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Island Inquiries: Nature, Culture and Environmental Management

Leah Plaisier Mortensen
Scripps College

ISLAND INQUIRIES:
NATURE, CULTURE AND ENVIRONMENTAL MANAGEMENT

by
LEAH PLAISIER MORTENSEN

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Introduction

> The Humanities Major in Interdisciplinary Studies in Culture is designed to offer students a foundation in the Humanities, with particular reference to theories of culture and cultural practice. Its aim is to give students an interdisciplinary training across the breadth of the Humanities that will equip them to analyze and engage with the local, national and international aspects of our globalized world (Humanities).

During my time at Scripps I tried to take this major one step further. One of the reasons I chose to attend a liberal arts college was the opportunity to both complete the required courses for medical school and major in the humanities, possibly even English. However, the CORE program at Scripps quickly convinced me to join the unique clan of students majoring in the study of culture: the Humanities Major. Ever since, my life at school has been a complex balancing act. On the one hand I had my Humanities courses, from The History and Philosophy of Culture to Schools of Cultural Criticism, where I read dense philosophical texts like *The Dialectic of Enlightenment* by Horkheimer and Adorno. On the other hand I grappled with Developmental Biology and Organic Chemistry, implementing the scientific method in my daily attempts to grasp the fundamental truths of life. At first I tried to keep these two facets of my life neatly compartmentalized. Yet frequently I found that they intersected, questioning the cultural foundations of the science that I studied, those methods and facts that were presented as Truth. So, when the time came to select a thesis topic I chose to explore those moments of intersection between the study of culture and science.

After much searching and an inspirational meeting with Professor Jennifer Perry, I found my topic: analyzing the relationship between nature and culture as demonstrated through the restoration of Santa Cruz Island National Park. In our meeting, Professor Perry described the extensive restoration project on Santa Cruz Island, referred to as the Santa Cruz Restoration Project. This endeavor involved—among a myriad of projects—extirpating sheep from the island, exterminating the feral pig population, and reintroducing bald eagles. The unofficial goal of the project was to restore the island to its pre-European contact state.

Santa Cruz Island is the perfect case study for grounding the theory that nature and culture are far more interrelated than people generally recognize. I investigated the theory that nature is a cultural construct, interviewing individuals involved with the Primary Restoration Plan in an effort to understand the decision-making processes behind the restoration. I explored the idea of restoration as the specific interface between nature and culture. How is *natural* defined? What makes one environment more *natural* than another? What shapes and influences our idea of the *natural*? This last question is of paramount importance to this inquiry. National Park restoration initiatives like the restoration of Santa Cruz play crucial roles in shaping the general public's perception of nature.

I begin my analysis of the relationship between nature and culture in the first chapter with an explanation of the Primary Restoration Plan and the restoration that was carried out on Santa Cruz Island, as well as the problems and questions that emerge from such a project. I then provide a brief outline of the different perceptions and opinions about nature that have morphed throughout the United State's history. I end the first

chapter with a brief history of the Channel Islands. In my second chapter I explain my interview process and why interviews are an integral part of this project. I conducted semi-structured interviews with the park employees at their offices in Ventura, CA. I provide the questions that I asked the National Park employees, as well as their responses. The third chapter is an analysis of the language of the interviewee's responses to my questions. Language is the medium through which we interact with nature and thus in my analysis of the interviews I concentrate on specific words that are essential for a discussion of the interface between nature and culture.

Recognizing the complex interconnection between nature and culture—even going so far as to state that nature is culturally constructed—is important because it strengthens environmental consciousness. By acknowledging the different ways we construct and perceive nature, we are forced to see the great extent to which we are responsible for nature. It is not a foreign entity; rather it is something that we as humans have been constructing since we first set foot on this Earth. We humans are part of nature, and our well-being as a species is irrevocably, inextricably bound up with the well-being of the planet.

Chapter 1

On days when they are visible through their cloak of fog, the Channel Islands are the mysterious forms five nautical miles off the coast. Naturalists frequently refer to the Channel Islands—Santa Cruz, Anacapa, San Miguel, Santa Rosa, and Santa Barbara—as the Galapagos of North America. Salty winds blow through the tall grasses and short scrubs, foliage further cloaking the islands' mysteries in the fog. The islands are home to 145 species that are found nowhere else in the world (Galipeau). The most famous of these indigenous species is Urocyon littoralis, the island fox. Smaller versions of their mainland cousins, these foxes are known for their fearless and friendly behavior. However, the survival of the Channel Islands' island foxes—as well as the continued existence of many of the other indigenous island species—has been threatened. European influence on the islands, starting with the arrival of the Spanish in 1542 and continuing through the 1970s, has strongly impacted the Channel Islands' indigenous species.

The threat of extinction facing some of these 145 unique species on the Channel Islands has come to the forefront in the issues surrounding park management and the role humans play in the preventing further damage. The recent restoration project on Santa Cruz Island, known as the Primary Restoration Plan, has been an attempt to "restore" the island to its "natural" state. The goal of the Primary Restoration Plan was to return Santa Cruz Island to the state it had been in prior to European contact. Since the completion of the Primary Restoration Plan, visiting the islands has been promoted as one way for the people of the thoroughly industrialized Southern California community to reconnect with a more "natural" past. Visiting the Santa Cruz Island has come to represent visiting what the coast might have looked like in the ancient past, a means for those who are

disconnected from nature in their hyper-industrialized lives to gain an understanding of the "natural" from which they have become disconnected on the mainland.

The Primary Restoration Plan represents an inherent difficulty in such modern restoration efforts: what constitutes the "natural" to which our corrupted environments ought to be restored? The way society determines a definition of "nature" is highly influenced by restoration projects such as these, which promote a troubling notion of nature as a relic of the past. One of the key words frequently used to describe a natural scene is "pristine." The Oxford English Dictionary defines "pristine" as "Of something natural: unspoiled by human interference, untouched; pure." One example of this is the battle fought over damming the Tuolumne River in Hetch Hetchy valley from 1906 to 1913, within Yosemite National Park. Building the dam was a direct and concrete threat to the "pristine" landscape, and was met with powerful resistance from the American people who valued the "pristine" state of the wilderness over its industrial use. Frederick Law Olmsted is a prominent figure in the history of managing American landscapes. Olmsted worked to manage and design landscapes such as Central Park, Niagara Falls, and Yosemite to be perceived as natural environments (Sprin 91). Olmsted designs prove problematic in their invisibility, although that was his goal, as they allow and promote the illusion of "natural" and "pristine" environments that have actually been very carefully planned and managed.

The consequences of associating "natural" environments with that which is "pristine" are troubling. A "pure" and "untouched" environment is so idyllic as to be unrealistic. The phrasing also suggests a prelapsarian sort of existence, which implies an inevitable Fall. Such associations of nature with that which is pristine influence

management of "natural" environments. Environmentalist scholars such as Bill Mckibben make arguments that emphasize the wrongheadedness of any such approach, which attempts to reverse human impact and return nature to being "pristine." Mckibben argues that, since the Industrial Revolution, humans have impacted the Earth in ways that have been as irreversible as they are drastic. Carbon emissions have changed the composition of the atmosphere such that the entire globe is affected. "Pristine" is impossible in such a world, irrevocably tainted as it is by human influence.

The discussion of a "pristine" landscape is also related to how Europeans perceived and interacted with North America upon European discovery of the "New World." This concept of the Americas being a "New World" devalues Native American agency in shaping their environment. It is part of the devaluation of the "Native American" also inherent in their being labeled as such. The idea that the "New World" was actually "pristine" upon its discovery is false. Native American engagement with the land has always been part of an intricate management, one that better recognizes the impossibility of coexisting with a "pristine" nature than European understandings.

Native American land management techniques have become apparent in contrast with those of America's colonizers. One tragic part of this history of discovering and coming to appreciate Native American land management has been seen in the management of American forests. Nancy Langston discusses the disastrous management of the Blue Mountains in her essay "Forest Dreams, Forest Nightmares: an Environmental History of a Forest Health Crisis." Langston emphasizes the problems incurred by the misconception that the Native Americans didn't manage their forests. She points out that "the frequent Indian-set fires" were seen by whites as a "threat" to the

ponderosa forests they loved rather than an "essential part of what they loved" in the seemingly-untamed wilderness (Langston 253). Attempting to "protect" the forests from fire surprised the ignorant but well-intentioned white conservationists by in fact being detrimental to the pinelands, which had been an intricately "managed landscape" through the frequent Indian-set fires rather than the untamed nature they had presumed it to be (Langston 253). Langston's perspective not only illustrates the influence that cultural perceptions have on land management, but it also touches on the difficulty of predicting what effects management will have on a complex ecosystem.

Langston goes on to discuss the drastic consequences of simply applying the ideas of European silviculture, the cultivation of woods or forests; the growing and tending of trees as a department of forestry, to American forests (Sylviculture). The European model of maximizing the efficiency of natural resources by eliminating waste was implemented by American foresters with devastating results (Langston 259). Rather than "transforming European silviculture to fit American forests," American foresters "transform[ed] American forests to fit European ideals" (Langston 259). Cuban writer José Martí warns Latin Americans of this in his essay "Our America" in 1891, he speaks to the importance of always taking into consideration the "natural elements" of a land in its management: "The form of the government must be in harmony with the country's natural constitution. The government is no more than an equilibrium among the country's natural elements" (Marti 3). The mis-application of silviculture be American foresters is just one example of how land management is influenced by wrongheaded adherence to cultural ideals without understanding the practical implications, with devastating effects.

The definition of "nature" is itself troubled by the way that it is defined in contrast to culture. A "natural" landscape is subjective, depending on personal and culturally influenced perceptions of which environments constitute "natural" for being in stark enough contrast to human influence (in an extension of the Western ideal of "nature" as "pristine"). The way "nature" is defined reflects the values of the culture defining that space as "natural." These values influence the management of such space. Institutionally protected lands and national parks, which are set aside for the purpose of preserving and protecting "nature" from the imminent threat of destruction, reflect these values.

The official stance the U.S. government has taken toward land management has been very dynamic, fluctuating in reflection of the cultural values of the time. Carolyn Merchant is a professor at the University of Berkeley and a prominent researcher in the fields of Environmental History, philosophy and ethics. Her essay *The Columbia Guide to American Environmental History* outlines several of the different environmental movements in the United States and how they are related to the cultural atmosphere of the time. During the colonial era of America's history, most people viewed the States as possessing infinite natural resources and abundant swaths of "pristine" land. At this early point in America's history there were few to no thoughts of preservation. With so much unsettled land there was a "perception of unexploited lands teeming with wildlife and fertile soils" that were just waiting to be settled (Merchant 127). The Land Ordinance of 1785 was one of the first movements toward systematically settling the land west of the Mississippi and set the tone for converting the vast public domain into private property (Merchant 122). This was also the era of Manifest Destiny and the conviction among Americans, especially those determining land policy, that the United States was destined

to expand across the entire North American continent. Manifest Destiny was a term coined by John L. O'Sullivan who proclaimed "our manifest destiny to overspread the continent allotted by Providence for the free development of our multiplying millions" in an article for the periodical the *United States Magazine and Democratic Review* discussing the recent annexation of Texas. The term was soon adopted and used with respect to several other land acquisitions by the United States government. The sentiment of Manifest Destiny was in step with the grand expansion of the United States. Thus, "by the late nineteenth century, most of the land and natural resources of the western United States had been entered, claimed, and developed under the federal government's liberal land laws" (Merchant 127). However, all of this unmanaged private land use began to spark concern among some Americans. The image of the once bountiful and fertile "West" being turned into a land of erosion, and wasted resources was the catalyst of the first environmental movement in the United States: the conservation movement.

This U.S. conservation movement was characterized by the concept of "wise" land use. These attempts at conservation resulted in reactionary policies that attempted to prevent the inefficient use of lands by private ownership by "withholding lands for forest reserves, game refuges, national parks, and wilderness areas" (Merchant 128). This movement was driven by a fear of wasted land and resources, mainly by the irresponsible practices of timber companies and ranchers. "Timber companies cut the best trees and moved on without reforestation… ranchers exploited the perennial grasses of the open range, leaving sagebrush and eroded soils" (Merchant 127). This period in the history of U.S. conservation evidenced a movement away from the previous "laissez-faire" policies, characterized by unregulated development, towards a period of "faire-marcher," which

emphasized "guidance to development through resource conservation" (Merchant 128). Bernhard Fernow originally proposed the concept of "faire-marcher" in his book Economics of Forestry (Merchant 128). As the first chief of the Division of Forestry, Fernow was a strong advocate of using resource conservation as a method of guiding development of national resources (Merchant 128). Thus, the conservation of the early twentieth century was characterized by the idea of conservationist WJ McGee, "the greatest good of the greatest number for the longest time" (Merchant 128). Two of the prominent leaders of this movement, with its emphasis on the efficient use of resources, were the forester Gifford Pinchot and President Theodore Roosevelt (Merchant 128). These two prominent figures lead the White House Conference on Conservation where they solidified the idea of conservation as "a scientific movement … Its essence was rational planning to promote efficient development and use of all natural resources" (Merchant 128). This conference led to the management of "forests, rangelands, and water […] for productivity, sustained yield and year round conservation" (Merchant 138). Pinchot started the forestry department with President Theodore Roosevelt, speaking of the land management before he took control Pinchot, said:

> When I came home not a single acre of Government, state, or private timberland was under systematic forest management anywhere on the most richly timbered of all continents. [...] When the Gay Nineties began, the common word for our forests was 'inexhaustible.' To waste timber was a virtue and not a crime. There would always be plenty of timber. [...] The lumbermen [...] regarded forest devastation as normal and second growth

> as a delusion of fools. [...] And as for sustained yield, no such idea had ever entered their heads (Pinchot 27)

Pinchot believed in the paramount importance of natural resources. As a scientist, he saw how heavily the United States relied on its natural resources for industry and development. Pinchot dedicated his life to implementing conservationist policies that would ensure that such resources would not be wasted but rather properly managed to provide for the country in the future.

Continued development and land use led to the inevitable disappearance of wilderness in the United States. The fear of the loss of wilderness sparked the second environmental movement in the U.S. According to Carolyn Merchant, "the movement to preserve wilderness rose during the second half of the nineteenth century and commanded national attention in the first two decades of the twentieth century" (132). This movement was born out of the middle and upper class's growing opinion that wilderness was becoming a "threatened national asset" (Merchant 132). The concept of nature as a valuable treasure that needed to be preserved took hold at this time. Nature writers such as John Muir emphasized the characterization of nature as sublime—part of God's majestic cathedral (Merchant 132). One example of Muir's eloquent writing is his description of the Sierras,

> The Sierra Cathedral, to the south of camp, was overshadowed like Sinai. Never before noticed so fine a union of rock and cloud in one form and color and substance, drawing Earth and sky together as one; and so human is it, every feature and tint of color goes to one's heart, and we shout, exulting in wild enthusiasm as if all the divine show were our own. More

> and more in a place like this, we feel ourselves part of wild Nature, kin to everything (Muir 326)

Muir invokes the power of biblical language, with his reference to "the Sierra Cathedral… over shadowed like Sinai" to add strength to his writing on the importance of preserving nature for its aesthetic value (Muir 326). It is this kind of writing that captured the hearts of the American public and convinced them to support his preservation efforts.

Characterizing nature as sublime was a powerful action, which inspired many people to support the preservation movement. One example of the power of Muir's writing style is the support he gathered to oppose the dam in Hetch Hetchy Valley in Yosemite National Park in the early twentieth century. In this case, Muir's invocation of the sublime power found in the grand mountains and raging rivers of Yosemite inspired "people who had never visited Yosemite National Park or the Hetch Hetchy Valley" to write to Congress "urging that the valley be saved" (Merchant 136). Nature became "loaded with some of the deepest core values of the culture that created and idealized it: it [became] sacred" (Cronon, *Trouble With Wilderness* 73). According to the Oxford English Dictionary, "sublime" is a description "of things in nature and art: Affecting the mind with a sense of overwhelming grandeur or irresistible power; calculated to inspire awe, deep reverence, or lofty emotion, by reason of its beauty, vastness, or grandeur". In William Cronon's analysis of the eighteenth century movement to associate nature with the sublime he references older connotations of the sublime. Including a direct reference to "the theories of Edmund Burke, Immanuel Kant, William Gilpin, and others," to whom "sublime landscapes were those rare places on Earth where on had more chance than elsewhere to glimpse the face of God" (Cronon, *Trouble with Wilderness* 73). Eighteenth

century romantic writers including William Wordsworth and Henry David Thoreau in addition to John Muir gave nature the power of religion—arguably one of the most influential values in American culture. The 'sublime' religious spirit that these thinkers found in nature was a solitary form of religion – finding God in the experience of walking alone through the grandeur of the mountains. By making nature analogous with worship—by turning the mountains into cathedrals, and the rivers and open fields and forests as places to find God—Muir appealed to the most powerful moral values of the nation to support his preservation projects.

Muir's perspective on sublime nature is distinct from the Native American approach to finding the sacred in nature. Muir saw the mountains as cathedrals – sacred for their grandeur and separation from society. However, for Native Americans, everything is sacred, everything possesses inherent sanctity, but some things embody sanctity more than others. These places in nature are special more because of the cultural relationship than because of an inherent natural sanctity. Places associated with ancestors or the birthplaces of gods, such as rocks, caves, and springs, would be especially honored in their ceremonies.

Nature in America is also intimately tied to the idea of "rugged individualism" (Cronon, *Trouble with Wilderness* 77). This concept of "rugged individualism" in association with U.S. conception of "nature" originated in a large part from settlers living on the frontier and conquering the wilderness. The myth of the frontier in the United States is that of European immigrants escaping the confines of city life and "moving to the wild unsettled lands of the frontier… and thereby reinfused themselves with a vigor, an independence, and a creativity that were the source of American democracy and

national character" (Cronon, *Trouble with Wilderness* 76). Frederick Jackson Turner, a historian who wrote in the 1890s, is credited with articulating the importance of the frontier to American identity and the American psyche (Cronon, *Trouble with Wilderness* 76). The frontier myth ties the idea of wilderness and nature directly to the American character. This connection was another catalyzing factor in the preservation movement. With the disappearance of the frontier, it became paramount to the United States collective identity to preserve wilderness spaces (Cronon, *Trouble with Wilderness* 76). 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, *Trouble with Wilderness* 76). In the history of the United States, the frontier myth has been filled with male protagonists who embodied nostalgic, heroic characters. Cronon quotes Theodore Roosevelt as an excellent example of the nostalgic fervor dedicated to these characters; Roosevelt describes the "frontier man" as "Brave, hospitable, hardy, and adventurous, he is the grim pioneer of our race; he prepares the way for the civilization from before whose face he must disappear" (Cronon, *Trouble with Wilderness* 77).

Thus, the frontier myth is one of the fundamental links between masculinity and the United State's concept of nature. Environmental historian Robert Nash asserts that "wilderness… acquired importance as a source of virility, toughness, and savagery – qualities that defined fitness in Darwinian terms" (Nash 14). With the growing middle class in the late nineteenth century, and the shift from subsistence farming and the connection to nature through survival—the importance of preserving nature was a powerful aspect of U.S. identity. As the middle class grew in the late nineteenth century,

with industrialization and the general prosperity of the United States, so did the perception that the U.S. lifestyle was becoming "soft" (Merchant 153). Recreationally exploring wilderness became the "antidote" for this perceived problem in the U.S. lifestyle (Merchant 153). Fredrick Law Olmsted (1822-1903), a prominent American landscape architect was a strong proponent of using 'nature' as an antidote to the mental problems resulting from city life (Sprin 93). Olmsted, "a commissioner appointed to manage the grant on Yosemite Valley," is perhaps best known for designing New York City's Central Park (Merchant 133). He approached natural environments with intense management and design with the goal of hiding his own hand in designing the landscape behind the façade of nature.

During this time of prosperity in the United States, with a growing middle and upper class, national parks and wilderness spaces become more accessible and with personal experience came stronger appreciation and value for these spaces. One example of the increased accessibility of wilderness spaces is the completion of the railroad leading into Yosemite in 1869 (Merchant 135). The railroad allowed for much easier access to this preserved wilderness space, and allowed for large groups of people to travel there and appreciate the 'natural' beauty that they may otherwise have only read about.

However, the increased access to wilderness spaces came with a price. One of the draws of 'nature' is the concept that it is a place that exists outside the human sphere. Thus, by increasing the accessibility of the National Parks and encouraging visitors, people are simultaneously destroying that which they go to appreciate. As Ann Whiston Sprin puts it, "the moment people come to a place, even as reverent observers, they alter what they came to experience" (Sprin, 94). Thus, one of the essential questions that must

be investigated by preservationists is how to manage the land and the people who wish to visit it without destroying the very essence of the space that is valuable (Sprin, 94). How to manage these two contradictory values – accessibility and protection – is one of the major challenges faced by park management committees, including the committee that compiled the Santa Cruz Primary Restoration Plan. This brings me back to one of my original questions: what is the "very essence" of what has been managed as a "natural" place? How is the term "natural" defined, and how do organizations restore and manage land for the "natural" state? The paradox that Sprin addresses in the previous reference is only truly problematic if one is working from a definition of nature that excludes humans. Establishing a clear definition of the term "natural" will strengthen the goals of restoration and preservation projects as well as the environmental movement itself.

Yosemite was also the center of one of the major struggles between the conservation and preservation movement. The debate focused on the issue of whether or not to build the Hetch Hetchy dam on the Tuolumne River in Yosemite National Park. Building a dam within the park in Hetch Hetchy Valley was proposed to provide a more stable water source for San Francisco after the 1906 Earthquake. The dam was strongly supported by Pinchot, one of the leaders of the conservation movement; Muir led the counter-movement. Pinchot was following a pragmatic argument for harnessing the resources of the valley despite its status as a National Park, evoking the standard line of advocating for the "greatest good, for the greatest number for the longest time" (Merchant 136). Muir, on the other hand, used his signature eloquence and persuasive language to write to the general public on the power of the grandeur of the cliffs and mountains, and to plea for their preservation as they represented God's glory on Earth

(Merchant 136). Muir's argument of 'nature' as the sublime was strongly supported by the general public. Muir inspired many people who had never visited the valley to write to Congress expressing their opposition to the dam (Merchant 136). However, in the end Muir lost the fight and the dam was built between 1915 and 1920. (Merchant 135-136). Once complete, the Hetch Hetchy dam was the centerpiece of the effort to bring water and electricity to San Francisco. (Merchant 135-136).

Federal land policy has evolved over the history of the United States. The way people have conceived of "nature" and considered the importance of "preserving" it—as well as what such "preservation" entails and how it should be balanced with the human preservation—has depended on the values of the time. In the beginning, the acquisition of territory resulted in the mass conversion of federally held lands to private property, generally with lenient acquisition laws. The policy of giving away federal land at low cost and with lenient requirements for land ownership was based on the belief in the infinite source of fertile and productive lands, which would surely be sufficient to support the new nation. However, as the land was rapidly settled, the realization that the unmanaged use of land resulted in waste stimulated the conservation movement, which emphasized the "efficient use of natural resources for 'the greatest good of the greatest number for the longest time'" (Merchant 138). The growth of the middle and upper classes led to an increased appreciation for the sublime and picturesque landscapes found in nature. These cultural influences led to increased emphasis on the preservation of National Parks for purely recreational purposes. The Santa Cruz Primary Restoration Plan is a manifestation of the preservation movement. Although Santa Cruz Island was only acquired as a National Park in 1980, the motivation behind acquiring the land and the

subsequent management as represented by the Primary Restoration Plan reflect the same values that inspired previous preservation projects (Gherini 232). In the following chapters I will analyze the specific cultural values that influenced this project in order to determine how today's United States' citizens conceptualize "nature".

A Brief History of the Channel Islands

Juan Rodriguez Cabrillo was the first European explorer to reach the Channel Islands, landing on San Miguel in 1542 (Kennett 72). However, the islands had been inhabited for an estimated 13,000 years according to the human remains discovered on Santa Rosa Island. The native inhabitants of the islands are called the Chumash people, supposedly coming from the word *michumash,* which means "makers of shell bead money" (More, The Lone Woman). Eleven historic village sites have been discovered on Santa Cruz Island. The Chumash were a maritime people who "hunted and gathered natural resources from both the ocean and the coastal mountains" to maintain their way of life (More, The Lone Woman). They built *tomols*, plank canoes, from redwood logs that drifted down the coast to travel from the islands to the mainland (Gherini 24). Unfortunately, the discovery of the islands by Cabrillo was the beginning of the end for the island Chumash.

Cabrillo was the first of several European explorers to visit the Channel Islands. Explorers and traders were drawn to the islands by the prospect of hunting otters, seals and sea lions for their pelts and oil. This increased exploitation put considerable stress on the native Chumash's resources, but even more destructive were foreign diseases that the explorers accidentally introduced, which caused a steep decline in the Chumash population. The European colonists that settled along the coast and established Catholic

Missions disrupted the native economy and well-being (Kennett 73). According to Spanish records the last of the island Chumash had moved to the mainland by 1820.

The islands were originally claimed for Spain by the early explorers such as Juan Rodriguez Cabrillo; however, the Mexican government claimed ownership upon gaining independence from Spain in 1821. In an effort to strengthen its claim over California the Mexican government sent "convicted criminals to populate many areas. Around forty prisoners were… sent to Santa Cruz Island. They lived for a short time in an area known as Prisoner's Harbor" (More, The Lone Woman). After they vacated the island the Mexican government granted the island to Captain Andres Castillero, who became the first private owner of Santa Cruz Island. Captain Castillero put Dr. James B. Shaw in charge of managing the island. Dr. Shaw built the first ranch house on the island and "is thought to have brought the first French Merino sheep to the island," effectively beginning the ranching era on Santa Cruz.

When California became a state as part of the Treaty of Guadeloupe Hidalgo in 1850, the Islands officially became United States territory. Captain Castillero sold the island to the San Francisco businessman William Barron in 1857 (Gherini 52). Throughout the time that Barron owned the island, Dr. Shaw continued to manage the property. Dr. Shaw expanded the sheep ranching on the island under Barron's instruction. The civil war significantly increased the demand for wool; by 1864, an estimated 24,000 sheep lived on Santa Cruz Island (Gerini 60). William Barron sold the island to ten investors from San Francisco in 1869 (Gherini 76). By the late 1880s, one of the investors – Justinian Caire – had acquired all of the shares of the Santa Cruz Island Company (79). Mr. Caire continued ranching on the island for many years and

"diversified production, including wool, beef, wine, fruit and nuts, [and] flocks of fowl" (More, The Lone Woman). Justinian Caire's descendants, the Gherini family, retained 6,000 acres of the east end of the island, on which they continued the sheep ranching operation (Gherini 181). Other family members sold the remaining 90% of the island to Los Angeles oilman Edwin Stanton in 1937 (Gherini 161). Edwin Stanton was the first owner to switch to primarily beef farming and move away from the sheep ranching business. Upon Edwin Stanton's death in 1969, Carrey Stanton continued the cattle ranching business on the island. When Carrey Stanton died unexpectedly in 1987, his portion of the island passed to the Nature Conservancy. "The Nature Conservancy rapidly liquidated the cattle operation and ended the ranching era" on two-thirds of the island (More, The Lone Woman). As for the 6,000 acres that remained in the possession of the Caire family, they passed to the Gherini family, the remaining descendants of Justinian Caire. This family carried on the tradition of sheep ranching until 1984, when they leased the land to a newly formed hunting club called Island Adventures. This operation ended in 1980 when Congress designated the four northern islands and the waters for one nautical mile around each as the United States' 40th national park.

The enabling legislation for the Channel Islands National Park stated the purpose of the park was to "protect the nationally significant natural, scenic, wildlife, marine, ecological, archaeological, cultural, and scientific values" with particular emphasis on the "the brown pelican nesting area… tide pools… the pinnipeds …the Eolian landforms and caliche… and the archaeological evidence of substantial populations of Native Americans" (Public Law 96-199). The Primary Restoration Plan, which I have chosen to use as a case study to analyze the relationship between nature and culture, was designed

to accomplish these goals as well as others that had been developed since the enabling legislation.

Chapter 2

Interviewing people involved in planning and implementing the Primary Restoration Project is an integral part of this thesis. My purpose in interviewing is to bridge the gap between the theoretical analysis of how our cultural values shape and affect our management of the environment and how this in turn affects our cultural values. It will also focus my project from the theoretical work that has already been done to its application to Santa Cruz Island and this particular restoration project. Analyzing the Primary Restoration Project on Santa Cruz Island is a case study of the theories I proposed in the first chapter regarding how nature is a culturally constructed discourse and the ways in which land management mirror a particular culture's concept of nature. My goal in interviewing the people involved in the Primary Restoration Project is to gain insight into the cultural values behind their decisions.

Considering the complexities of Santa Cruz Island's history, including the Chumash and ranching histories, in conjunction with the natural history, it was clear that I would need to interview people involved in all aspects of the restoration process. To do this I interviewed people involved in both the cultural and natural departments of the park service. The cultural and natural resource departments of the national park embody two main sides of restoration. The park service is always working to balance the restoration of the natural environment with the preservation of cultural and historic landmarks. The long prehistory of the Chumash and their ancestors, as well as the historic ranching establishments, requires the perspective of historians and archaeologists. These people played a critical role in the decision-making process and implementation of the Primary Restoration Plan by working to preserve and maintain key elements of the human

occupation of the island. However, the human occupation of the island – particularly during the ranching period – was hugely detrimental to the natural environment. Thus, it was also important that I interview several people involved with the natural resource management of the park. Overall, these people value the restoration of the natural environment above the preservation of the cultural resources. In order to capture the various dynamics of this department I interviewed a wildlife biologist, a monitoring botanist, and a restoration ecologist. Each of these individuals relied on their particular education and the priorities of their specialties to answer different questions.

I conducted the majority of the interviews over the span of two visits to the Channel Islands National Park office in Ventura California. The one exception was interview A, which was done over the phone. For the rest of the interviews I met with each individual in his or her office space and proceeded to conduct the interview. I happened to meet interviewee E and another park employee at lunch and conducted a brief informal interview with them in that setting before moving to interviewee E's office and conducting the official interview. Interviewee G requested that I not record their interview but rather just take notes on what they said.

When composing my specific interview questions I created a list of goals that I wanted to accomplish through them. The goals of my interview questions were as follows: to better understand the decision making process behind this project – specifically the cultural values that influenced the process. Also to discern how the people involved in this project view nature – and the relation that humans have with nature. To examine the role of historical preservation and cultural preservation – particularly in terms of the Chumash archeological sites. Finally, to draw connections

even from those people who are strongly rooted in science with the cultural values that have influenced their work. I designed my interview questions for a semi-structured interview, intentionally leaving room for follow-up questions and expansion depending on how each individual interview went. Here are the actual questions that I asked and the interviewee's responses:

1. How would you define a natural environment?

Interviewee A:

L: Okay so my first question is: How would you define a natural environment?
A: How would I define a natural environment?
L: Yes.
A:. Um… One that. One that has most of the natural elements. Uh… That um… . That would occur there and is managed for those types of values.
L: Okay. Managed uh by organizations such as the National Park Service?
A: That's right. Right by landowners or others. Uhuh

Interviewee C:

L: Okay now this is uh may be a difficult place to start but how would you define a natural environment?
C: That is a very difficult place to define. Um well I think of natural it's really hard to do I think of a place that doesn't have a lot of what we consider to be the western trappings. A place that doesn't have a lot of infrastructure, it doesn't have a lot of buildings it doesn't have a lot of roads there isn't a store on every corner. Its just the opposite of what we have right here in Ventura.

Interviewee D:

L: Okay so can you define natural or what that is that you're seeking to do by removing these stressors and the importance of it?
D: Yeah that's a tough word to define. Um so to me natural is those things that we believe to be, see cause we don't even necessarily know for sure. Uh cause we don't know if a Chumash brought a specific plant over or not. But we do know that its been out there for a period of time and its evolved over a period of time and since we can't say they brought it or didn't bring it we will assume that it is native to that place. So I would say the first thing with naturalness is that it's native to that ecosystem. And what's big about the natural component is that it has the processes the physical and biological processes in place. So that's how I put my arms around natural. We know it's getting hammered all the time with air quality and some places it's acid rain and now we have global climate change and heating but the thing is if you don't – my view is you'll loose

these ecosystems if you don't allow – it to have resiliency. So that's what we look at is this idea of resiliency. Is if you can have all of the components that used to exist on the islands or still exist on the islands that they're out there and they're robust and they're healthy. Just like you if you're robust, you're healthy if somebody comes and introduces a virus to you because you touch hands
L: you can fight it off
D: Right but if I put all these stressors on you I put all – here it is it's finals week (laughter) and you've got a cold right, and your boyfriend just left you, and you know you didn't eat and somebody walks in with the measles you know your resiliency is way way down. So how do we manage the ecosystem the same way is we remove some of those stressors that we know aren't a part of that system. And Islands have already got that challenge because they're isolated, they're already having to overcome all the things that come, the pressures of isolationism: small populations – you've got all those other challenges. So here it's, naturalness is what we believe belongs out there, what evolved out there over time what are the processes are in place and then make sure we identify the stressors. And which of those stressors can we control and remove. That's what we try and work on here.

Interviewee E:

Notes from lunch conversation:

- "degree of natural"
    - degrees all the way to pristine (which doesn't exist)
- Natural area with functioning systems
    - Natural as a not human dominant system (development, species influence)
    - Stability → needs to be stable – handle problems
        - Always changing → within parameters – pace of changes (pollen core) contrast natural change with change when ranching started

Interviewee F:

L: So my first question is how would you define a natural environment?
F: um well that's interesting um a lot of people define a natural environment as something that has been removed or has not been impacted by humans um and that of course presumes that humans are not part of the natural environment. If you say they are part of the natural environment its hard to say what's natural and what isn't. Clearly when we look at a shopping mall we can say that, we at least say to ourselves that that's artificial versus the field next door where we say that's natural. Now it also comes down to a um how much you know. Um a lot of people see a field, a grass field oh isn't that beautiful, see a meadow and say that's natural and great. I look at a meadow and say well this plant shouldn't be there. This plant was introduce and that's and I see a degraded piece of property and so in some ways the more knowledge you have the less appreciation you have for the natural world. Um as we proceed to um and although that's just my human subjective you know imposition on that piece of property um in of itself the things that make up that piece of property may work fine. Nature always has a solution um no matter what we do we may come in and do something but nature always

the environment always uh has a reaction. And in I don't know whether you want to call it healing or that's just you know it's the world we live in; I mean nothing – nature implores a vacuum so you blade a piece of ground to bear dirt and its gonna get occupied over time. Now mostly its gonna get occupied by what's nearby, what's adjacent um a lot of what I consider um nonnative plants um what many consider in the botanist field are plants that are accustomed to being disturbed. Um they're they grew up around a lot of, some of the Middle Eastern plants that we have grew up around herbivores: around goats, around sheep so they're used to disturbance and they have ways of dealing with it where a lot of the native plants on the islands for years I mean did not. And so they have little or no defenses um so what was the question?
L: How would you define the natural environment?
F: How would I define the natural environment – God that's a tough one, um uh I would in my for my you know I've learned a natural environment is one that is um still has uh an intact sort of intact evolutionary processes that have not been what are most of the native where most of the species have not been uh artificially introduced and are derived endemically from that area. Um uh I guess I can just leave it at that I hope.

Interviewee G:

Notes from interview:

Natural state:
Return – restore natural processes
Wetland restoration – was the largest – buried wetland processes were highly altered.
You can have people being part of an area and the natural processes still working – still moving. So natural processes don't exclude humans – but with restoration that's the goal because you can't exclude humans.

2. In your opinion what is the natural state of Santa Cruz Island?

Interviewee A:

L: Okay. And in your opinion what is the natural state of Santa Cruz Island?
A: The natural state of Santa Cruz Island it is somewhat different than it is today only because there's been about a hundred and fifty years of grazing and some agriculture on that island. That changed some of the landscape out there. That being said it's less changed than some other islands. But um a hundred and fifty years of grazing by sheep, cattle and pigs ah affected the natural environment out there probably decreased ah shrub and tree communities and um there's been introduction of alien annual ah grasses, European/Eurasia grasses out there ah due to um settlement as well. So those are some of the changes that have occurred. Ah but right now um the island is in a state of recovery and uh the trajectory is about all um all alien species or ah alien ah vertebrate species have been removed that includes the pigs and the sheep and the cattle that were there and so that has allowed the island to start to recover. Um some of those veg communities are

in the process of recovery and there's actually large uh high quality stands of most of the uh the habitats on the island.

Interviewee B:

L: All right, and if you, my next question is: In your opinion what is the natural state of Santa Cruz Island?
B: Oh okay
L: And I have more or so if you want to skip that one as well?
B: I think we can talk about that a little bit more um essentially what I understand that the biologists and natural researchers and people with the park are trying to do, understanding that I'm coming from a cultural perspective, is to restore the ecosystems, the naturally functioning ecosystems on the island. So that doesn't mean um that we have to put back every plant that ever existed and every animal that ever existed and get rid of all the exotics it just means that they have to create an environment where the natural systems or the natural resources can thrive and um persist. So to me that doesn't exclude cultural resources and obviously um there have been humans on the islands for some thirteen thousand years and they've had a large effect on the natural resources because they either exploited them for food or um burned the vegetation to create whatever kind of plant life um environment they wanted to have out there. They've probably cultivated plants in certain areas or certain plants that they could eat or use for other things so um there's been an influence on both the marine life and the terrestrial um environment by humans for a very long time. So what we see out there now is a reflection of that um and probably a lot of what we see out there is a reflection of what happened say over the past two hundred years with grazing animals because the impacts were so much greater in the past two hundred years but there have been human impacts for much longer than that.

Interviewee C:

L: What, in your opinion, what is the natural state of Santa Cruz Island?
C: Well I don't really know what the natural state of Santa Cruz Island; I mean I know I can kinda guess what it was. What it is I don't really, I can't really say I understand the question.
L: Okay. Um let me try and rephrase it. Is there, I mean another way to question it is: is there a natural state if for you a natural environment is one without the trappings of western society what we see
C: infrastructure
L: Infrastructure ect um and out there there aren't that many buildings that is it a particular ecosystem or should that be shaped and managed is a bit of that question.
C: Well um okay well I think it's a matter of relativity um certainly its in a more of a natural than Ventura is, uh could it be more so? Its got roads, Santa Cruz has got roads it doesn't need, it's got buildings that aren't being used um ah sorry I just forgot your question again?
L: What is the natural state of Santa Cruz Island?
C: Okay but I think it is compared to here it does have some degree of being a natural state and you know it has a lot of open expanse lands its got a lot of endemic species on it

um this is a hard question. I really don't know how to answer this question, I think you know it does have some of the trappings of western society but it's comparatively much more like a similar state… and oh the question you, I was trying to get into does it need to be managed. Uh if it didn't have years of heavy exploitation in terms of, primarily in terms of ranching operations I would suggest it probably wouldn't, but there's been a lot of damage done to the island in terms of over grazing and invasive species choking out a lot of the endemics. So in that regard I would say yeah we probably do need to manage it at least for the time being.

Interviewee D:

D: When I look at ecological restoration I'm looking at restoring processes. Not a point in time, cause you can't get the point in time back. You lost it, you lost it. But what you haven't necessarily lost are the processes. So if a river was diverted and then you go to restore the river you're not necessarily restoring the river itself. You're restoring its process. And by restoring that process you can then keep the ecological processes going that were dependent on that river. So we just did a wetlands restoration and the whole idea was not necessarily to reconstruct it the way it used to be. Because first of all, we don't know exactly what it used to be but how can you reconstruct it or restore it so that the wetland function can continue. Because the wetland function was pretty much destroyed. Water was diverted. Topsoil was put on top, so there was still wetlands soil that was there but it wasn't functioning as a wetland because that soil, the topsoil wasn't in ah the proper positioning with ground water. So you had wetland habitat you had wetland but you don't have a habitat when it's buried. So you might have had something way down here, so the idea was to take off the overburden. But you had to construct it somehow and so is it exactly the way it was? No. But is it functioning? I think we gave it the opportunity to see if it can function as a wetland again. Will it? We hope; that was our objective. Ah there's always a chance that it won't but the whole idea is – not a point in time.
L: Right
D: It's a process.
L: Okay
D: So that's why we've been really adamant here about removing stressors.
L: Uhuh okay
D: Is that they can drive an ecosystem, so if you believe like we do here that you're trying to allow ecosystems to function, and allow the processes to function then you have to remove the stressors. So in our case we had pigs, we had rats, we had donkeys or mules and ah rabbits. The thing is well, those weren't part of this natural system out here so you remove. They did cause some harm, they did change the way the landscape works but um now that you've removed them there is a chance that the natural system. Or some sense of the naturalness can come back. Because you've taken away that ecosystem driver that was not native to the islands, that's important to us.

Interviewee E:

L: So we covered the first question out at lunch um how would you define a natural environment? What in your opinion is the natural state of Santa Cruz Island?
E: Natural state mmm um I guess I can tell you what I see as the general components. So the vegetation and the animals that we um define as native to the island so and we have some sense of what that mix at least of habitat types would've been based on things like pollen coring and um soil mapping and things like that um so the native vegetation of the island was a mix of uh woodlands, chaparral coastal sage scrub communities primarily uh some native grass – perennial grassland probably some more components. Don species in some areas, wetlands in some limited area but overall it would've been a mix of these native shrub land, woodland plant communities. The, and we have a pretty good idea of what the native wildlife on the island would've been. Like foxes and skunks and so on. Exact numbers – hard to tell but uh and probably would've changed over time depending on how the vegetation communities changed with uh changing climate.

Interviewee F:

L: So in your opinion what is the natural state of Santa Cruz Island?
F: Um it is a mix um because of the grazing history and how the grazers were removed from that island um the bulk of the island – well it all came down to the ownership um just a second (phone rings)…
L: What is the natural state of Santa Cruz Island?
F: Santa Cruz Island. So um, so during European contact and settlement they introduced um sheep, um pigs, um initially I think sheep and pigs were the initial and then eventually cows. And it was at first I think the whole islands were like a sheeping, a sheep ranch operation and then it got converted to a cattle operation at some point. Now ownership of the island got divvied up and then one man um Justin Clare
L: Yeah Justinian Caire
F: Yeah Caire, well um so ownership of the island 90 percent of the island gravitated toward one person, individual – ultimately Stanton. The east end of the island was owned by the Gherini family and there were I think by the time the park acquired it there were I don't know 9 um number of heirs. Um and so um Stanton when he um uh acquired the island made several efforts to eliminate or reduce the feral sheep on the island and he was operating a cattle operation and so what the sheep ate his cattle couldn't eat and so of course. I don't think he was ever entirely successful at eliminating the sheep but what he did do was he fenced off his portion of the island uh from the east end um and uh did sheep reduction and managed his cattle and I think it helped alleviate a lot of the impacts that the sheep were having on the islands where on the west, on the east end um I think the Gherinis never really expended much of an effort. I think they would maybe allow people to come over and hunt them but never, um but never I don't think there was ever a concerted effort to eliminate or remove the sheep so by the time the park acquired the east end of the island um it was in pretty bad shape um they ultimately they took over 6000/9000 sheep off just the east end. Um and so when you go out you can kinda see – in fact if you take uh the a boat or Island Packers and you go on the South side of the island you can see as your going past the east end there's an old fence line and if you look up at

the old fence line you see to the left um the uh the Stanton portion and its native plant communities: coastal sage scrub. On the right hand the east end of the island owned by the Gherinis it's most part grassland and that was the due to the sheep that were out that they type converted most of the area on the east end of Santa Cruz island to what we call annual grass land or this shrub savanna so you have bulk. Now there are areas in some of the steeper canyons where you have nice intact native shrubs and trees there's an actually one place that I go to rears that's actually nice oak woodland and very large oak that um that uh goes by. The and uh so but much of what you see is introduced alien grasses and so right now Santa Cruz island is, it's a mixed bag. Uh even on the Stanton side of the island if you go to the west end again you have these oakland areas that are grassland dominated and you see shrubs poking up here and there. And so what it is is sort of mix of native plant communities, alien introduced grass annual grassland communities and what we hope to see overtime is that as if you and what I'm gratified to see is that I go out to the east end and you look into the grassland and you'll see a native shrub coming up: a twian um a lemonade berry and you can know and you can tell that over time much longer than any of us will be around that eventually I think the native shrubs will recover. But Santa Cruz Island is in some ways represents has both the best intact communities um and in terms of diversity it is because it is the largest island and it has the largest diversity in terms of plant species. Due to its topography and its size um and its relative closeness to the mainland um but it also has some of the worst. Um so it really is you know um kinda in one island kinda has uh the whole the whole history is there for all the islands and its all I can say is that it's a mixed bag right now. And I hope that over time the native shrubs will recover, the native plant communities will recover, we're never going to remove the grasses but I hope that where they dominate will become less and less.

Interviewee G:

Notes from interview:

Wetland – historic photos that show that it was buried. We know it was a wetland and there are certain characteristics that define a wetland. Specific definitions – in order to do that they collected very specific data how deep to dig and what plants to put in.
Pigs were so negative, rototillers anyone who went to a site would know that there was damage. Root up soil – weed invasion afterwards – obvious need – especially when the connection with the birds was put together
Fortunate with the park b/c islands
Remarkable capacity to recover when the stressors are removed. Remarkable

Processes – not trying to reset the clock. What are you trying to achieve n when back in time. Complex food web and many steps. And even with the wetlands project – resetting the clock and clack and then letting nature take its course. Undoing actions.

3. Why do you think it is important to return this environment to pre-European contact?

Interviewee A:

L: So, and this may seem like an elementary question but why do you think that it is important to return these elements – the bald eagles and ensure the survival of the island foxes and while removing these other alien species. What is the importance of that?
A: Well that is part of Park Service goals for any piece of land that it manages for a natural state and you want an ecosystem that functions like an ecosystem the way it's supposed to and so on any piece of land the Park Service manages in that vein there are efforts to remove nonnative species and to reintroduce species that have been extricated. And like I said it's so that you can have a functioning ecosystem that approximates as close as possible um the type of ecosystem that functioned ah before those human influences took over.

Interviewee C:

L: All right um this may be self-evident or not, but why is it important to to um manage it and to preserve endemic species do you in your opinion?
C: Well I think uh the planets viability really depends on that kind of variation, you know you need to have the kind of diversity and if you allow the endemics to be overrun by invasive species which a lot of them are the result of agricultural practices then you are narrowing um the viability your closing down all the options you don't have these endemic species, contributing to the gene pool

Interviewee D:

L: So this is a question that I've struggled with: can naturalness – now you say that if you were walking through and it was all introduced exotic grasses that would bother you but can naturalness change? Can the state of an area change? What is the line that those grasses are now the natural state of an area?
D: Yeah we're all going to be faced with that that challenge here uh shortly. Well you have to be willing to say that it was okay for those other things to go away. See to me we have to - it's a tight rope of of say uh at what point are you giving up the whole back the big push I mean if we believe people are part of the ecosystem then we're going to change the ecosystem. Well my fear is that if we change it in such a fashion that we create a monoculture and then we're going to have the same problem with the resiliency, and then the loss of biodiversity. So that what I say when I go out there and its all exotics is that it's native its lost that biodiversity. And if you want to take more of the anthropogenic pieces well what does that biodiversity offer us in the future? We don't know because we haven't looked at it. If you look at 80% of the drugs that we use come from the natural world. But if we just say – okay let all the exotic grasses take over then we knock down all the rain forests and convert it to cattle grazing well maybe it really should have been 80% of the world pharmaceuticals but we lost all that because we said

it evolved into something different. That's my biggest fear is that we'll allow these things to meet our needs which is maybe openness, green space but is it really helping the ecosystem and is it really helping the health of the Earth? And I'm afraid that if we loose all those pieces that it'll come back and get us.
L: Sure
D: Because it's easy to loose it. They're saying now that you know the way the population is growing it's going to take seven Earths to feed us all. Seven Earths – how are we going to do that? So the only way to do that is you got to increase productivity and that means you got to increase more land and higher yield on those land or you got to have less population.
L: Yeah
D: Well I don't think that the less population is going to happen any time soon. So then you are going to continue to push and then convert to farmland – that's very productive land but then if you like birds and bees and flowers you're probably not going to see them.
L: Yeah hmm
D: But you know to me it has a spiritual value too and to me just going out to any park, I can do it with any open space I can do it on any beach. But going to a park where I know it's protected for future generations I always feel better and then I can unwind and I can relax. Um and I don't think about the troubles of the world, but if I'm sitting on the beach I'm still you know reminded of it I'm still worried about this may not be a beach tomorrow.

Interviewee E:

E: And the reason for that at the islands is because these islands contribute to worldwide biological diversity. So we have species and associations of species that occur nowhere else. Uh we have and part of the values of the island ecosystems includes in cases what we do not have. So um to give you an example of another island cause in some ways Santa Cruz is big and diverse – its not the mainland but it has a lot of species. But other islands like Anacapa and Santa Barbara and to some extent San Miguel – much smaller islands fewer made fewer species so in a way you could say um they're kind of depoprate islands but in some sense because they don't have island foxes and they don't have island skunks it makes those islands excellent places for sea birds. Because they're ground nesters and they're nesting in these large colonies – they didn't evolve with predators and so um sea birds can't nest on Santa Cruz Island because the foxes eat their eggs, the skunks eat their eggs. But on Anacapa and Santa Barbara they're protected because they don't naturally have predators so that sorta so if we didn't try to understand. Or if we tried to convert them from something that they were before to make it human dominated with cats – these are all things that were done – rats, sheep, rabbits eliminate the vegetation the cover that the sea birds need for nesting the rats eat the eggs so now you've got a predator, cats eat the eggs, cats eat the adults. What you've done is you've eliminated some of the uh unique um diversity that allows some of these species to exist and if you do that in multiple places then you're gonna completely loose some of that natural biodiversity. By natural I mean species um types uh life histories that evolved over many many years you know are part of this Earth ecological system and they need

some place for us to protect. Otherwise we're making a choice to loose them. So it's a human choice, because we have the power now. We have the power. People didn't have the power before and I think that's the big difference between - you know people talk about: okay are people part of the system or are they not part of the system? Yeah we're part of the system – we're natural, we're no less natural than a fox is but we have the capacity to make changes beyond what any other animal can do and we have the capacity to not make changes and so um we're in a unique role to sorta step back and assess um sorta what we want any landscape to be. Um but in the park service we try to not be arbitrary so we try to have policies and guidelines that are less, that involve as much as possible us not making a decision whether a species is good or bad. So we're trying to look more to an almost an independent or objective type of metric to determine – does this species belong here.

Interviewee F:

L: Um so why do you think that its important to return this environment, Santa Cruz island, or any of the channel islands to pre-European contact?
F: Because there are very few places like that left in this country um and especially this close to um Southern California. Um you know California is known as the golden state and its not that name not because gold was found here in large numbers. But because at certain times of the year a lot of it has this sorta golden brown look to it. And but that golden brown look is totally unnatural. All the annual grasses that you see in this state most, the majority of them are introduced and come from the Middle East. So the uh, the state of California is vastly altered from what it was prior to um European contact. Amazingly so. And uh and we go, most people don't know it um and so I think its important to keep intact those pieces that are left. Um because we have ample examples of of places that you know are modified and so um uh so its important to have these areas where we can say look this is what California used to be like. Because otherwise you're just gonna read it in history books and see it from pictures. But now you can go out to the islands and actually see what it was like.

Interviewee G:

Because there are so many organisms that are dependent on that – migratory fowl (85%) gone – three acres are huge. Put in water (daylighted water and birds, pintail, deer, sandpiper on and on, amazing
Why do it? Because so many organisms are dependent on that habitat - do we need that? Do we need to have the pintail the birds the tree frog do we need them? They need habitat and you are providing that again.

4. Recognizing that this is a very dynamic environment, what challenges have you faced during this restoration project? How has this affected your goals?

Interviewee A:

L: Okay. Um so recognizing, as you do, that it's/ that the island is a very dynamic environment what challenges have you faced during the restoration project and have any of those challenges affected your goals?
A: Ah. Challenge… dododo… well one challenge um we thought we might face was the removal of pigs, which are not native, might have affected island foxes negatively in an indirect manner. That's because island fox's declined on other channel islands do to predation by golden eagles. Golden eagles never bred historically on the channel islands but started doing so in the mid-1990s because they were supported by alien prey species out there, ah feral pigs on Santa Cruz and mule deer on Santa Roza which didn't occur there naturally while the eagles were out there making their living off of unnatural prey species they also preyed on native species such as island foxes and that's what drove the three northern subspecies of island foxes close to extinction in the late 1990s. So obviously though one of our goals was to remove feral pigs um it was thought that since golden eagles were dependent on feral pigs that they might switch over to more predation on the island foxes and that didn't really happen, but we were cognizant of that possibility so that was a challenge. That was a bit of uncertainty involved. Ah another piece of uncertainty was the effect that newly reintroduced bald eagles would/might have on island foxes, because golden eagles and bald eagles pretty much take different types of prey. Golden eagles take small terrestrial animals like rabbits and squirrels and so the island fox is right in their prey range and it's a terrestrial animal whereas bald eagles are marine species in terms of foraging so they take fish, they take sea birds, ah they eat pinniped carcasses on the beaches. However, there was still a possibility that reintroduced bald eagles might occasionally prey on island foxes and this has occurred once or twice that we know of ah in the past I would say eight years but still that was a risk that we took. Now there was a certain amount of uncertainty about it.

Interviewee B:

L: Um so recognizing the dynamic nature of the island and the environment what challenges have the managers faced during this restoration project? With anything unexpected or um have there been any changes that have been, that you've tried to implement that had repercussions that you didn't anticipate?
B: I think that um I don't think that I'd be able to answer that, I think that's a natural resources type of question because for me that the um restoration project which has been more about um making sure that the cultural resources are not adversely effected and then some of the actions that they've taken have actually acted to help preserve the archeological resources which up were being impacted by the pigs. So that has helped restore, not restore, but at least preserve archeological sites um what I would say I think one thing that came up was that is a natural/cultural thing is there's an olive orchard out at smugglers ranch and it has um you know it's a certain plant there but unfortunately both pigs and the birds eat the little olives and then they spit their seeds all over the island. So when there were sheep out there grazing they were keeping all of that vegetation um eaten and once the sheep were gone and the pigs were gone there wasn't anybody eating all of the grasses and so olive trees started popping up all over because

the seeds had been out there forever and so they suddenly realized that along with all the other weeds that were coming up so were olive trees and there were a lot of them so its created this whole what do we do about the olives and are they still continuing now that we don't have grazing animals that are eating everything off. Um are these olive trees going to continue to be planted by birds elsewhere on the island and have to be controlled and so it has been sorta a battle about if we keep the olive trees or natural resources cause we've been causing a problem.
L: Sure
B: So that's one of the things we've been talking about that I think was unanticipated.

Interviewee D:

L: Have you, in removing stressors have you encountered unexpected events or how do you predict or deal with the dynamic nature of an ecosystem?
D: So um you know whenever we do big projects like that we of course have to do um compliance, environmental compliance.
L: mhmm
D: Both natural and cultural compliance. So typically you put out your objectives of what your expectations are and what's important is that you monitor actually to see if you've achieved your objectives. So with the removal of the rats one of the big reasons was because it was having this really adverse impact of depravation on the Xantus's Murrelet. Well, so we got rid of the rats, if we didn't monitor the Murrelets how would we know we achieved anything? So we monitor the Murrelets and see did we achieve our goal? And we are seeing that we did achieve that. Um are there unintended consequences? Well then you have to see are you looking at a bunch of different parameters and there possibly was, um but they may have been things we weren't monitoring or things we didn't think that they were that great of a consequence worth monitoring. I can't think of anything off hand but the obvious one with the rats was that you'd loose your mouse population. If you were to kill all the rats off you'd loose all your mice. So what did we do? We made mouse houses and we took and we actually looked at the genetic variation on the three islands on Anacapa – determined that they weren't genetically different. So we could take a sample of those mice and keep them in captivity and then when we did poison the islands uh then once all the rats were gone and all the poison had already decayed. No longer existed, put the mice back out so so how are the mice? The mice are doing just fine. We have mice on all three islands its not a problem. Captured raptures to make sure they weren't getting sick from poisoning. So what you try to do is try and mitigate all those other, secondary or unintended consequences and hope you don't have any. But you could. You never, never can tell. On the pigs a lot of what we were trying to do was not just get rid of the pig – but it caused rooting. Now some people were saying that rooting is like a rototiller so it just primes the soil for your ecosystem so its easier for plants to get established. True, it was – for exotics.
L: Right that makes sense
D: But it wasn't for natives. So we're actually seeing that the natives are doing better. But how do you know that? You have to monitor and then I think you have to be um willing to say – if you didn't reach your objectives then maybe something wasn't quite right. Uh, we've done pretty well so far but it doesn't mean that there aren't, that there isn't some

level of unintended consequences just whether it's a big consequence or a little one. But we go through all that and try to figure it out.

Interviewee E:

E: We brought bald eagles back to the islands but that was because we could trace that history of bald eagles being there – being an important part of the ecosystem. Bald eagles being persecuted by people – eggs were collected adults were shot, eventually DDT was put into the system. Bald eagles died out, we brought them back and we brought bald eagles back even though they weren't seen as being good by certain people. Bald eagles prey on the sea birds for instance and so some of our biggest um opposition to bringing back bald eagles came from sea bird biologists who were saying: but we've got these other endangered sea birds like the Xantus Murrelets and Cassin's Auklets species that we're actually trying to restore on Anacapa Island. We removed rats and eliminated rats on Anacapa because they were preying on sea bird eggs. So, we removed the rats so the sea birds could flourish and then at the same time we're bringing in the predator of the sea birds and um, so our response to that is: yes but predation is the natural part of the system so um in all these species coevolved and have lived out there together. There is a question that and that's so the question we have to resolve is well is this not the right time? Should we wait twenty years to bring – bald eagles might belong here but will their level of predation on Xantus Murrelets be so high that Xantus Murrelets can't withstand that predation so we don't bring them back now. So that's a value judgment so we looked at and we decided no, we don't think that the level of predation will be that high in part because Xantus Murrelets are primarily nocturnal and bald eagles are primarily diurnal so they may meet them occasionally but its not it's not really hitting the population level. But so that's the kind of thing that we go through.
L: It's amazing – you hit resistance on every, it feels like every front. Not necessarily, but I hadn't expected resistance to bringing back bald eagles I have expected it with exterminating the pigs or you know but not
E: Yeah sometimes we don't expect it either – we thought oh the rats would get we would get – you know who likes rats but it turned out some people did. And uh it is easy to think of it in a negative way but in other ways it's not bad that people have a variety of opinions because if uh cause we I don't know I don't recall that we actually thought of that as seriously as we did after the issue was brought up. And so we then we did take a second look at those kinda at that question. And ah it's better to to have a little bit of reasons to tend to think things through before you make sorta unalterable decisions so yeah.

Interviewee F:

L: Um, so recognizing that this a dynamic environment the islands have you, what challenges have you faced trying to restore them or give them space to recover?
F: Um I think uh well I'm not for this question it might be the restoration ecologist might be the best person to talk. Especially when your doing restoration work. But I do know that um there's when your actually uh having the animals present the uh like the deer and the elk present on Santa Rosa island has made it a lot harder to do restoration. You had to

fence everything off – so a lot of money was spent on fencing. A lot of time and effort. Not easy putting up a fence you know just anywhere and otherwise if you just started something and just put it out there on your own. Say you just grew plants and put them out there without erosion control, um matting um and tried to restore a site um inevitably the deer and or elk would come by and I think they're just as most animals just curious about what this new thing is in their environment and they would just trample the erosion control matting and the nice juicy wet plants that you put out that were perfect – nice and succulent. So um it just added another layer of difficulty for when you're actually doing actual physical restoration. There is another aspect to restoring uh the islands that um for many people um uh it it comes down to what is natural. And they would say that they would argue that we're part of the environment and so the fact that these animals were out there makes them part of the environment and there was no need to get rid of them um. Uh there was this I think for some people there is this bias or at least I guess I can't say bias – they'd say I'd be bias. But um this idea that you know that everything was okay that there you know it's we're part of the environment and there's still I think a lot of that ethos of um of um the initial you know we first settled the land that uh land wasn't doing any good if it didn't have a use you weren't doing something with it and so I remember uh when I first got to the park and I went out to Santa Rosa island we uh I was helping uh weed uh well it was this thing with botany group of people who were interested in native plants had come out. And one of the uh people um that came out uh brought her husband along. And her husband was a rancher and he kept um twice uh I was talking with them and he said you know you guys don't do anything with that and he was pointing to the coyote bush out in the back – that's gonna take over. And at first I was like yeah – that's what we want. I didn't say that but that's what we were hoping is the *Baccharis* would come in and invade these annual grasslands but he was looking at it from a use standpoint. And that the cattle don't eat *Baccharis* – they have no use for it and so if we didn't do anything all that valuable grassland was going to be invaded by this terrible *Baccharis*. And to him that was you know why would anybody want that cause you were making the land less useful. And so there's still I think for some people um that sort of mind set that the land um the land is there for to be used um and if you remove that factor then it it so that it is I don't know its going against progress if you will. And so there's that um I think even in within the park service itself there's sometimes that um sort of your like well what's the big deal you know who cares about some of these plants. You know I'd rather see deer and elk out there and for some people that is nature. It's not the plants its what's in the natural world, the animals the charismatic fauna as we call them. The deer, the elk, bambi - that to them is nature and the wild. And if we remove that then you would have just a… you know, park.

Interviewee G:

So for this project and other – conflicting management goals for natural and cultural resources. Evaluate what has a GREATER NEED! On top of filled wetland were corrals contributing historic landscape. That was tough. Had to go to state historic preservation office – outsider help resolve issue. Collective ranching – balance the benefit of keeping the corrals and restoring the wetland. Historic landscape will be preserved even in the

absence of the corrals – construct interpretive corrals – all the same elements just moving them all to one area.

Seeds – Italian stone pine displace the bishop pine – well I don't know. The olive grove is tricky because its an icon for sailors it very familiar landscape feature – got rid of a lot 400 and some trees, still 100,000 trees – spread and convert the grasslands to woodland. San Pedro point – mostly native grass – north of olives. Wildflowers. Resolve – we're doing a survey every year to find out how many of those olive trees produce fruit. Tag all historic and a few extras. Evaluate the trees for fruit production. At the end - 6 - years look at what can be done. Non-fruit trees no problem. Big fruit producer call SHIPO. Take home.

Wetland project data rich! Driven. Same approach with the olives. Scientific data.

Wetland – its not raining – water dropping that's gonna cycle. Irrigating higher ground – pump out of pond to water high ground. Haven't had any big unexpected – planned so well. Less emotionally charged. Didn't get sued. Found historic wall – that was cool. Put in place to channel the creek – didn't know if they would find it. Berm – take down to reconnect – found the wall all that beautiful stonework. Dug it up - pictures. Covered it back up – documented. Modified the plan – higher it will take more water to overtake the wall. Design decisions on the spot.

5. Is there any context in which you think it is important to preserve non-native plants?

Interviewee A:

L: Okay. Um is there any context in which you think it is important to preserve nonnative plants? Or…
A: Sure, absolutely ah and that's especially true in historic areas or semi-natural areas where ah certain plants have been or planted by early settlers and are important part of a historic landscape. For example, the trees in the ranch area in Santa Cruz and Santa Rosa Island ah it's important to maintain those types of trees there because they represent the historic period of the island and in that regard or in those instances the park service or another management agency has made the decision – you know we are going to manage this part of the island for the historic scene therefor nonnative eucalyptus trees are important here because they were planted by the ah the settlers. So, it really comes down to identifying the different types of management zones on pieces of land.

Interviewee D:

L: Plus you have the added cultural, archeological sites so historical, how do you – just personally as [position in park service] how - this is something encountered in national

parks around the states but balancing cultural preservation or whatever you want to call it and natural preservation. How do you balance those two things on the islands?
D: Well I think you have to you look at first of all we're very fortunate because even though the organic act says you're going to manage you know it basically says in balance but then congress comes back and gives you even more instruction on the purposes for the park. That specific park so and in our case they're pretty specific even though it did say some things on natural resources it also says some very specific things like pelicans, and Aeolian forces – windblown, pinnipeds – seals and sea lions, so they were very specific that you should be paying attention to some of these things. So then when you look at some of the works like the wetland restoration you look at well that was all filled in it does represent an error of human occupation. Okay, well how significant was that occupation and do you really need to maintain it? Or is it just part of the story? If we kept the, to me if we kept the human mark on the land everywhere you'd have very little left.
L: Yeah
D: Because humans have been everywhere. So I think you look again at the general purpose. Now if this park was set aside primarily as a cultural resource then you'd have very different management objectives. You might still have cattle on Santa Rosa and say well that's more important to maintain that uh cultural livelihood out there. And we do have parks that are like that, like Coors Ranch where its still a cattle ranch. All the battle fields are managed where they're trying to mimic what it looked like so besides manicured lawns they're at least sorta what it looked like at the time of the battle. So it's not as important about all the natural resources. Except then we get into endangered species and then we do something else.

Interviewee E:

L: So is there any context in which you feel or think that it would be important to preserve nonnative plants or animals?
E: Um lets see, well you know like [other park employee] brought up the Euks and the monarchs there are certainly places where nonnative species are in fact providing a substitute for a role that native species used to play. And [other park employee] mentioned the bats. We have this situation on Santa Cruz Island at Scorpion where this townsends logger bats which are a very rare bat in coastal California are now the only maternity colony on Santa Cruz island is in this historic building. So we are trying to managing the historic building both for preserving the historic building and for protection of the bats and for visitor access and so we have a lot of sorta competing and certainly competing interesting because the bats can't tolerate disturbance you can't work in the building and do maintenance while the bats are there um so but and then you're allowing bats to stay in an environment that has inherently potential for disturbance. But what we think happened with the removal of a lot of the native vegetation particularly the woodlands on on Santa Cruz island that the natural habitat for the bats has been eliminated or largely eliminated so not this two story bakery building – historic bakery building is sorta their next best choice. Um so, but um species so yeah if um if the species if it was in a natural area and its um the if it was in a natural area a nonnative species had no historic significance we would well so then we'd allow things to continue if we don't have money or its not a priority to remove it. So it could stay because of that but to

actually choose to keep it or maintain it would be only because it was performing a function that was a benefit to to natural resources native plants or animal but that said we don't manage everything for natural resources in the parks so we zone areas some areas are managed for natural primarily, some for cultural some for recreation, some for development so it's the landscape has a mosaic of sorta what the primary purposes are and even within that mosaic um you look at um is it is the resource doing harm like so. You mentioned earlier the historic fence post – so even if you're in a natural environment the fence posts have value to the historic resource. They don't cause harm to the natural resource. So it a no conflict situation so you so we choose to protect the cultural resource and it's consistent with protecting the natural resource its really not a conflict. So the problems come up when there is a conflict and you've got to choose between these different values. The park says historic scene historic structure natural habitat you know those are you know where the choices get discussed.

Interviewee F:

L: Um so do you think that there's any context in which it's important to preserve nonnative plants?
F: um I think nonnative should be preserved (laugh) um where they're native um
L: Okay (Laughter)
F: Its just a joke, but there are from a cultural from a natural resource standpoint no. I can't well, only in that I will say this, um the only thing worse than having uh a slope, a hillside full of nonnative grasses would be a hill slope full of just bare soil. So in that aspect if you are not gonna be able to restore that hill slope um with anything than yes keep the native grass the introduced grasses there because their helping to retain the soil on the landscape not having it erode into the streams where then you have a host of other problems. So yeah in that context I would say yes don't just remove, if you're going to remove a nonnative plant. If you're going to remove a nonnative plant then you have to replace it with something or hope or plan for um it to be colonized um with native plants relatively quickly so yeah. Uh in that context, but just for the sake of preserving an area just for the beauty of nonnative, from my perspective no. From a cultural perspective I would say they would probably say yes. In that if the, when they look out on the islands they see a settling where there was its ranching era and as part of the ranching era were these grassy hillsides and cattle. And so if you can't have the cattle at least have the you know the nice grassland setting so you can when you go out to the island you can experience that. And so there's actually sometimes conflict between natural resources and cultural resources in that in the landscapes. How you perceive the landscape. Um uh but from a natural resources standpoint, from my standpoint um to preserve a native introduced nonnative plant that's for its sake. Not really.

Interviewee G:

Some nonnatives are not invasive – not a big deal – if you have a plant that's invasive then it's a problem. Red gum hydrology displace upset ecological function. Fennel. Nonnative – make a rational decision about what the goals of your project are and how much they upset processes.

6. As I understand it, the Park Center has focused on removing all non-native animals from the Island; do you think that like with the eucalyptus trees there could be any exception to this policy? Can you provide an example?

Interviewee A:

L: Great, so would like these eucalyptus trees would there be any exceptions with the, ah animals the introduced alien species?
A: Only in a historic context, for example um there's a great history of ranching on Santa Rosa Island. However, we don't want there still to be cattle out there because of their impact on the environment but it may be appropriate to have some horses around the historic ranch area out there, that type of thing. Ah I don't think the park service has made those type of decisions but it could and in many uh cases there are demonstration farms or ranches within national parks when that type of activity is appropriate. It all depends on what type of effects they have and we certainly don't want to leave feral pigs out in the environment on Santa Cruz island even though they're an important part of history – they were brought to the island a hundred and fifty years ago but their impact on the environment was just too great so we can't consider that. We're going to manage most of the island in a natural state. Um, I'm trying to think of … I don't believe there are areas on any of the channel islands where they are maintaining nonnative animals ah their fairly hard to maintain because you can't control their breeding except if they are domestic stock like horses or cattle.

Interviewee E:

Addressed in the previous question.

Interviewee F:

L: So and maybe maybe this is an example of cultural versus natural resources but the eucalyptus trees?
F: The eucalyptus trees yes
L: You would say no
F: No
L: Let's take them off
F: Take them all off, yes
L: Okay
F: I would dearly love to see them all gone but I do know that a lot of people love the smell and I know I appreciate the smell of them as well but um um but no I think if we're going to restore the the plan the islands to a state um as natural as it can be then no they have to go.

7. I am aware that on Catalina they have made the decision to retain and manage a bison herd for their historical significance to the island. Do you agree with this decision?

Interviewee A:

L: Right, that leads perfectly into my next question which was um I'm aware that on Catalina Island they have made the decision to retain and manage a bison herd for specific, their historical significance they were out there for a film shooting and that was an interesting quirk. Do you agree with that decision?
A: Yeah, it seems, and I don't manage the land on Santa Cruz Island but it seems there's a good case to be made for maintaining the bison out there in a representative herd in a defined area. One of the problems, you can take that too far of course ah any time there is a large grazing animal introduced to an environment in which it has not evolved there are detrimental effects to the plants and the soil of that area. That's certainly true on Santa Rosa Island, which had deer, elk and cattle until a few years ago. Those exotic or alien inoculates they were one of the primary causes of endangerment for island plants in fact there were about 10 species of plants on Santa Rosa island that were listed as endangered by the fish and wildlife service primarily because of the impacts of those grazing animals. But it's appropriate in limited areas um in a if those bison were ranging island wide it would be a different story than if they're just confined to one pasture or so.

Interviewee E:

L: Um so in that case um on Catalina Island they maintain a herd of bison for historic significance what – do you agree with that decision from all of my reading about the islands grazing animals are very destructive to the ecosystem. So how does that play out – clearly you don't maintain any sheep or cattle here. But what's your opinion on that decision.
E: Well, everything all the all decisions made by land managers are made in the contexts on purposes of why they were set aside so in the case. So Catalina is not a part of the park so you have a whole different purpose. So I can say we wouldn't make that decision but we also are not Catalina Conservancy. So they have a whole different set of goals management goals – purpose for their establishment and realities that they deal with than what we do. Um and even within the national park service there are units that make a different decision. Every park has it's enabling legislation – the purpose that is set aside so there are ranches that are being made by maintained by national park service as ranching ranches with cattle grazing all that sorta thing. Not the decision that we should make based on what we saw as the core values for the national park that this park was established. Um so but given that Catalina's decision was not sorta a laissez faire we're gonna maintain bison as they've been maintained in the past. No it's a very constrained number of bison um and it is that was entirely a cultural decision they're not maintaining it to – some people said oh your woodlands your soils they need grazing animals. No the reason why um uh Catalina why I think – I wasn't on the inside when they were making

the decision but my understanding was that it had entirely to do with public reaction – the public loves the bison so what they tried to do was balance sorta their public image with lessening harm to the natural environment and the – it was a bitter pill for some, a number of the people to swallow. But they reduced bison substantially – what they're trying to do is minimize and try to have it all a little bit. And that's something that we try to do somewhat with our complex between natural and historic resources what we look at and work and we… all the eucalyptus aren't going away we are by choice going to maintain eucalyptus in some places and by choice we are not going to keep eucalyptus in other places. So um so it's it's a balancing act and um Catalina Conservancy has to balance different things than we do.

8. I am now going to ask you a series of scenario questions. With each scenario I would like you to walk me through your decision making process on how you would approach the situation.

    a. How would you have acted as a member of the restoration team if instead of an endangered population of island foxes it was an endangered population of island grizzly bears?

Interviewee A:

L: Um so I have a question with um the island foxes. If and as far as I understand it they are not they are not very timid and they are um not a big threat to human visitors to the island per say?
A: Oh that's right.
L: They are very friendly.
A: They're very small, they're not aggressive, they're certainly more diurnal and not as nocturnal as other animals and they didn't evolve in an environment where they were hunted at all by anything at all so and that's why you'll see them during the daytime and they're less wary of people than other carnivores on the mainland would be.
L: Sure, so what if you had one of those more aggressive carnivores um what if – this is just a scenario question – um if that was an island, uh an endemic species to the island how would that effect your management of the space?
A: So if it was aggressive?
L: Yeah, I don't know, what if it was an island grizzly bear, I don't know.
A: Well I think in that situation is commonly found on the mainland, where that the Park Service is charged with maintaining viable populations of large carnivores or other animals that are actually dangerous to humans. Bison in Yellowstone and so there is a tension between public safety and the ability of these animals to do what they will. But if you look at bear management in Yellowstone or bison management even management of elk you know there's a fine line that's tread here but the Park Service does it. You know it's keeping people away from those animals. If there's a bear jam at Yellowstone or

Grand Teton's you'll see rangers on the scene keeping people well back, away from the side of the road where those animals are. So it requires more people management than actually wildlife management.

9. In your opinion, does nature exist outside of human conception and use?

Interviewee A:

L: Um so in your opinion does nature exist, this is a very theoretical question, but does nature exist outside of human conception and use?
A: Well certainly there are natural situations that exist, ah totally irrespective of human interaction – so yes I think it does. Maybe the term nature is a human construct but natural environments exist out there independent of human interaction.

Interviewee B:

L: Um so this is one of my theoretical questions that is part of the basis of my thesis but in your opinion does nature exist outside of human conception and use?
B: No (laughter)
L: Cool, will you elaborate?
B: Um it's something that I've been… I mean yes and no because obviously it would exist whether I thought about it or didn't think about it and life would go on but I think that more and more I've been thinking about how humans perceive and different cultures perceive nature and culture and um I think working on the general management plan and defining where the wilderness area is going to be and um there's kinda a tug of war about wilderness. Both in the national park service but in the greater community and in general I think that people, the public thinks of wilderness as a place that humans just aren't. I mean humans have never been um that it's wild that there shouldn't be any signs of humans having been there or being there and to me there's nowhere in the world or very few places where humans haven't been and to try to erase all of that makes no sense and in a national park and particularly this national park where you have fence lines and archeological sites and um all kinds of things that are in what we would determine as part of our wilderness area um should not preclude those things from being there or people coming across them but your if your general public thinks 'well I'm not going to see fence lines in the wilderness' then there will be pressure to take those out and seeing as that's an important part of the history of these islands and they shouldn't be taken out just cause we put a term of wilderness on that part of the island so to me wilderness itself is a definition that we've come up with to place on something and it more recently I've been thinking about national parks and that that that truly national parks again are something that we decided to manage land in a certain way that that your taking these little islands and saying this is going to be our our sanctuary and we're going to think of it as. And just going back through history and people probably did have sanctuaries but they weren't in a sense of a 60 thousand acre set of five islands or whatever. Um, does that make any sense?
L: That makes a lot of sense.

B: And it um what you were saying before about your paper and what you've been reading and so on I thought well obviously that other people have probably been thinking about this and writing about it. I haven't been reading it (chuckle) but its just sorta been coming to me and the more I think about it the more I think it is that we are placing social constructs on on our resources but the people, most of the people who don't manage them or most of the people who manage them don't think of them that way I think it's cultural resource people or sociologists or whatever who go 'we've made this up – we've created this entity and defined it and therefor it's defining us.'

Interviewee C:

L: Um so um this is probably the hardest question of all. In your opinion does nature exist outside of human conception and use?
C: I think it does. I really think it does. I think we're just one of those little characters in the mix of things. I think that nature will continue long after we're gone as a species.

Interviewee D:

L: Um in your opinion does nature exist outside of human conception and use?
D: Absolutely.
L: yeah?
D: Yeah, I mean if we weren't here it'd still be here as far as I can tell.
L: Sure
D: yeah and I think it has its own intrinsic values. We just are trying to find a way to save it because of some value we have in it but otherwise would we have anything out there if it didn't have its own value? Yeah absolutely, it doesn't need us. I mean it'd probably be better without us but.
D: Well to me um wilderness – the law – it's a cultural construct. I think wilderness exists so why do we have a law? Well it was to protect really the agencies against themselves. But when you read the act its um and you should read it. It doesn't talk about naturalness. You can imply it means natural and it doesn't talk about cultural. Except I think it's a cultural construct it's what our society believes we should have are some areas that are wild. But to me wilderness has to be more than just untrammeled by humans its got to have the components of a healthy ecosystem. Cause if I went hiking and if I knew it was I'm hiking through an area that's all exotic grasses I don't care if there's another soul there or not it would bother me that here I am in the wilderness but I'm really just enjoying a piece of open space. That's not important. That's not – the social construct is not as important as that what I see has some resemblance to naturalness. But there is a social construct about humans and their impact on the natural world.

Interviewee E:

L: Hmm so, very interesting, so alright so this is a question that's very related to more my theoretical research but in your opinion does nature exist outside of human conception and use? I, yeah, answer as you will.

E: Does nature… hmm… that's a tough one. Um .. So the concept of nature I would say no it does not. That the concept is our concept ah I think that there are realities outside of our, out of outside of what we perceive and I don't know. I think once you put a name on it then it becomes our concept. So but that's not to say they don't exist so that's kinda similar to if a tree falls in the forest and no one hears it - does it make a sound? Well I guess it doesn't because sound is what you hear, but did it put out sound waves things nature, animals, I mean species don't exist, species is our concept so all the all of our terms are um are concepts I guess but um but these things exist so ah its just our way of trying to make sense of them. I guess, so we can talk about it.
L: Yeah um, I when I was talking to [other interviewee] this morning she brought up discussions of wilderness and I was wondering
E: That's where we get that discussion most often, well wilderness is completely a human concept yeah well our language is, everything is, so yeah so yes of course it is but um I guess it doesn't make it meaningless so it can still be something that we value. We value things that we put names on um so uh yes it's a human concept, construct it um well that was one of the things that when we were in Alaska the Eskimo people took umbrage to that whole concept of designating an area as wilderness because they saw it as excluding humans and they saw themselves as a natural part of landscapes and they were used to constructing things in the landscapes and they wanted cabins they wanted facilities and they saw that as a natural part of the systems. Uh so ah even what we see as being wilderness that's also quite variable and just what we designate as wilderness across the country, what is the term wilderness in the east it would not be acceptable certainly in Alaska as wilderness. Those would be your developed areas so some of those things are relative. Um but uh its all human – I don't see how we can get away from everything being a human construct.
L: Yeah wilderness is one of those interesting things because its in my opinion because its supposed to be without human and yet almost by designating it as human and how to you interact with something that is supposed to exclude all human contact or
E: Well but yeah, well no lets the wording in the wilderness act is untrammeled
L: Untrammeled, interesting
E: It's a weird word that no one uses at all and so there's been a lot of discussion well what the heck did that mean? Well the feeling is that it was a very definite decision to use such an odd word. And a lot of people have thought it was trampled like we interpret it as untrampled cause they're so close but they're different words. So trammel apparently is a um is used with horses but its like you would hobble them or so. I'd have to look it up but it's something along those lines but its something like if something is untrammeled it is unleashed it's allowed to function on its own. So it's not that humans can't be in the system but we don't control the system. So that's the idea with wilderness. It's these wild areas that are allowed to function on their own and so one that so once a law is past and you have this conceptual idea of what your trying to achieve which is this untrammeled area that is allowed to function on its own. So what does that mean, where is that applied to? And what did the regulations that are going to support a er allow us to make that a reality and so it's in a regulations that things have come about like no motorized – I don't know what that has to do with trammeling but you know there's probably stuff in the legislation too about solitude and stuff like that but you know so that's in regulation then um the um the bureaucrats that are tying to determine how to manage the wilderness act

then say okay this is what we think it means – you know no motorized vehicles no construction of permanent facilities, none of this none of that, no bicycles so no mechanized so you know so and the regulations are the kinda things that change periodically just like in the park service our polices change periodically. But the basic law - vision the goal that you're aiming for that, that's out there as your overall guidance. And the way that we interpret how to get there does change over time, becomes refined and at first we see we are experiencing new problems over time so um a hundred years ago national parks weren't dealing with urbanization right around their boundaries for instance. They hadn't lost predators a lot of things that hadn't been dealt with when parks were first established and so park service policies were um are different issues than what we face today and so regulations and policy the things that change that reflect current values in cultures and problems yes.

Interviewee F:

L: And then um I think that you've touched on this but I'd just like to hear it straight up. In your opinion does nature exist outside of human conception and use we talked a lot about use but…
F: Yes um yes it does, um how we view it is dependent on our culture that you were raised in. I uh I have and it can be within between countries it can be even just within a country depending on whether you were raised in the city or raised down in the country um. People uh I think who grow up in the cities have a severe disconnect with the world around them and what sustains them I remember when I was working for the forest service um worked up in big bear for awhile and we were doing a a restoration project which um in which we were breaking down this old Earthen dam that had been built – I don't know back in the 1800s maybe and so we an excavator had been brought out and he broke down the dam and scooped down the sides and we had a ccc crew out there helping us and I was thinking about it … (this interview got cut off due to technical difficulties).

Interviewee G:

Bush – dropped off. Hear all kinds of stuff. Those processes take place whether we're there or not. All those processes cycles functions. We describe it. It's like religion – describe the spiritual world. An artificial construct and it will always be imperfect. Imagining it. They've had religious experiences – seen Jesus or Allah – but most people don't have those it's the same as that. Imperfect. So describing nature – seeing through the human lens.

No matter how we describe it labels or titles it's there.

10. Have you read T.C. Boyle's latest novel When the Killing's Done? If so what was your opinion of the book?

Interviewee A:

L: Um, so then, last question: um, have you read T.C. Boyle's latest novel: When the Killing's Done?
A: Haha I have indeed haha. Quite entertaining,
L: What is your opinion?
A: Well it's interesting because a lot of, it's half fact and it's half fiction, I mean there are people in there that are modeled after actual people um in the park service and the nature conservancy and in the private sector. There are things in there that absolutely happened and things in there that didn't happen and would never happen so its very interesting to read it as someone who knows the situation and what actually happened down there.
L: Sure. Do you think, what do you think the effect of his novel has been in Santa Barbara in the public view of the island and everything he deals with?
A: I haven't heard of any public reaction to it that has changed the way people viewed the islands or viewed ah management action on the islands.
L: Okay
A: A lot of the management actions taken out there have been and continue to be somewhat controversial but that book really hasn't changed that basic argument at all. I don't know that it's swayed ah people one way or the other. He seems to have treated both sides of the issue equally I'm not sure that he comes down on either side of the issue in the end. Um but maybe it's more that he presents the issue as something that does have two sides and can and should be talked about. He sorta presents it as an issue that has advocates for either side whose arguments are not mitigated by the actions of the other side. There really was and is no middle ground in the book or in the management actions.

Interviewee B:

L: Have you read T.C. Boyle's latest novel When the Killings Done?
B: (laughter) yes
L: And what is your opinion?
B: I um its funny cause the park service people that I've talked to are just like "eh" but the general public people who I've talked to who have read it really liked it and to me I felt like because I was part of all of this um that I know how it was all carried out who some of his characters are amalgams of um I thought his two main characters were way two dimensional. That Alma and um what's his name and and I could see that he was trying to make his point of there coming from different ends of the spectrum but really they they were equally passionate about sorta similar things um but to me they weren't real people and I think that's that was my main. And then the other thing that I didn't like was his uh the character introducing the raccoon and someone coming out with a bag of snakes "Don't give people any ideas!" (laughter)
L: oh yeah – absolutely
B: Yeah
L: Um well, from the general public that you've talked to do you think that – what do you think their response other than liking it did they think that it did a good job of portraying both sides of the story or?
B: I think that they got what he was trying to do.

L: mhmm
B: Um so yeah. [There was this one thing] A few weeks ago I was on our boat coming back in from one of the islands and there was a couple on the boat. Um, umum that way was. Okay so I was standing on the boat and a guy started talking to me and he'd been hiking on Santa Barbara island he was saying oh we were out there babysitting the island for the sea bird people and uh I was reading the book – he had it with him. He wanted – what he asked me was 'how much of the history that was in in it is true' and I said it was all true up to like the 1980s and then he started disguising the characters you know cause people were still alive so he kinda changed it to some degree and then he called his wife down cause she was in another part of the boat and he wanted her to hear that cause we were having a discussion about the book and I think he looked at it somewhat critically and I think we both agreed on this in don't be giving people any ideas about bringing exotic animals out there. But as I talked to him more it turned out that he was Mark Bittner who wrote and was in the film the Wild Parrots of Telegraph Hill I don't know if you've ever seen that. It's probably eight or ten years old maybe not quite, maybe more like six or eight years old but he and his wife are from San Francisco and he had started, lived on telegraph hill, and started noticing all these wild parrots that were nesting sorta roost in the trees around his and then he got to really just identifying them and monitoring them and naming them and feeding them and doing all those things but so he did this for a period of years and wrote a book about the experience and then um met and somehow in the course of it met this woman and she ended up marrying him and she was a film maker and she made a film about it. But you can get it on Netflix so as a person whose been involved with um … false nature in a cultural environment I thought his take, or just talking with him about it was an interesting thing because he wasn't from here he didn't know the islands he didn't know the uh the history of any of that but he was coming at it from sorta a cultural observer kinda view point.

Interviewee C:

L: Have you read T.C. Boyle's latest book?
C: I started it but I got distracted so no I haven't read it. It was I read the first couple of chapters and it was eerily familiar. But what really got me was just reading the acknowledgements where like half the people in the acknowledgements are people who are still in the park here and people I work with every day so it was a little spooky to begin with and I have it and I'll pick it up and read it at some point but…
L: Have you had any discussions with people in the park service or people in general?
C: Only on the most cursory levels and basically it was some people thought it was really really accurate, aside from being fiction that it was, that it really mirrored some of the events that went on and other people just thought it was a boring book.
L: Alright
C: But I've only had the most cursory discussions.

Interviewee D:

L: Um do you have any opinions on the novel When the Killing's Done?
D: Yeah, I haven't read it.

L: You haven't read it?
D: Not going to for awhile yet.
L: Okay
R: I decided to let it be out for about a year before I read it. Um you know I'm not characterized in it much, well a little bit. But you'll talk to [other interviewee], you're gonna talk to [other interviewee] right?
L: Yeah
D: She'll, she might have an opinion. Um what I know about it, see and I haven't read it, so but what I know about it is you know I think that the author took on the struggle of um animal rights versus you know sorta naturalness. And it's unfortunate that it's a novel you know that uh cause you could have done a true one and even the true story would have been. People would have loved to read it because it was so bizarre.
L: Yeah
D: You know a lot of the events that occur in it actually occur.
L: Hmm
R: They didn't necessarily occur with the pigs, they may have occurred with the rat project or vice versa.
L: Okay
D: But um the little that I've read he captured the players pretty well.
L: Okay
D: Have you seen the trailer to it?
L: Is there going to be a movie?
D: No the way he, T.C. Boyle, does his books is he does trailers to them.
L: Oh
D: So type it in and watch the trailer.
L: Okay
D: Oh it's worth watching
L: Alright
D: And the trailer – that meeting actually happened.
L: Oh wow
D: And it's not played exactly that way uh and the woman speaking uh although there was a woman there at the time of that event I was the one speaking. But that doesn't hurt my feelings at all. Uh but uh yeah a lot of those events occurred.
L: Hmm
D: Yeah – even the trying to spread the antidote on the island.
L: Huh oh wow.
D: You haven't read it then.
L: Oh no, I have.
D: Oh you have?
L: Yeah I'm surprised that that happened. Er like actually…
D: Oh yeah, that really happened.
L: Wow
D: Interesting little things.
L: Yeah
D: But you know people are passionate. You know and I think that as long as you don't harm people – people need to be passionate about what they believe in. It doesn't matter

if you're right or wrong – as long as no one gets hurt. Be passionate – be passionate about something. Hey – we're passionate about what we're doing.

Interviewee E:

L: Have you read T.C. Boyle's latest book?
E: Oh yeah.
L: And do you have any opinions on it?
E: Uhuh yeah I do. Yeah yeah um well I … I think I think it was pretty good. Um Boyle did bring some of the issues that we deal with to the public in a way that is apparently more readable for the public than what one of our environmental impact statements might be. But I did wish that there had been more sorta examination of the values between the varying groups and really talking about the consequences of going down one road or the other and what some of the different paths would be. As opposed to what I saw as he kinda set out with these antagonists at extremes and then created a very emotional and escalating uh interaction between them that eventual resulting in people dying so. So to that extent that was not reality, that's not our reality. There are some scenes in the book that are amazingly close to what our reality is so there are some things that he captured quite well. And he did work with people on our staff, or he talked some with I should say he talked some with myself and [other park employee] and um I don't if… and maybe a couple of other people on our staff. We worked closely with the nature conservancy and I don't know who else he talked with. But he did capture certain things about um the way we worked with the nature conservancy some things with the personalities with certain individuals, there were some things that were right on. He captured, there's uh a public meeting um that happens at the Santa Barbara Museum of Natural History in the book. It was actually a meeting about pig eradication from Santa Cruz Island and in the book he makes it about rat eradication about Anacapa Island and he also heightened the conflict of that. But there was a lot about that evening that was actually correct in terms of the setting and the emotions and the people that were there it's and what either T.C. told me or no Lotus Vermeer with the Nature Conservancy told me was that T.C. Boyle said he was not at that meeting which amazed me because somehow he captured that. So he was very good at capturing people and um cultures and sorta how some people - how we think a little bit but um I think that there was a missed opportunity with delving a little more deeply into the different value systems. Yeah.

Interviewee F:

L: But my last question is have you read T.C. Boyle's latest novel?
F: When the Killing's Done?
L: Yes.
F: Yes I have read his latest novel.
L: What are your opinions on it?
F: Um I was frankly a little exasperated with uh the author um I, in trying to portray the conflict um he he I think in order to neces to create this you know antagonism he definitely focused on I think the extremes um which is often not the case. Um I um I so I have you know I enjoyed it up to a point but then when he, this was the final straw for

me: when he had those um raccoons introduced to the island and then had the wildlife biologist not only had them trapped and then subsequently released one of them and then subsequently it was able to be uh it escaped and for her to turn around and say oh well maybe they came out here naturally. No, that was so far, so far from reality that that was the final straw for me. There was just no way that any wildlife biologist would um would've known that maybe something was – this is not right. You just don't run across you know an animal that size on an island and not think something was something's not quite right. And certainly even if you suspected well it might be there on its own you certainly would not just leave it – you would one you would uh start looking for making sure or at least start surveying for it and others out there to see if there was a population established. Uh we ran into this problem with the sighting of the snake on Santa Barbara last year and it was sort of you know um by one of our volunteers um she was she was sure it was a snake she said she's deathly afraid of snakes. But when we tried to pinpoint where it was there was some discrepancy with where she said it had been and her description of the area and um but we we didn't just say oh okay well you know we'll keep our eyes peeled. No we actually put out 40 snake points in an effort to see if there actually was a snake out there. So we I mean in that aspect just turning your back on this introduced animal and saying oh well – you know no that was the last straw for me um so I would not say that I um it's my favorite book. Okay, did you read it?
L: Um I'm working on it now.
F: You're working on it?
L: Yeah I'm about 70 pages left.
F: Okay, I think that working on it is an apt description um. Well one I've read him before and outside of I think The Tortilla Curtain I've had a hard time with his style of writing and so some authors you can just read and its just like you know its easy but with him for whatever reason his style I don't find it easy. And so uh and this was again an example that um and so somethings he got right but there were some small things like um these the wildlife biologists who were these environmental people you know and but and yet they used an electric razor you know you don't, anybody who sorta comes from that sorta ethos - electric razors are not something you really want to use. You use a regular razor so um so it was those little inconsistencies that well this doesn't quite seem right. But anyways that's just me. I mean I just picked up on that stuff, I don't know it just didn't seem like he had spent enough time talking with people and being out on the islands to really make it feel um like he knew it seemed in some ways a bit artificial.

Interviewee G:

Enjoyed the book. Good description of the island the story. And it was really fun to read knowing the characters. Super not [other interviewee] – [other interviewee] and Lotus. Enjoyed style. Good job showing contradictions like the biologist is a vegetarian. Guy raccoons saving. Conflicts
Haven't heard about the public.

One question that I added after an interview correspondence with interviewee D was:

How would you describe the goal or purpose of the Primary Restoration Project?

Interviewee A:

L: Okay. Um why do you think that it's important to return Santa Cruz Island or any environment to… Well okay, first of all I have a question um what, I had been informed that part of the goal of the Primary Restoration Plan was to return the island to pre-European contact. Would you say that that's accurate or…
A: Ah I wouldn't say that that's exactly accurate because you can never return a foliage to pre-European contact, ah state. I mean some things will likely be out there for a long time for example alien grasses - we'll probably never get rid of alien grasses. However, and that's what you said is what you'd call static scene management – trying to return a piece of land to a certain point in time which doesn't really work and its not - it's a very simplistic goal and its really not one that the park service um tries to implement. So I wouldn't say that that per say is the goal of the primary restoration plan for Santa Cruz Island. I would say that the goal of that plan was to remove the major um unnatural influences on the environment out there. And return some others to the environment return some native elements to the environment. So the um the major unnatural elements were of course the feral pigs and those were removed successfully and I think by 2006. Ah one of the larger questions is nonnative plants and they're certainly um a fair number of those out there but they have relatively less influence on the environment than the pigs did. One of the elements that were returned to the environment were ah bald eagles which had bred successfully on the Channel Islands till about 1950s or so by which time the last of them disappeared do to DDT contamination and also direct persecution, but now there are over 30 bald eagles on the northern Channel Islands and as many as ten active nests every year so that's one element that is returned to the environment and of course the recovery of island foxes ah has been a primary goal as well. And that has also been successful.

Interviewee D:

D: When I look at ecological restoration I'm looking at restoring processes. Not a point in time, cause you can't get the point in time back. You lost it, you lost it. But what you haven't necessarily lost are the processes. So if a river was diverted and then you go to restore the river you're not necessarily restoring the river itself. You're restoring its process. And by restoring that process you can then keep the ecological processes going that were dependent on that river. So we just did a wetlands restoration and the whole idea was not necessarily to reconstruct it the way it used to be. Because first of all, we don't know exactly what it used to be but how can you reconstruct it or restore it so that the wetland function can continue? Because the wet land function was pretty much destroyed. Water was diverted. Topsoil was put on top, so there was still wetlands soil that was there but it wasn't functioning as a wetland because that soil, the topsoil wasn't in ah the proper positioning with ground water. So you had wetland habitat you had wetland but you don't have a habitat when it's buried. So you might have had something way down here, so the idea was to take off the overburden. But you had to construct it somehow and so is it exactly the way it was? No. But is it functioning? I think we gave it

the opportunity to see if it can function as a wetland again. Will it? We hope, that was our objective. Ah there's always a chance that it won't but the whole idea is – not a point in time
L: Right
D: It's a process.
L: Okay
D: So that's why we've been really adamant here about removing stressors.
L: Uhuh okay
D: Is that they can drive an ecosystem, so if you believe like we do here that you're trying to allow ecosystems to function, and allow the processes to function then you have to remove the stressors. So in our case we had pigs, we had rats, we had donkeys or mules and ah rabbits. The thing is well those weren't part of this natural system out here so you remove. They did cause some harm, they did change the way the landscape works but um now that you've removed them there is a chance that the natural system, or some sense of the naturalness can come back. Because you've taken away that ecosystem driver that was not native to the islands, that's important to us.

Interviewee E:

L: Okay um so what would you say was the goal of the Primary Restoration Plan Project?
E: Like the EIS? Is that what you're looking at? With the removal of the feral pigs?
L: Yeah I think that that that was it, it was a project that spanned about ten years and I've had it explained to me in the past as um the goal being to return the island to pre-European influence. I don't know if you agree with that or would rephrase it or …
E: I would rephrase it – we never we would not. So we had we actually had a document call the Santa Cruz Island Primary Restoration Plan – it was an Environmental Impact Statement plan and EIS and I doubt that we ever used that term in there.
L: Okay
E: But that uh that term was used um well that that wording has been used in the past in the park service or in advisory groups to the park service you know sorta a benchmark for um what we consider native versus nonnative. So um but so Santa Cruz Island pre-European that is a benchmark for identifying species that are native less - but with the understanding that things are always changing and that um introductions and extirpations so continue to happen so there are – do I have an example? I don't know if I have an example of a species that has moved onto the islands you know since uh say the late 1400s that we consider native. I don't know but the – its probably has happened. So we would look at something that was on the island and go – oh there's no old records of that but native to mainland California it could have gotten over here. Certainly with birds and things like that so its not a static - we are going back to that - it is um what we want to go back to are the natural processes – meaning the uh ecosystems that are dominated by uh native species and habitats. And the reason for that at the islands is because these islands contribute to worldwide biological diversity.

Interviewee G:

Processes – not trying to reset the clock. What are you trying to achieve n when back in time. Complex food web and many steps. And even with the wetlands project – resetting the clock and clack and then letting nature take its course. Undoing actions.

The semi-structured nature of my interviews allowed space for discussion beyond the confines of these specific questions. However, I have limited my analysis to the specific questions that I designed to unearth the connections between nature and culture in the minds of those people most involved in shaping the public's perception of the natural world. I have focused my analysis of these interviews on the specific language that the interviewees used to answer my questions.

Chapter 3

Language is the primary mode through which we interact with nature – in order to discuss any natural phenomena we must first translate it into language. This translation is the primary way in which nature is affected by culture. By analyzing the specific language that the interviewee's used when discussing nature I am able to delve into the deeper connections between nature and culture. Specific words like "process" and "possibility" reveal engrained cultural philosophies that affect our perception of nature.

The word "processes" was used in response to several questions: the interviewee's definitions of nature, what they believe is the natural state of Santa Cruz Island, as well as in response to the goal of the restoration project. Interviewee D insisted on the use of this word when discussing the goal and purpose of the restoration project: "When I look at ecological restoration I'm looking at restoring processes. Not a point in time, cause you can't get the point in time back. You lost it, you lost it. But what you haven't necessarily lost are the processes. So if a river was diverted and then you go to restore the river you're not necessarily restoring the river itself. You're restoring its process. And by restoring that process you can then keep the ecological processes going that were dependent on that river" (D 28). Despite its common usage and obvious importance, the exact meaning of this word was never defined in the interviews.

The most commonly used definition of process according to the Oxford English Dictionary is "a continuous and regular action or succession of actions occurring or performed in a definite manner, and having a particular result or outcome; a sustained operation or series of operations" (Process). This definition provides the general definition of a process and can be related to interviewee D's response. However, this

definition does not help pinpoint the specific context for the word's common appearance and importance with regards to restoration projects. For this a more specific understanding of 'process philosophy' as provided by the Stanford Encyclopedia of Philosophy is more informative. Nicholas Rescher described the definitive nature of process philosophizing as follows:

> What is characteristically definitive of *process* philosophizing as a distinctive sector of philosophical tradition is not simply the commonplace recognition of natural process as the active initiator of what exists in nature, but an insistence on seeing process as constituting an essential aspect of everything that exists — a commitment to the fundamentally processual nature of the real. For the process philosopher is, effectively by definition, one who holds that what exists in nature is not just originated and sustained by processes but is in fact ongoingly and inexorably *characterized* by them. On such a view, process is both pervasive in nature and fundamental for its understanding (Rescher).

This way of seeing and understanding the world prioritizes processes over the items, or "modes of change rather than fixed stabilities" (Rescher). This illuminates part of interviewee D's insistence on restoring processes rather than a fixed point in time. Rather than aiming for static state management of the park the National Park Service uses the language of "restoring processes" in order to achieve a dynamic management system, versus a static management system which would aim to restore the "fixed stabilities" in order to establish a particular ecosystem. The dynamic management system allows the Park Service to work with ecosystems, which are constantly changing regardless of

human involvement (Marris 4). This also allows them to address the uncertainty in their projects. For example, when interviewee D discusses restoring the wetland, “the whole idea was not necessarily to reconstruct it the way it used to be. Because first of all, we don’t know exactly what it used to be but how can you reconstruct it or restore it so that the wetland function can continue” (D 53). Basically, they don’t have to worry about the exact parameters of the land, or which species come to take advantage of the habitat because these details are encompassed in the “wetland function” that will follow if the park service restores the process.

Dr. Bryan Norton, professor of philosophy at The Georgia Institute of Technology specializes in the application of practical philosophy to the problems of species loss, degradation and "illness" of ecological systems, the problems of watershed management and other environmental issues. In his chapter “Conservation Biology and Environmental Values: Can There be a Universal Earth Ethic?” in Protecting Biological Diversity: Roles and Responsibilities, he develops a theory of process perspective on biodiversity through three different phases of “biological resources” conservation. The first phase focuses on individual species, the second phase was a mere expansion of the first with continued emphasis on the “protection of objects;” Norton argues that biodiversity has been wrongly focused on “ ‘inventory’ of species, genes, ecosystems and has neglected processes that create and maintain natural values” (Faith). This leads back to the issue of static management – management for a particular inventory of species and objects, rather than the dynamic management of the third phase, which according to Norton is “based on ecosystem processes” (Faith). These philosophical definitions of the term processes as they relate to biodiversity and conservation illuminate the meaning behind interviewee

D's emphasis and insistence on the goal of the Primary Restoration Plan being to restore the natural processes.

I introduced the question of what the goal of the Primary Restoration Plan was at the same time as I introduce the possible interpretation that the goal of the plan was to return Santa Cruz Island to the state that it was prior to European contact. All four of the interviewees who answered this question disagreed with my usage of the term "pre-European contact." Interviewee A did so most clearly by rejecting it on the basis of sounding too much like "static scene management – trying to return a piece of land to a certain point in time which doesn't really work and it's not - it's a very simplistic goal and it's really not one that the park service um tries to implement" (A 53). The other three interviewees who answered this question: D, E and F all mentioned the importance of trying to restore the processes rather than restoring the environment to a particular point in time – which was generally rejected as an impossible goal.

Interviewee D also used the concept of processes in their definition of natural: "And what's big about the natural component is that it has the processes, the physical and biological processes in place" (24). If this response is considered in the context of Dr. Norton's phases of 'biological resources' it becomes clear that interviewee D as well as the other interviewees who mention processes are firmly settled in the third phase of conceptualizing the conservation of 'biological resources' with their emphasis on the processes rather than the individual elements or objects of nature (Faith).

When addressing the issue of restoring processes interviewee D specifies the importance of resiliency, "We know it's [nature] getting hammered all the time with air quality and some places it's acid rain and now we have global climate change and heating

but the thing is if you don't – my view is you'll loose these ecosystems if you don't allow – it to have resiliency. So that's what we look at is this idea of resiliency. Is if you can have all of the components that used to exist on the islands or still exist on the islands that they're out there and they're robust and they're healthy" (D 24). The goal of the Park Service is not limited to simply restoring processes but goes further to try and establish resiliency within the process so that it can persist through challenges such as climate change.

The use of the word possible with regards to the restoration project by interviewee A: "And like I said it's so that you can have a functioning ecosystem that approximates as close as possible um the type of ecosystem that functioned ah before those human influences took over" (A 31) draws attention to an important facet of restoration. The use of the word possible brings the whole concept of possibility into restoration work. One common definition of restoration provided by the Oxford English Dictionary is "the action of bringing back into existence" (Restoration). By accounting for the emphasis interviewee's placed on restoring processes and the integration of the key term "possibility," it is possible to formulate a definition of restoration specifically for environmental restoration. The environmental restoration attempted by the National Park Service is the action of bringing back into existence through the possibility of processes.

Possibility draws attention to the utopian and illusionary property of restoration, and the idea that restoration is possible through the integration of process philosophy as described by Nicholas Rescher as "the insistence on seeing process as constituting an essential aspect of everything that exists – a commitment to the fundamentally processual nature of the real" (Rescher). The "commitment" mentioned by Rescher requires that one

believes in the possibility of the "processual nature of the real" (Rescher). With restoration it is not "the **action** of bringing back into existence" that is problematic but rather the "existence" that needs to be clarified. Restoration is not bringing back a previously specific, untouched, unaltered existence but rather bringing back to first a possible existence and second bringing back to existence which means 'life' but not necessarily an existence that has been lost since that by definition is always impossible.

The possibility of bringing back into existence is viable only through the restoration of processes. The possibility of an existence that is no more (i.e. returning to a pristine state of nature) is physically and conceptually impossible. This concept is contradictory to the very concrete basis of restoration – an effort to restore a thing to a former state or position. Thus, the use of the word 'possible' draws direct critique to the concept of restoration. It puts the entire concept of the reality of the success of such an endeavor into question, because it can be argued that it is never possible to return to an original state. With the restoration on Santa Cruz Island, the baseline or original state that the park was trying to restore the island to could be summarized as pre-European contact.

The concept of the possible as it invokes a utopian illusion could be seen as a pointless endeavor – because of the impossibility of actually attaining the utopian illusion – or it could be viewed as the ultimate drive of the individual. The definition of possibility as "the fact of something (expressed or implied) being possible to one, whether through circumstance or power; capacity, ability" shows that striving for the possible is an attempt to realize the extent of our power and capacity as human beings (Possibility). Interviewee E addresses this: "Otherwise we're making a choice to loose them [natural biodiversity]. So it's a human choice, because we have the power now. We

have the power. People didn't have the power before and I think that's the big difference between - you know people talk about: okay are people part of the system or are they not part of the system" (E 33). E clearly believes that since it is in our power to restore the planet in terms of how we think it makes most sense and ensure its viability for our own sense of survival it is a conscience choice whether or not we work to save these environments. In terms of restoration the concept behind possibility allows us to create new existences, new states through processes but not "recovering' per se that which has been lost.

Environmental restoration can in a sense be boiled down to a fight for survival. This is conceivable through the recognition that our survival is tied to the viability of the Earth. As a species we have two possibilities: one is the possibility to strive to save the Earth by attempting to restore it to what we think its original and natural state was and should be. Or the possibility of disregarding nature in favor of technology and industry – in essence a faith in our ability to create new possibilities to ensure our survival. However, this choice can be avoided by the idea of restoration as restoring the Earth to new possibilities of the original state of nature, which actually does not mean that technology and industry cannot be part of the process.

Although it is possible to avoid the choice between these two possible ways of ensuring our survival – the dichotomy that was first presented is related to ideologies and one of the essential paradox's in Western philosophy. The restoration model relies on the idea of returning to our conception of the original state as the method of ensuring our idea of survival. Its counterpart in Western philosophy is the embodied by the Enlightenment's striving for progress. This progress could be described as the creation of

a series of new originals to ensure survival. Interviewee F addresses this with the anecdote about the rancher's perspective of the restoration project. The rancher kept pointing out to interviewee F that if they did not work to keep back the coyote bush it would take over the grassland. This was exactly what interviewee F was hoping for but there was a clear disconnect between their perspective and the rancher's. Interviewee F addressed this disconnect as follows: "And so there's still I think for some people um that sort of mind set that the land um the land is there for to be used um and if you remove that factor then it it so that it is I don't know it's going against progress if you will" (F 37). The idea that "the land is there to be used" and controlled by humans in the name of progress is part of the Enlightenment philosophy that progress and survival is tied to the creation of new originals.

The point of view and positionality of the interviewees is important for the analysis of the interviewee's responses to the questions. First of all, the interviewees speak from their academic disciplines. The extent of their internalization and identification with their particular discipline permeates the responses. Simply asking the cultural studies interviewees questions addressing the field of biology made them incredibly uncomfortable. As did asking biologists and ecologists more theoretical questions. They limited themselves in their responses through this strong self-identification. One explanation of this is that they see themselves as in "action" within the processes rather than thinking about them and what they mean in a more conceptual realm and their implications for how we, as human beings, grasp our relationship to our surroundings.

The interviewee's strong self-identification with their disciplines affected my research in that during the interviews I picked up on the interviewee's discomfort and chose not to push them to answer every question. Although this resulted in a loss of potential material I do not feel that it affected my overall argument. As a researcher I feel that this could be an interesting issue to analyze further by pushing the boundaries between academic disciplines such as cultural and natural studies.

All of the people that I interviewed have chosen to commit themselves to restoration. It is important to account for the fact that this is not their hobby; this is their purpose in life. They have tied themselves through their work, their livelihood, to this cause. They believe fully in the ideology that the possibility of restoration is the way that they will work to ensure our survival as a species and a planet, similar to doctors restoring bodies, and anyone in the business of 'fixing' things: peoples, bodies, or systems. All of these people refer back to what was to at least 'recuperate' that and, if possible, improve it beyond what it was. When posed with questions like mine – the importance of restoration and the definition of natural, and how we interact with nature through this framework – they are put in a position of defending their livelihood. However, this was friendly fire. My gut reaction is to agree with their position, their ideology of possibility and returning to the original, in terms of processes and possibilities as previously discussed.

This connects with the dichotomy between nature and humanity. Nature is a force of its own in this world. It works to change and shape the Earth in a similar way that humans work to create change. However, nature is understood as acting from a less consciously self-interested place as compared to humans. As a species, we know that we

act out of self-interest and that our actions are inherently flawed. Thus, one of the appeals of restoring nature to its original state is the assumption that nature "knows" best. Nature's "knowledge" is that of intuition and innocence rather than the conscious knowledge of humans. This is related to our constant striving for something, some power beyond ourselves. Nature is one embodiment of this power, similar to religion. In terms of Christianity the difference between natural knowledge and human conscious knowledge is depicted in the fall from the Garden of Eden. The Garden represents one conceptualization of the original state of nature – upon eating the fruit from the Tree of Knowledge Adam and Eve gained conscious knowledge and were consequently banished from the Garden.

Ultimately, restoration is about us – human beings. It is one attempt to ensure our idea of survival by trying to return to what we believe to be the original state, before we as humans began making drastic changes to Earth. In a religious sense we are trying to return to the Garden of Eden and the time before we sinned. In this sense, restoration is an effort to ease the pervasive anxiety that our idea of survival is at risk. One example of this is the emphasis within restoration of preventing extinction. This addresses our culture's sense of unease and discomfort with endings and the transience of life on this Earth: in other words, with our own mortality.

Interviewee E gave the most thoughtful response to question nine: in your opinion does nature exist outside of human conception and use? They responded, "So the concept of nature I would say no it does not" (E 46). They went on to elaborate "I think once you put a name on it then it becomes our concept" (E 46). In this way the interviewee distinguishes language as the primary way that we interact with the world – or

specifically nature. Interviewee E conveys the idea that as soon as we name phenomena we begin seeing them through the human lens. Thus, the concept of nature is a human construct. By framing their answer in this way interviewee E can maintain the belief that "there are realities… outside of what we perceive" (E 46). She uses the example of a tree falling in the forest to make her point: "similar to if a tree falls in the forest and no one hears it does it make a sound? Well I guess it doesn't because sound is what you hear, but did it put out sound waves … these things exist so ah it's just our way of trying to make sense of them… so we can talk about it" (E 46). In this way interviewee E identifies language as the bridge between reality and human concepts. Language is the way we conceptualize nature and thus one of the primary ways that we interact with nature on an intellectual level.

While interviewees E and B were the only two to say that they do not believe that nature exists outside of human conception and use all of the interviewees were quick to say that wilderness is completely a human concept. This may be because there is actually a United State's legislation referred to as the "Wilderness Act" which defines wilderness in order to establish a national system for its preservation. The main definition of wilderness in the act is "an area where the Earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain" (H.R. 88-577). This act was referenced in many of the interviews, but interviewee E provided the most thorough interpretation. Interviewee E discusses what they interpret to be an intentional decision to use the word "untrammeled" in the definition of wilderness. Although it has frequently been misread or misinterpreted as "untrampled," the two words have distinctly different meanings. With regards to the concept of wilderness

interviewee E describes the term as follows: "if something is untrammeled it is unleashed its allowed to function on its own. So it's not that humans can't be in the system but we don't control the system" (E 46). This definition of wilderness is ideal and indeed necessary for the park service to function, because it bridges the gap between wilderness and humans. The park system functions because it allows and encourages people to visit the parks, thus the specific use of the word *untrammeled* in the legislation is a crucial term for allowing humans to coexist in nature even when the specific nature is designated as wilderness.

This chapter has focused on the specific language interviewees used in response to my questions: processes, resiliency, possibility, use, wilderness and untrammeled. Language is the interface between nature and culture - according to interviewee E it is the way that phenomena like nature become human concepts. The specific use of the word *untrammeled* in the "Wilderness Act" is fundamental in the act's definition of wilderness especially in the application to National Parks. The language used by the individuals I interviewed and the language used in legislation like the "Wilderness Act" actually shapes our concept of nature through the way National Parks are managed. Interviewee E uses the term *untrammeled* in the "Wilderness Act" to discuss the word's far reaching effects: "so once a law is passed and you have this conceptual idea of what your trying to achieve," then it is the regulations that are passed that "allow us to make that a reality" (E 46). Through this system the word *untrammeled* is expanded to include or be reinforced by regulations such as no motorized vehicles, no bicycles, no constructing permanent structures. All of this essentially shapes and determines our

interactions with and conception of *nature*, at least with respect to how it has been presented in National Parks.

In many ways *nature* is translated throughout this process. With legislation it is constructed through the language of politicians – people who may be nature enthusiasts or may interact mainly with nature through publications such as *National Geographic* or *Planet Earth.* National Park policy makers who are solidly grounded in their own professional fields whether that is archeology, history, or most likely biology or ecology then interpret that language to create the regulations that make the legislations into reality. That reality is then what most of the public interacts with and uses to build their own concept of what *nature* is. In the long run the public will vote on future legislation based on the *nature* they encounter in National Parks.

Conclusion

The position of environmentalists is strengthened by more fully acknowledging the interdependent and reciprocal relationship between nature and culture. One example of this is the profound ambiguity amongst the interviewees in their definitions of nature. One might think that the definition of nature would be well established and solidified in an organization whose goal is to restore environments to their natural state. Surprisingly, there was no single clear definition provided by my interviewees. However, by examining this ambiguity and the specific language used by the interviewees to answer the questions, the relationship between nature and culture became clearer.

I personally find exploring the relationship between nature and culture important because it strengthens the position of environmental organizations like the National Park Service and their restoration projects. William Cronon effectively articulates this same opinion in the introduction to the book Uncommon Ground, which also examines the relationship between nature and culture:

> Indeed, it is precisely because we sympathize so strongly with the environmentalist agenda – with the task of rethinking and reconstructing human relationships with the natural world to make them more just and accountable – that we believe these questions *must* be confronted. To ignore them is to proceed on intellectual foundations that may ultimately prove unsustainable. We believe that any movement that merits the most passionate support of its followers – as environmentalism surely does – also deserves their most thoughtful and soul-searching criticism. Troubling as such criticism can sometimes seem, its goal in the end must

> be to deepen and enrich our understanding of the problems we struggle to solve, by helping us see the unexamined, sometimes contradictory, assumptions at the core of our own beliefs – assumptions that can detract and defeat us if we embrace them or act on them unthinkingly (Cronon, *In Search of Nature* 26).

Analyzing the extent of our relationship with the natural world and reshaping how we think of our interactions with nature is important because it strengthens the argument that we are responsible for the way we treat the Earth. The interconnectedness of nature and culture is often overlooked – and nature is framed as an entity completely separate from humans – however, by delving into this unexamined area of environmentalism the movement itself can be strengthened. Indeed, this idea was what drove me to investigate this topic in the first place. I love to visit National Parks and to enjoy the protected natural spaces they provide, but I was bothered by the idea of fencing off a plot of land and calling it more natural than the rest of the country. The extensive Primary Restoration Project on Santa Cruz Island consumed me with its paradoxes and contradictory ideas. There were several inconsistencies surrounding this restoration project that I wanted clarified. I wanted to know what made the environment before the restoration project unnatural and why was it necessary to go to such great lengths – extirpating the sheep, exterminating the pigs, reintroducing the bald eagles – to restore the land to basically pre-European influence? I was curious who the environment is for, how the decisions regarding such a huge environmental project where made, and who was involved. These questions shook my understanding of the purpose of restoration and preservation at a core level.

Although I was able to develop a better understanding of the relationship between nature and culture, there were many questions that I was unable to fully explore regarding the connection. Who is nature for in restoration projects like the Primary Restoration Plan? How do you balance preservation and access? How does the nature we interact with on a daily basis relate to the nature found in National Parks? How are we as human beings actively changing nature? What new forms of nature are we creating? How are science and the study of natural phenomena based in cultural values and practices? That said, I hope that this thesis established that nature is a cultural construct and recognition of this fact strengthens environmental consciousness. It is important we investigate these questions to deepen our understanding of how nature and culture are related and to better our relationship with the Earth that we depend on for survival.

I gained a better understanding of the complex relationship between nature and culture by interviewing National Park employees. By actually asking the questions that troubled me, I was able to seek out answers by analyzing the language with which the employees responded. Both the interviews and my literature research confirmed my initial idea: nature is socially constructed. The heart of our concern about preserving the natural environment, biodiversity, and areas such as Santa Cruz Island National Park is a concern for our survival as a species. As Koert Van Mensvoort says, "Nature as a whole wouldn't really care if the living conditions on Earth would be radically altered and became inhabitable for people – evolution would continue nonetheless" (86). Recognizing survival as one of the driving forces behind restoration integrates culture into nature on an essential level: the act of restoration itself is rooted in the concept of possibility. A striving for a return to our idea of the original state – a return to the natural

landscape before humans ruined it. This, too, links nature and culture together as we invest cultural values in nature.

Acknowledging that our interaction with nature is socially constructed does not necessarily lessen its value or weaken the position of those people fighting to restore and preserve nature. Indeed, this recognition may strengthen environmentalist's position. Steven Vogel makes this very argument in his book Against Nature: "To view the environment as socially constructed is to see it as something for which we are literally *responsible;* it is in this recognition of our inextricable connection to and responsibility for the world we inhabit, it seems to me, that the source of a morally justifiable "environmental ethic" is to be found" (10). Instead of viewing nature as an 'other' and separating it completely from human influence, recognizing nature as a social construct acknowledges the many ways we affect nature. This recognition of the full effect of human agency in shaping nature carries with it the responsibility for nature. Interview E acknowledges that nature is a social construct that we interact with through language – specifically the language of legislation and science. We shape nature into what we believe it to be through this language and through the various translations between these disciplines. Recognizing our agency in shaping nature strengthens the "environmental ethic" by increasing our responsibility for the Earth we live in. Thus, despite the initial discomfort with stating that nature is a social construct, this acknowledgment in fact strengthens the environmental movement.

Bibliography

Cronon, William. "A Place for Stories: Nature, History, and Narrative." *The Journal of American History* 78.4 (1992): 1347-376.

Cronon, William. "In Search of Nature." Introduction. *Uncommon Ground: Toward Reinventing Nature*. 1st ed. New York: W.W. Norton &, 1995. 23-56.

Cronon, William. "The Trouble with Wilderness; Or, Getting Back to the Wrong Nature." *Uncommon Ground: Toward Reinventing Nature*. Ed. William Cronon. London: W.W. Norton &, 1995. 69-91.

Dana, Samuel Trask., and Sally K. Fairfax. *Forest and Range Policy: Its Development in the United States*. Montréal: McGraw-Hill, 1980.

Faith, Daniel P., "Biodiversity", *The Stanford Encyclopedia of Philosophy (Fall 2008 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2008/entries/biodiversity/>.

Foster, John Bellamy. *Marx's Ecology: Materialism and Nature*. New York: Monthly Review, 2000.

Galipeau, Russel. "Welcome from the Superintendent." *Plan Your Visit - Channel Islands*. National Park Service. Web. 27 Feb. 2012. <http://www.nps.gov/chis/planyourvisit/index.htm>.

Gherini, John. *Santa Cruz Island: A History of Conflict and Diversity*. Spokane: Arthur H. Clark, 2005.

Haraway, Donna Jeanne. *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. New York: Routledge, 1989.

H.R. 88-577, 88th Cong., Congressional Record (1964) (enacted). Print.

"Humanities Major: Interdisciplinary Studies in Culture." *Scripps College : Academics : Department*. Scripps College. Web. 11 Apr. 2012. <http://www.scrippscollege.edu/academics/department/humanities/index.php>.

Kennett, Douglas J. *The Island Chumash: Behavioral Ecology of a Maritime Society*. Berkeley: University of California, 2005

Langston, N. 1997. "Forest Dreams, Forest Nightmares: An Environmental History of a Forest Health Crisis." Chapter in *American Forests: Nature, Culture, and Politics*. Ed. Char Miller. U. Press of Kansas. 247-271.

Levy, Sharon. "Island Fox Paradox." *BioScience* 60.5 (2010): 332-36.

Marris, Emma. *Rambunctious Garden: Saving Nature in a Post-wild World*. New York: Bloomsbury, 2011.

Marti, Jose. "Our America." *El Partido Liberal* (1892). *Cuban History Begins Here*. Web. 3 Mar. 2012. <http://www.historyofcuba.com/>.

McEachern, Kathryn. "Rare Plant Research in the Northern California Channel Islands." Women in Science: Dinner and Talk. Hampton Room, Claremont. 6 Oct. 2011. Lecture.

Mensvoort, Koert Van., and Hendrik-Jan Grievink. *Next Nature*. Barcelona: Actar, 2011. Print.

Merchant, Carolyn. *The Columbia Guide to American Environmental History*. New York: Columbia UP, 2002.

More, The Lone Woman of San Nicolas Read the Real Story That Inspired the Novel Island of the Blue Dolphins. Read. "People: Channel Islands." *National Parks Service*. National Parks Service. 27 Feb. 2012. <http://www.nps.gov/chis/historyculture/people.htm>.

Muir, John. *My First Summer in the Sierra,*. Boston: Houghton Mifflin, 1911.

Nash, Rodrick. *Wilderness and the American Mind*. Forge Village: Murray Printing, 1973.

Pinchot, Gifford. *Breaking New Ground.* New York: Harcourt, Brace, 1947.

Pollan, Michael. *Second Nature: A Gardener's Education*. New York, NY: Atlantic Monthly, 1991.

"Possibility, N." Def. 1a. *Oxford English Dictionary*. 3rd ed. 2006. *Oxford English Dictionary*. Oxford University Press, Mar. 2012. Web. Mar. 2012. <http://www.oed.com/viewdictionaryentry/Entry/148375>.

Potvin, Catherine, and Bryan Norton. "Conservation Biology and Environmental Values: Can There Be a Universal Earth Ethic?" *Protecting Biological Diversity: Roles and Responsibilities*. Montréal: McGill-Queen's UP, 2002.

"Pristine, Adj. (and N.)." Def. 2a. *Oxford English Dictionary*. 3rd ed. 2007. *Oxford English Dictionary*. Oxford University Press, Mar. 2012. Web. 12 Dec. 2011. <http://www.oed.com/viewdictionaryentry/Entry/151585>.

"Process, N." Def. 8. *Oxford English Dictionary*. 3rd ed. 2007. *Oxford English Dictionary*. Oxford University Press, Mar. 2012. Web. Mar. 2012. <http://www.oed.com/view/Entry/151794?rskey=ClplsS&result=1&isAdvanced=false#eid>.

Public Law 96-199. 94 Stat 74. 1980

Rescher, Nicholas, "Process Philosophy", *The Stanford Encyclopedia of Philosophy* (Summer 2012 Edition), Edward N. Zalta (ed.), forthcoming URL = <http://plato.stanford.edu/archives/sum2012/entries/process-philosophy/>.

"Restoration, N." Def. 2c. *Oxford English Dictionary*. 3rd ed. 2010. *Oxford English Dictionary*. Oxford University Press, Mar. 2012. Web. Mar. 2012. <http://www.oed.com/viewdictionaryentry/Entry/163986>.

Sprin, Ann W. "Constructing Nature: The Legacy of Fredrick Law Olmsted." *Uncommon Ground: Toward Reinventing Nature*. Ed. William Cronon. London: W.W. Norton &, 1995. 91-114.

"Sublime, Adj. and N." Def. 7. *Oxford English Dictionary*. 2nd ed. 1989. *Oxford English Dictionary*. Oxford University Press, Mar. 2012. Web. 12 Dec. 2011. <http://www.oed.com/viewdictionaryentry/Entry/192766>.

"Sylviculture | Silviculture, N." Def. 1. *Oxford English Dictionary*. 2nd ed. 1989.*Sylviculture | Silviculture, N.* Oxford University Press. <http://www.oed.com/viewdictionaryentry/Entry/196186>.

Vogel, Steven. *Against Nature: The Concept of Nature in Critical Theory*. Albany: State University of New York, 1996.