotes and not others. A road atlas will represent the highways and surface roads of an area but not the hydrology, population density, or topography. Political cartoons represented Franklin D. Roosevelt as cutting the rope labeled "Supreme Court" holding America above the abyss of despotism, or as a giant casting the corrupt moneychangers out of Wallstreet, but they commonly did not represent him as disabled. An astrophysics graduate student once told me that a common practice within the field, when astrophysicists needed to model human beings, was to represent them as spheres of water one meter in diameter. No representation is "complete," there are always features of the target that could be represented, but are not.

We do not need direct contact with the "thing itself" to understand that there's always something left out of our representations. We know this inductively from observing that there is always one more thing that could be represented, but is not.

I call the features of the target that are not captured in a representation of it the *representational deficit*. This goes a long way toward explicating epistemic wildness as the gap between representations and what they represent—there's always more to the thing than

is contained in the representation.

4.2.3 Significance

However, the existence of a representational deficit is not sufficient for epistemic wildness. Any target of representation has an arbitrarily large set of features that the representation leaves out. If this were all that were needed for epistemic wildness, everything in every situation would be equally wild—desks and soft drinks would be as wild as people and Grizzly bears—and this is not how we use the term wild. In order for something to be epistemically wild, the representational deficit has to be significant or important in some way. Another way of saying this is that epistemic wildness shows up when we find a representation to be inadequate; when we *notice* that there's more to the thing than is contained in the representation. This way of talking about wildness is in line with Aitken's statement that wildness is an experiential phenomenon; wildness happens when we experience a representational deficit as important.² Chapman and Bennett's characterizing the experience of wildness as uncanny also makes sense here; wildness combines the familiar, what is contained in our representation, with becoming aware of the unfamiliar aspects that were left out of the representation.

In order for the representational deficit to show up as significant, there are two basic requirements on the user of the representation. The first is attentiveness: one has to be paying enough attention to the thing represented to notice that it has features not contained in the representation. Attention is a strange phenomenon. It can be directed to some extent, but quite often our attention is "grabbed" by things, outside of the direction of the conscious ego. The second is openness: one has to be willing to not immediately dismiss the deficit once it comes to attention. It is impossible to give a rigid and comprehensive account of which situations will have these two features, and thus we cannot say with any great precision when

² When we speak of epistemic wildness as a property of an object—"x is epistemically wild"—this is short hand for "x has features that make it likely to produce experiences of epistemic wildness. Everything has the *potential* to evoke experiences of epistemic wildness, but not everything is equally disposed to do so.

something is going to be epistemically wild.

We can give some examples of the sorts of situations that provoke wildness, though. We will be more likely to pay close attention to things if they are important to us. One will be more likely to notice that there is more to loved ones, or loved places, than was previously thought. An encounter with a potentially dangerous animal is likely to make one pay very close attention to the ways that models fail to predict its behavior. If a representation is inadequate to its purpose the representational deficit will also likely show up. In science, this may take the form of anomalous results not predicted or accounted for by the model in use. In everyday life this may take the form of discovering that a section of trail represented on a map has become impassable. Using a representation for a purpose other than the one it was intended for will also highlight its representational deficit. Anyone using Google maps, designed for towns and roads, to navigate a forest will notice how many features of the land are left out of the representation. A scientific and a poetic description of the same meadow will highlight different features; trying to extract the composition and structure of an ecosystem from a poem, or the aesthetic impact from an ecological survey, will highlight what is left out of each. Finally, one might also deliberately pay attention to the representational deficit.

4.3 Epistemic and Pragmatic Wildness

Now that we have an account of epistemic wildness, we can talk about how this relates to what I have called pragmatic wildness. Ned Hettinger and Bill Throop define and defend pragmatic wildness as a value of natural systems. "As we use the term, something is wild in a certain respect to the extent that it is not humanized in that respect. An entity is humanized in the degree to which it is influenced, altered or controlled by humans." (Hettinger and Throop 1999, p.12) That is, pragmatically wild things are things over which humans do not have practical, active mastery. Pragmatic wildness is an objective relational property, epistemic wildness is a property of subjective experience. Hettinger and Throop give an excellent defense of the value of pragmatic wildness as a sort of "root value" that makes other features

valuable: “Biodiversity is not by itself valuable. If it were, we could add value to ecosystems by integrating large numbers of genetically engineered organisms into them. But doing so seems unacceptable. It is wild biodiversity that people wish to protect.” (Hettinger and Throop 1999, p.14) Their account goes a long way towards justifying the value of wildness in wilderness, but does not address epistemic wildness.

The practical and the epistemic ways of being wild are related, but conceptually separable. Neither is a necessary or sufficient condition for the other. It is easy to think of examples where something is wild in one sense and not in the other. The meteorological processes behind drought might be adequately represented, but are out of our power to influence: wild in a practical but not epistemic sense. Bennett's uncanny encounter with the assemblage of objects in a storm drain is an example of something that was epistemically but not pragmatically wild.

One sort of wildness can exist without the other, but they're often interrelated—being wild in one sense makes something more likely to be wild in the other. Jane Bennett's insight is important here: the representational deficit includes not just passive features of a thing, but its active and reactive powers to affect the world. Having an inadequate representation, excluding features that affect its behavior, means that it is more difficult to predict, and thus to control, something—in part because “adequacy” is often defined in terms of prediction. Something that is pragmatically wild is more likely to be epistemically wild because one common feature of taming something practically is to make it conform to one's representation of it—disciplining animals or persons that act in unexpected ways can make them more predictable. Thus, managing for epistemic wildness grows out of managing for pragmatic wildness—non-intervention and allowing things to go their own way makes them more likely to produce the experience of epistemic wildness.

4.3.1 Wildness of Art

In order to account for “how a purely graphic diagram differs from a painter's sketch, a

contour map from an aerial photograph, a ship model from a sculpture," (Goodman 1968, p.229) Nelson Goodman introduces the notion of *repleteness*. The difference between an electrocardiogram and a Hokusai drawing of Mt. Fujiyama, according to Goodman, is that "the constitutive aspects of the diagrammatic as compared with the pictorial character are expressly and narrowly restricted." (Goodman 1968, p.229) That is, in the electrocardiogram, only a few features are meaningful and the rest can be discarded. "The only relevant features of the diagram are the ordinate and abscissa of each of the points the center of the line passes through. The thickness of the line, its color and intensity, the absolute size of the diagram, etc., do not matter... For the sketch, this is not true. Any thickening or thinning of the line, its color, its contrast with the background, its size, even the qualities of the paper—none of these is ruled out, none can be ignored." (Goodman 1968, p.229) The sketch, because of the larger set of meaningful features, is *replete*. This is a matter of degree, as there are some aspects of the sketch—what the back of the canvas looks like—that are not relevant for the meaning of the piece.

One consequence of this is that although replete works of art are (theoretically) possible to copy, they are resistant to representation. That is, one could make an exact duplicate of a replete work of art, but a representation would leave out some features that are important to the work. A smaller bronze representation of Boccioni's *Unique Forms of Continuity in Space* would lack the impact of the size of the original, and the representation of the sculpture engraved on the back of the Italian 20-cent euro coin leaves out any number of features significant to the original.

So, it seems that replete artwork always has a significant representational deficit, and is thus epistemically wild. As Bennett points out, epistemic wildness is not limited to natural things. So, in some sense this is just an interesting connection between nature and art, and may go some way towards explicating the aesthetic value of nature as found in Muir and others; the experience of a significant representational deficit is similar—one can be long acquainted with a work of art or a wilderness and still discover new features. But there does

seem to be a significant difference between the wildness of art and nature.

This difference is the absence of pragmatic wildness in art. Humans produce art, and are called on to maintain it. Natural things are produced by nature, and one of the most powerful responses that they evoke in us is to leave them to their own devices. Despite his criticisms of wilderness, William Cronon recognizes this feature of the natural world as valuable. "In the wilderness, we need no reminder that a tree has its own reasons for being, quite apart from us. The same is less true in the gardens we plant and tend ourselves: there it is far easier to forget the otherness of the tree." (Cronon 1996, p.23) That is to say that pragmatic wildness has its own sort of value, independent of the value of epistemic wildness, and art lacks this feature but natural things do not.

4.3.2 Wildness and Intent

In the literature surrounding the dilemma of wilderness management (e.g., Aplet and Cole 2010, Ridder 2007), there is a distinction between human effects on nature that are unintentional and those that are planned or intended. Writers in this context tend to see only or primarily intentional effects as compromising wildness. "Although unintended anthropogenic processes such as the greenhouse effect will lead to changes in nature, they do not necessarily diminish wildness." (Ridder 2007, p.10) This distinction is crucial to the existence of the dilemma. If we do not distinguish between intentional and unintentional effects, unintended things like climate change would be of the same "kind" as deliberate intervention to mediate the effects of climate change. Wildness would already be compromised by ubiquitous human-caused change, so avoiding additional intervention could not be justified in terms of preserving wildness. Tagging threatened White Bark pine stands with pheromones to keep away the pine bark beetles that are threatening them would not compromise wildness any more than the climate change that allowed the beetles to access the higher elevation trees in the first place.

There are several practical reasons to make such a distinction. The first is that the

context of the dilemma is wilderness management, and wilderness managers have a choice of whether or not to intervene intentionally, but not over whether people around the world will continue to emit greenhouse gasses. Second, intervention is never as simple as just reversing the damage done; there are always significant side effects, and mitigation is often not completely successful.

But there is also a difference in kind between intentional and unintentional intervention in terms of epistemic wildness. When people intervene in nature to achieve some goal, they generally have a representation of how they want the result to look, whether this is a mining pit or restoration to a pristine baseline. In forcing nature to conform to a representation, we limit its disposition to produce epistemically wild experiences. When we make nature look like we want it to look, even if this is a benevolent image, we're less likely to see what we were not looking for.

This is not an argument against restoration *tout court*. This distinction only means that in some cases epistemic wildness is compromised by intentional intervention, but not by unintentional intervention. There are other factors that affect epistemic wildness, and there are other values that may outweigh compromising it.

4.4 Wilderness and Wildness

Having described epistemic wildness, we need to say a few words about how wilderness is epistemically wild. This kind of wildness is not synonymous with pristineness or lack of human intervention, so the answer is not immediately obvious. Rather, there are a number of features that tend to make experience of wilderness epistemically wildness.

First, wilderness experiences are direct. They are direct apprehension of natural things through the senses rather than experiencing nature mediated through representations such as pictures, films, writing, etc. This is one of the things that Turner identifies as essential to experiencing the "real" wild, and Thoreau and Bennett point out the importance of attention to sensual experience of nature to appreciating wildness. Obviously, it is difficult to notice the

features of a thing that are left out of a representation if all one has is the representation. This is especially important in light of the fact that "adults are exposed to screens — TVs, cellphones, even G.P.S. devices — for about 8.5 hours on any given day..." (Stelter 2009) Wilderness involves actual contact with wolves, deer, rocks, and trees, and this can help us understand how the representations of them promulgated in culture are limited. Direct experience also involves all five senses. Quite often we think of things in only one or two senses. Noticing how things smell is quite likely to add something to our representations— noticing that older ponderosa pines smell like vanilla, or that the sap of black birch smells of wintergreen can be quite a surprise to someone who has only seen the trees from books, or through a car window.

Wilderness experiences are also likely to be wild because they are immersive. One is *in* wilderness, not just looking at it. Extended contact, contact one cannot turn off, with things makes one likely to attend to neglected features of things. Wilderness experiences involve some amount of difficulty and danger—one is likely to pay careful attention to the features of a difficult slope miles from any medial facilities.

Since most people do not spend much of their time in wilderness, and even experienced wilderness travelers seldom visit the same places, spend a lot of time on the move, and areas can have markedly different characters at different times of the year, so wilderness is often experienced as unfamiliar. Dealing with something that has an element of novelty tends to elicit closer attention than we pay to familiar things, and confrontation with things of which we have relatively shallow concepts tends to make us aware of how shallow those concepts are. People also tend to develop habitual ways of dealing with things in the world; a change of context and practice can cause us to look at things in a new light, and notice overlooked aspects.

Wilderness is also pragmatically wild. It is far more difficult to put adequate concepts to things that are not built or shaped for human purposes. Devices and commodities are subject to human control, and part of this control is to make sure they behave in expected ways—

pragmatically wild things are not subject to such control, and thus tend to be more difficult to fit neatly into a representation.

All of this combines into an experience that directs care and attention on the natural surroundings, and results in a continual enrichment of one's concept of wilderness and wild things. As Joseph Sax describes it, "The woods, for the beginner an endless succession of indistinguishable trees apparently designed to bewilder the hapless walker, conceal a patch of berries or an edible mushroom. Nearby, but unseen, are beautiful grazing deer or, overhead, a soaring eagle." (Sax 1980, p.31)

Wilderness experiences tend to forcefully remind us that there is more to the world than is contained in our concepts. Wilderness demands and rewards the close attention and care that enables the experience of epistemic wildness. This can be a powerful reminder of the representational deficit that attends all things, even everyday items that do not impress their wildness on us as forcefully. Exposure to wilderness can develop a faculty to notice and be open to epistemic wildness, even in society. There is no greater reminder that the map is not the territory than trying to use a map to navigate the territory.

4.5 The Value of Epistemic Wildness

Why is epistemic wildness valuable? We tend to mistake our representations for the things that they represent. This is both inherently impoverishing, and leads to ethically problematic consequences. Epistemic wildness is what reminds us that this is an error. The thinkers on wildness that I talked about earlier can be seen as expounding on this basic fact in various ways. Now that I have laid out my formulation of epistemic wildness in terms of representation, we can briefly outline how the values that Turner, Chapman, Bennett, and Birch found in wildness can be understood in these terms.

For Turner, the value of wildness is that direct experience of the wild, as opposed to simulacra, enables the sort of emotional connection required for effective environmental action. "There is knowledge only the wild can give us, knowledge specific to the experience of

it." (Turner 1996, p.26) This knowledge is the knowledge that there is always more to the wild than we can represent. This is one of the fundamental characteristics of the experience of real others—things that exist on their own rather than as projections of one's ego—and it is missing or greatly diminished in experiencing mediated representations. Genuine love—a recognition of and delight in the other, a desire to understand the world from their point of view, and a relaxation of the need to control the other (Nussbaum 2013, p.176)—thus requires that we experience the other as epistemically wild.

For Chapman, the value of wildness is that it allows for conceptual and social progress. If Kuhn is right about anomalies not accounted for by the dominant scientific theory accumulating until they can no longer be ignored, resulting in a scientific revolution, then epistemic wildness, the experience of significant features of the represented not contained in one's representation, is one of the most important factors in scientific progress. The apocryphal quote attributed to Isaac Asimov, "The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' (I found it!) but 'That's funny ...'" illustrates this point. Encounters with wildness, because they serve to remind us of the incompleteness of our concepts and organizational schemes, may also serve to call political and social structures—the way that we represent one another—into question.

For Birch, the value of wildness is that it is counter to the western imperial project of the domination of others. Part of this project is accomplished through pragmatic control over others, and part through a finalized system that seeks to reduce others to their concepts. Wildness as the experience of what about others exceeds their representations, including their abilities to affect the world, is a counter to this project. I will say more about wildness and respect for otherness in section 4.4.1.

For Bennett, the value of wildness is that by learning to attend to the powers of non-human others to act and effect change in excess of the meanings and purposes that humans assign them, we inculcate humility and respect for others, both human and non-human. Though the emphasis is on the abilities and capacities of things, their active rather than

passive features, these are also part of how we represent them.

4.5.1 Wildness and Justice

One of Guha's criticisms of Deep Ecology, and its concern with wilderness conservation, was that it furthers colonial and imperial exploitation of the third world: "...it seriously compounds the neglect by the American movement of far more pressing environmental problems within the Third World. But perhaps more importantly, and in a more insidious fashion, it also provides an impetus to the imperialist yearning of Western biologists and their financial sponsors, organizations such as the WWF and IDCN." (Guha 1989, p.76) Callicott argues that the wilderness idea is "woefully ethnocentric" because it ignores the "presence and effects on practically all the world's ecosystems of aboriginal peoples." (Callicott 1991, p.348) Cronon notes that "Ever since the nineteenth century, celebrating wilderness has been an activity mainly for well-to-do city folks." (Cronon 1996, p.15) These criticisms can be summed up by saying that wilderness has been inimical to justice.

This is a true and important criticism of how wilderness preservation has actually played out. But, it is not a necessary feature of wilderness. Many of the revisions to the wilderness concept laid out in chapter three—rethinking the nature and role of pristineness, making wilderness less central to environmentalism, allowing for a diversity of values in wilderness—attempt to remove features that lead to this problem. This is a negative solution that simply makes wilderness not conflict with justice. Positively, wilderness, because it involves experience of epistemic wildness, can also be an active counter to injustice and imperialism.

One of the central ways that injustice is justified is through an oppressive conceptual framework. According to Karen Warren, a *conceptual framework* is "a set of basic beliefs, values, attitudes, and assumptions which shape and reflect how one views oneself and one's world. It is a socially constructed lens through which we perceive ourselves and others." (Warren 1990, p.127) An *oppressive* conceptual framework is "one that explains, justifies,

and maintains relationships of domination and subordination." (Warren 1990, p.127) People in power conceptualize others as somehow significantly different from themselves, and think of this difference as justifying domination.

This often takes the form of what Martha Nussbaum calls *projective disgust*: "people in power impute animal properties that typically inspire disgust ... to other groups of people, whether African Americans, women, lower castes, Jews, or gay men—and they then use that alleged disgustingness as a reason to refuse contact." (Nussbaum 2013, p.182) This, for Nussbaum, is one of the central problems that must be overcome by a just society. In the case of projective disgust, the other is represented as animalistic "in order to serve the inner need of the dominant group for a surrogate for its own animality." (Nussbaum 2013, p.184) Of course, this is a distorted representation: "disgust is extended from one object to another by totally irrational processes, forms of 'magical thinking.'" (Nussbaum 2013, p.184)

Thus, one of the central supports of iniquity in all its forms is representing others as having features that mark them as inferior—and of those in power in relationship to them as superior—and using this representation as an excuse to dominate them. This system of representation is not only simplified and inaccurate, but also taken to be exhaustive of the other—it claims to show all, or essentially, what the other is. Epistemic wildness, experience of significant non-represented features, whether of the other or of the self, can be disruptive or fatal to an oppressive conceptual framework. Because wilderness can promote an openness to epistemic wildness—attentiveness, a tendency to take nothing for granted, and a readiness to revise concepts based on experience—wilderness can aid in perceiving others and the self as more than they are represented to be by an oppressive conceptual framework. This includes noticing the inaccuracies of representations, and realizing that representations are never exhaustive—there is always more to others than one's concepts of them.

This is not to say that wilderness experience necessarily leads to questioning oppressive concepts. Marlow's encounter with wilderness in *Heart of Darkness* did not cause him to reconsider his racist concept of the Africans he met, and Muir himself called for the

expulsion of all Native Americans from Yosemite. (Dowie 2011, p.2, 9-10) But, it is at least possible for wilderness to give us a sense of the limitations of our representations in general, and thus to provide one possible tool for questioning oppressive systems of representation.

This possibility is strengthened by the fact that, as Warren points out, oppressive frameworks dealing with both human and non-human others have a similar logical structure, and, as both Warren and Nussbaum point out, much of the justification for oppression comes from associations between oppressed groups and bodily, material, animalistic, nature. These connections make it more likely that realizing the limitations of representations of wilderness might lead to a similar realization regarding marginalized human groups.

4.5.2 Wildness and Consumerism

Ramachandra Guha identified overconsumption of resources by residents of the industrialized world as one of the most serious environmental problems facing the world. For instance, Americans emitted 16.6 tons of CO₂ per capita in 2014, compared with 1.7 tons emitted per capita by Indians. (Olivier et al. 2014) And, according to Guha, wilderness preservation "runs parallel to the consumer society without seriously questioning its ecological and socio-political basis." (Guha 1989, p.79) If wilderness is to be relevant to solving our most important environmental problems, we should have an understanding of how the concept of wilderness can be a counter to consumerism. There are a number of possible features of wilderness experience that might lead one to question the life of consumption—voluntary simplicity might carry over from the backcountry to everyday life, for instance. One of the most powerful of these is epistemic wildness.

Consumerism has been defined in any number of ways. For our purposes, we can understand it as a vision of the good life that sees convenient pleasure as the final and self-sufficient end of human life, where "convenient" means without effort, waiting, or unpleasant side effects.³ Consumerists want what they want when they want it, without having to endure

³ Many thanks to Bridget Clarke for inspiration and patience in helping develop this conception of consumerism.

discomfort or put forth much effort. Having asparagus available on demand would be preferable to having to put forth the effort of cultivating it, waiting for it to grow, and only having it at certain times of the year. Consumerism is often a *de facto* position on the good life: expressed through action and choices, but not the result of conscious deliberation and endorsement. The pursuit of this kind of pleasure can mobilize significant machinery to provide convenience, and this often results in environmental problems—having asparagus available in January requires shipping it from Chile, and this burns a lot of fossil fuels. (c.f. Borgmann 2000, 2003)

This notion of the good life captures much that is important to people's happiness. But certain sorts of pleasures are left out by definition. If inconvenience—effort, waiting, discomfort—is an essential component of what makes something desirable, it is outside the purview of consumerism. We might call these *complex* pleasures as opposed to the *simple*, convenient pleasures valorized by consumerism. Mountaineering is an example:

The notion that climbers are merely adrenaline junkies chasing a righteous fix is a fallacy, at least in the case of Everest Above the comforts of Base Camp, the expedition in fact became an almost Calvinistic undertaking. The ratio of misery to pleasure was greater by an order of magnitude than any other mountain I'd been on; I quickly came to understand that climbing Everest was primarily about enduring pain. And in subjecting ourselves to week after week of toil, tedium, and suffering, it struck me that most of us were probably seeking, above all, something like a state of grace. (Krakauer 1997, p.175-77)

Even in a consumerist society, people have desires for complex pleasures. But, insidiously, there are usually consumerist options that promise to satisfy these desires while, paradoxically, doing away with the inconvenience that is essential to them. On Everest, this takes the form of full service, guided climbs. Paying clients often expect conveniences, and do not have the mountaineering experience or physical fitness to make the climb without considerable assistance, including being literally pulled up the mountain by Sherpas: "the denizens of Everest base camp are supplied with Coke, pizza, bagels, and, incredibly, sushi. The clients, many of whom would not otherwise be capable of such an arduous endeavor, are then led toward the summit." (Krakoff 2003, p.427)

The appeal of climbing Mt. Everest is not just attaining the summit (which can be done

by helicopter), but developing the skill to overcome adversity and difficulty. A heavily guided trip negates much of the skill, adversity, and difficulty, and thus makes the endeavor largely self-defeating. Epistemic wildness is an essential component of this. First, because the skilled, attentive engagement that often characterizes complex pleasures necessarily involves a gradual, sometimes frustrating, enrichment of representation of the thing engaged with. Learning to play the violin involves adding a lot of detail to one's mental representation of the instrument. Second, epistemic wildness is itself complex. It is often inconvenient—surprising, uncanny, and frustrating. But, discovery, surprise, exploration, and wild otherness are also features of the most desirable experiences. Part of the pleasure of climbing the mountain is coming to know its unexpected depth and in finite detail.

Consumer society presents us with easily digestible and glamorous surfaces lacking in depth. Attunement to epistemic wildness helps us understand and appreciate the value of the surprising and the complex. In particular, wildness helps us understand the paradoxical nature of consumerist attempts to satisfy complex desires with convenient commodities. At least partially, this is what Turner is drawing attention to with his distinction between the abstract and the real wild; like visitors to SeaWorld, or client climbers on Everest, people want genuine encounters with nature, but end up accepting a convenient representation as the real thing. Lovers of abstract nature "seek to confront 'reality' in its most extreme, and least forgiving, form. But at the same time they have not prepared themselves, either spiritually or physically, for such a confrontation." (Krakoff 2003, p.430) Attunement to wildness through wilderness is one way to prepare for such a confrontation.

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Conclusion

The revised conception of wilderness I have laid out here answers many of the problems with wilderness, but there is no one size fits all solution to the dilemma of wilderness management. Though wildness is, I have argued, the only feature necessary for an area to be considered a wilderness, pristineness is still often an important value of wilderness. Sometimes they will conflict, and we can not give an algorithm for how to decide between them in advance. However, we have seen that there are many problems with pristineness, and that wildness, including its epistemic dimension, is valuable for solving pressing concerns. As a general recommendation then, wildness ought to be considered the default management option for wilderness areas, with the burden of proof falling on justifying that a possible intervention would minimally compromise wildness and would preserve significant other value.

One major benefit of thinking of wildness as the sole necessary component of wilderness is that this allows for the creation of new wilderness in areas significantly affected by people. The Oostvaardersplassen and North Brother Island are examples. This possibility makes the concept of wilderness much more relevant to the lives of people living in areas without large tracts of relatively pristine land, and allows them to draw on the cultural resonance of wilderness in the struggle to protect wild lands. This also makes environmentalism, and wilderness conservation, much more optimistic and proactive. Rather than only a struggle to defend a constantly diminishing remnant of pristine land, we can also see wilderness lurking under the surface of developed land, showing itself once we start to leave it alone. We can advance as well as hold the line in wilderness, and this is significant if we want to offer an attractive alternative to development. Ideally, the Wilderness Act should be updated to allow designation of areas that are wild but not pristine. Because of political

inertia, both in government and in wilderness advocacy, this is unlikely. But, people do not need the act to consider areas wilderness.

Epistemic wildness accounts for much of the value of wildness, and of wilderness. This is unfortunately overlooked when we think of wildness in only pragmatic terms. We ought to encourage epistemic wildness in wilderness. This involves management non-intervention, but also managing elements of wilderness experience in ways that encourage us to notice the representational deficit of our concepts of wilderness. Part of the reason that certain forms of technology are banned in designated wilderness is that they discourage the sorts of close attention and complex engagement that tends to produce experience of epistemic wildness. We might consider extending these bans to certain forms of information technology that have similar effects.

On an individual level, attention to epistemic wildness tends to enhance the experience in wilderness, and the ability to spot the gap between the represented and representation in cultural contexts. As with art, what we get out of wilderness depends on the way we approach it. Cultivating a personal practice of attention to epistemic wildness would increase the personal benefits of wilderness. A useful project would be to outline such a practice.