

JAWS OF SIGNIFICANCE:
THE CONSERVATIONIST'S PERCEPTION OF THE SHARK IN SOUTH FLORIDA

by
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in Partial Fulfillment of the Requirements for the Degree of
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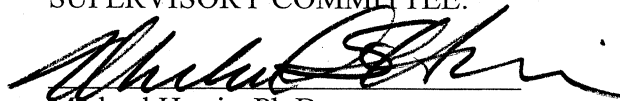
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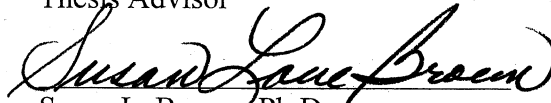
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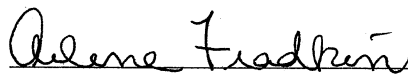


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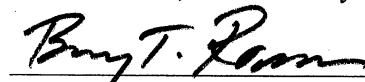
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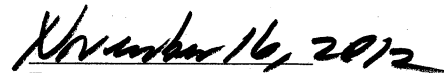
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ABSTRACT

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In examining the intentional relationship between the conservationist and the shark in South Florida, this thesis considers the latter as both a scarce natural resource—caught up in what Clifford Geertz citing Weber referred to as “webs of significance” (Geertz 1973:5)—and as a reflection of dynamic human conceptions of nature: a meta shark. This complex relationship is described by interpretations of conservation discourse recorded through ethnographic interviews that demonstrate how individual conservationists have formed their perceptions of sharks and how these perceptions have been influenced by factors such as personal experiences, film and text, and broad changes in the relationship between humans and nature since the early days of the environmental movement. By linking these perceptual changes with changes in American shark conservation policy, this work not only explains a relationship between culture, perception, and policy, but also celebrates the emergence of a multispecies marine community.

DEDICATION

To the Shark

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PREFACE

In the summer of 2005, I was scuba diving in Papua New Guinea on what is called a “wall dive”—literally a vertical wall of coral reef that drops straight down into miles of blackness. I was kicking hard against the current to get around to the other side of the wall, and when I looked out into the sapphire blue water to my right, I saw three large hammerhead sharks swimming parallel to me—one male and two females. They followed effortlessly for a few minutes as I kicked awkwardly to keep up the pace, and then for no apparent reason, one of the females, a unique silver hammerhead eight or nine feet in length, turned and swam straight toward me. I could do nothing about it; the shark was making all the decisions. She increased speed, and when she was merely a body-length away, she quickly turned and glided back to her group, a bright flash of sunlight reflecting off her powerful back.

I cannot explain why that silver hammerhead swam straight at me on that dive, but I have thought deeply about the meaning of this event. What may have been a simple sensory reaction in her brain has been thought over thousands of times in mine, and though I cannot fully articulate the essence of this encounter, I nevertheless experienced a strange and meaningful connection to this marine animal.

Then last year, I was diving in Fort Lauderdale, and as our boat returned to the dock, a chartered fishing boat pulled in next to us. In the back of the boat lay a dead hammerhead probably the size of the silver shark that introduced herself to me in 2005.

Three sunburned tourists and two crewmembers worked for twenty minutes to hoist the shark by its strange head out of the boat and onto the dock, where they posed for photographs with the bloodied animal. With cigars lit, they got in their cars and took off, leaving the crew to dispose of the dead shark. We divers were horrified.

Feigning innocent curiosity, I asked the captain why they killed the animal, and his reply was “The customers wanted to. You eat meat right? Well, cows are killed for that too.”

With nothing to say in response, I resorted to a year of introspection, trying to clarify just what it is about sharks that make them different from cows or chickens, and just what it is about our dive group that makes us different from the shark fishermen. Ultimately, this introspection has been insufficient to answer these questions, and I now turn to other conservation-minded individuals in search of a common foundation on which our meaningful perceptions of marine nature are based.

INTRODUCTION

Broadly defined as the study of humankind, anthropology typically finds its quarry in terrestrial fieldwork. *Homo sapiens*, the subjects of this endeavor, have evolved to live on the thirty percent of our planet that lies above sea level. Yet as our population increases, we find this small percentage of space is shrinking, both literally (through sea-level rise and land subsidence) and conceptually (through globalization).

More and more each year, we enclose and manage unspoiled lands and the natural resources within to feed our families and grow our economies. It can be argued quite compellingly that there is no longer such thing as “unspoiled” land on Earth; even the deepest jungle and vast desert are affected at least by anthropogenic climate change, if not also by elaborate developments of agriculture and infrastructure. Beyond the shore, recent enviro-political movements have led us to enclose the sea as well—creating arbitrary zones of protection in the open ocean and deciding which species of fish should or should not be resourced. Driving these movements are actions of humans that, at first glance, appear practical and straightforward. Subjected to the anthropological gaze, however, these actions or patterns of action are revealed as tacit manifestations of culture that develop across generations.

As humans increasingly define, delimit, and exploit the biological, spatial, and relational wealth of the sea, our meaningful associations with this vast geography

transform under the pressures of modernity. In the West, the ocean has lost much of its romance, and has become what Taussig (2000) has described as the “forgotten” sea, hollowed out and re-valued. Devoid of passion, occasionally protesting its condemnation with hurricane, tsunami, or rogue wave, the sea is largely a complacent roadway for capitalists, tourists, and knowledge-seekers. The elegant wooden ships of the past are gone. In their legacy are immense steel hulks designed to move the most amount of product from factory to market; or research vessels, crammed with cranes, submersibles, and sampling equipment to efficiently extract and expedite the explainable to the land-based labs of the explainers; or cruise ships, now carrying over six thousand tourists at a time from one fantastic paradise to another overnight. The human-nature dichotomy epitomized in Melville remains strong as struggles to conquer, colonize, and manage the sea are manifest in these commercial, recreational, and scientific pursuits—where meaning develops through cultured perceptions of the world beyond the horizon, and where knowledge enables domination.

Within this lost imaginary are marine animals, conceptually separated from humanity yet inextricably linked to our kind within a complex planetary ecosystem. Like the megafauna that once roamed the earth in plentiful number, the largest marine animals—whales and sharks—are at risk of depletion and demise from human activity. Global populations of pelagic sharks, those that swim in the open ocean, are estimated to have decreased in number by between 70 and 90% in the past three decades (Baum and Myers 2004; Dobson 2008; Gore et al. 2011; Myers and Worm 2003). As the apex predators of an intricate food chain, the survival of sharks is essential to the sustainability of the marine ecosystem. Considerable effort to manage shark populations is thus being

undertaken through small-scale and large multi-national endeavors (Godin and Worm 2010; Topelko and Dearden, 2005).

In the West, this effort is being advanced under the broad banners of environmental science and activism. A concerted effort is being undertaken by conservationists—individuals and groups with backgrounds in biology, ecology, public policy, art, public relations, and numerous other fields—who seek to ensure the sustainability of global shark populations through their influence on public perception of sharks and through advocacy of science-based policy. This thesis focuses on these conservationists; the real people who involve themselves in various activities to protect the shark—from full-time work in governmental organizations to long hours in the lab. Their work generally involves monitoring or census activities, behavioral observations, operation of shark-dive experiences, fundraising through sales of art, and so on. It is supported by university departments, multi-national agencies such as the Pew Environmental Trust (which dedicates an entire branch to “Global Shark Conservation”), and many private sources with interest—for one reason or another—in the protection of sharks. Whether a professed scientist or a spirited “shark hugger,” shark conservationists choose to dedicate a portion of their lives to protecting the shark, and this thesis is largely focused on understanding the cultural context in which this dedication resides.

In this thesis, I approach this context by examining the reciprocity between these conservationists and the animals normally referred to as the Great Sharks: the hammerheads, tiger sharks, bull sharks, and the infamous great white. In other words, the big ones with sharp teeth. Both a scarce natural resource—caught up in what Weber referred to as “webs of significance” (Geertz 1973:5)—and a reflection of a conceptual

change over time, I envision the shark as an animal that has become a companion species to the terrestrial human, its fate intertwined with the dynamic culture of conservationism.

To explore this change, I question how conservationists perceive the shark and how these dynamic perceptions have influenced fisheries policy over time. As human perceptions of animals are largely based on cultural factors, I ask what aspects and events of American culture have led to these perceptions, and thus, how culture affects conservation policy. “In practice” as Susan Board reminds us, “animals are often perceived through ignorance and fear” (Board 2002:139). Yet as my research here shows, there are varying depths of this ignorance that are more accurately viewed as dynamic and highly complex levels of understanding.

Through ethnographic interviewing and archival research, this work examines how the perceptions of conservationists have been influenced by factors such as personal experiences, film and text, and changes in the human-nature relationship since the environmental movement gained momentum throughout the latter half of the 20th century. By linking these perceptual changes with changes in multiscale shark conservation policy, I intend to explicate a concrete relationship between culture, perception, and policy.

This research is presented in four chapters. First—an introduction to the “problem” and the significance of my chosen research. Included here is a description of methodology. The second chapter is a review of the pertinent anthropological literature that begins to contextualize the problem into a dichotomy: the objectification and subjectification of non-human nature in recent anthropology and the value and harm of each approach. The third chapter of this thesis features a contextual meditation on the sea

and the people who dedicate their lives and careers to protecting it, followed by a correlation of historical events and processes of American culture with the interview responses of my conservationist informants. While this chapter might, at times, be read as a lamentation of a romance lost in the throes of the Information Age, it concludes with a realistic and optimistic interpretation of the culture of shark conservation and a description of the human community intimately dedicated to this cause.

For reasons I argue here are deeply cultural, the individuals that make up this community conceptualize and utilize the shark in degrees and capacities that affect not only the shark, but also their own human identities. In doing so, they build and reinforce epistemological foundations that—however altruistic they may be—are plagued by the logical fallacies and practical shortcomings that weaken the case for shark protection. Ultimately, this work serves as an exploration into a cohesive and defensible argument of why sharks are indeed deserving of further conservation measures and how these logical critiques may be overcome

Significance Of Research

This thesis is significant on two primary fronts: first in its attempt to clarify cultured understandings to create a more unified argument for shark conservation and thus benefit the scope and direction of marine conservation policy. Only with a clear understanding of the cultural context of how, why, and when conservationists choose to protect certain non-human nature can we see the present state and future direction of these efforts. In this sense, this research can be called meta-environmentalism: an exploration of value tracing the tributaries of these cultural perceptions of nature.

Second, by clarifying the relationship between humans and the non-human animal and accepting the inherent subjectivities of this relationship, this paper critiques the positivism of the dominant sustainability discourse and advocates an integration of human emotions to understanding how we come to protect certain animals.

Building Cohesion

By better understanding the cultural context in which conservationists and sharks interact, the case for legislative protection of these threatened animals can be strengthened, and what has been a loosely connected quantitative argument by biologists and ecologists can gain the integrity it currently lacks in the policy arena. Recently, environmental anthropologists have been working to link conservation policy with changes to (and changes in) human culture (Brosius et. al 1998; West 2006, 2012). It is no longer adequate to establish protective measures on an ecosystem without considering the lives and livelihoods of the humans within it. While policy decisions are often developed in the boardrooms of Tallahassee, Washington, D.C., or global environmental conventions, the effects of this policy on humans and vice versa (the human dimensions of conservation) has received little academic attention (Gore et al. 2011:166). Yet the work of anthropologists and other social scientists is slowly generating more and more interest in the policy arena; no longer can policymakers ignore the effects of environmental development and degradation on the people of a particular region.

While the physical sciences continue to fuel the fire of evidence-based conservationism, by their very nature they fail to contribute a holistic understanding of the conflict facing sharks. Attention from the social sciences community addresses these

shortcomings by re-integrating the human into local, regional, and global ecosystems and by postulating a human species re-united with marine nature.

As suggested by several participants in this study, the public is becoming more aware of the plight of sharks. Yet spatial and temporal disconnections between Americans and the sea have mired this increased awareness. Compounding these culturally driven issues is the lack of cohesion in the information being put out there by scientists. With policy increasingly dependent on what can be called *good science*, the current knowledge about sharks and other marine life is currently only an unintelligible mosaic of fuzzy facts and disputable figures.

Establishing some level of synergy has proven to be beneficial in other areas of marine conservation. In what has been generally considered a success for the anti-whaling movement, the International Whaling Commission (IWC) imposed a moratorium on commercial whaling in 1982, citing a change in the attitudes of whaling nations toward the harvest of the great whales (Anderson 2011:515). In the whaling issue, which is visited again in the third chapter, an overwhelming and integrated tide of moral, ethical, biological, and ecological arguments came together in the global meetings of the IWC to promote this moratorium. This thesis will demonstrate how a cohesive drive of attitudinal change toward sharks can justify increased measures of protection for these imperiled animals.

Critique Of Positivist Conservationism

In addition to building cohesion in the case for protective shark policy, this project examines the inherent problems with the current argument. Namely, I question

why the expression and persuasive capacity of emotions and morality are being repressed in the dominant sustainability paradigm, and propose an inclusion of such subjectivities. Challenging the dominance of what I describe as “soft exploitation” in the biological sciences, I suggest we bring emotions and morality out of the epistemic closet, allying these utilities with their biological shelf mates.

Methodology

The meat is in the methods, and the guts of this research are arranged into three parts. First is a contextualization of the cultural aspects of American shark conservation. Second, and flowing in and out of this subjective description are semi-structured interviews with individual conservationists and archival research into the history of shark policy in the United States. By adjoining my own impressions of the sea with those of my informants, I attempt to elucidate the boundaries of a community of aquatic conservationists, if indeed such boundaries can be reasonably established. This juxtaposition is intended to elicit discursive data from shark conservationists that can be interpreted for significance and meaning. Finally, an overlay of this data upon a historical trajectory of conservation policy is included to illuminate the relationship between cultural changes and changes in the form and function of legislative action to protect sharks in the United States.

Contextual Meditation

Beginning in the third chapter, the reader is welcomed into the lifeworld of the shark conservationist. Through description of geographic and conceptual qualities of the

beach and the sea in South Florida, the reader can distinguish between land-value and sea-value, and is encouraged to recognize the sea as a forgotten geography—a lost romance of faded passion where attempts at scientific facticity have relinquished the old sea to a space of mere utility. Conceiving this divide is essential to understanding the identities of both individual conservationists and the community as a whole, and thus allows us to see the human connection to marine conservation.

Ethnographic Interviews

Interwoven into the third chapter is discursive data from personal interviews with conservationists. Here, I attempt to explicate the meaningful valuation of sharks as manifest in the expressions of these individuals. By meaningful valuation, I represent the non-monetary significance of sharks (and the sea over which they preside) as perceived by the individual and constantly mediated by culture. In other words, I question the structure and expression of individual rationale: *Why protect the shark? And how has conservation come to be part of your life?* Answers to questions like these will come through description and interpretation of discourse elicited from each interview.

In asking such questions, I aim to identify the cultural and historical context in which these meanings are embedded, and how this context permeates the ethical arguments of the individual conservationist. For example, I determine from these interviews the point in each individual's life when conservation (both in general and specific to sharks) became a significant part of their daily thoughts and activities. Was the individual raised in a family of environmentalists? Did they have a personal experience with the shark, such as an encounter underwater that changed their

impressions of the animal? After all, popular media in the United States has altered the public image of the shark considerably, especially in films such as *Jaws* (1975).

Ethnographic interviewing with individual conservationists is utilized in this case over impersonal surveying methods, primarily for the former's ability to elicit tacit cultural data.

I consider in this paper my own position as an advocate of shark protection. Why do I want to protect this animal? I have seen *Jaws* and have seen what a shark can do when latching down on the leg of surfer. My experience in Papua New Guinea certainly generated a rich suite of perceptions that could only come about from seeing the shark in its natural environment. However, the meaning generated from this experience cannot be isolated from my previous appreciation for "pristine" or "wild" nature. I have been interested in environmental protection from some bygone point in my life, and even as a child I remember cursing the black smoke that billowed from my hometown paper mill. So, when I saw the shark swimming powerfully in its habitat, my perceptions transcended basic visual and auditory cues to include a deeper, dynamic cultural context. With present-day consciousness rooted in this unique array of historical experience, I exited the water that day with an altruistic impression of a commonly maligned animal, and wonder if like-minded individuals have come to their professions in similar fashion.

My discussions with these conservationists has primarily taken place over the telephone, as many were busy and could afford only a brief lunchtime interview, but some was done by personal, informal conversations. In addition, much of the contextual data in Chapter Three is drawn from personal observations from the past ten years in South Florida.

The interviewees were selected by their occupation or conservation-related activity, their location, and otherwise by convenience. In this study, the occupational conservationists range from a shark biologist at a local university to a photographer/activist that helps run a non-governmental organization dedicated to saving the sharks. I chose to focus this research on conservationists in the South Florida area because of their connection to regional fisheries policy (whether occupational or personal), and because they have undoubtedly faced the same ethical questions asked of me by shark fishermen along the docks, and asked to ourselves in inward examinations of personal rationality.

I chose to focus this paper only on shark conservationists (and not shark fishermen or the general public) because, rather than attempting a political ecology-of-sorts on shark fishing, I am interested in how conservationists in particular develop and sustain their perceptions of these animals and not whether they are morally or practically right or wrong. Rather than vainly attempt to paint a complete picture of the relationship between sharks and humans, I set out on this path of research to find out how one particular faction has become so intensely dedicated to the protection of the shark, and the depth in which their perceptions of this animal are contextualized in dynamic webs of culture.

Temporal Contextualization

The aggregate data obtained from ethnographic interviewing is then overlaid on a historical trajectory of shark policy from after World War II through to the present day. In doing so, I show how perceptions and meaningful valuations of sharks in the lives of

individual conservationists have influenced legislation over time. Since the environmental movement began in the 1950s, and even before that, the condition of nature has been recognized by some to be in peril. Enabled by the representative governance of the United States, this concern for nature has led to creation and implementation of policy to protect the flora and fauna of our land, sea, and air.

By examining the changes in this conservation policy (fisheries policy, specifically) from the 20th century through to the present, I attempt here to demonstrate evidence of the link between individual perceptions of non-human nature, the cultural context which both generates and reinforces these perceptions, and the regulatory policy that comes of such cultured perceptions. Taken synchronically, a short-sighted impression of shark conservation policy could be formed by examining only the recent developments to protect sharks. Yet as Eric Wolf reminds us, each community and culture is not frozen in time, but rather a process influenced by local, regional, and international histories (Wolf 1982). Thus, an accurate (or at least, more accurate) interpretation of the culture of conservation must examine the temporality of human beliefs and action with regard to non-human nature.

Geographically, the majority of these interviews are with informants based in South Florida, although some live and work in Washington DC, Colorado, California, and various other locations throughout the country. As I have discovered by the data collection process, shark conservation flows from the local to the national to the global and back again; just as the objects of their devotion must keep swimming across unseen boundaries to breath, conservationists must follow close behind in their wake. While South Florida is home to many of the individuals whom I come to call “Water People,”

their work frequently leads them to the Bahamas, California, Hawaii, the South Pacific, and South Africa in search of the Great Sharks.

THEORETICAL CONTEXT

From Exploitation To Stewardship

The ways in which sharks have been used and thus understood through the last half-century have changed from all-around exploitation to more conscientious forms of marine stewardship. And yet as this chapter details, while the latter form of understanding is certainly more altruistic in terms of shark protection, within it we find a continued process of objectification in which animals are cast merely as items to be used by humans. Despite a recent push in anthropology to understand natural life as subjects with agency rather than mere objects of human production (Haraway 2003; Michael 1996), in some ways the shark remains a very useful *other*.

This chapter is therefore arranged into two sections. In the first, objectification of natural life in the relevant literature is reviewed—literature in which the world and its forms of life are regarded anthropocentrically. In the second section, I describe more recent efforts by scholars to comprehend a biocentric universe, where humans are yet another species in an interdependent ecology—equilateral companions with the birds, the bees, and even the sharks.

Both sections align respectively with two intentional attitudes of Heideggerian phenomenology, which Hoage describes in *Perceptions of Animals in American Culture* (1989) and Morris clarifies in *The Power of Animals* (1998). The first attitude is what Heidegger called *Zuhandenheit*, meaning ready-at-hand. Animals that are ready-at-hand

have practical value for humans, are objects to be exploited and dominated and are generally perceived as extensions of the human lifeworld. Just as a hammer is ready to be used as a tool, animals in this sense are ready to be used by humans.

The other attitude, which I argue is being embraced by current scholars and some conservationists in their contemplation of a biocentric universe, is what Heidegger referred to as *Vorhandenheit*, or things that are present-at-hand. Animals perceived in this way are done so in a more imaginative and psychological fashion (Morris 1989:168). In this attitude, the shark is still exploited by humans, but this time as a subjective interlocutor—both recipient of and mediator to human intentions.

There are, of course, many other ways to categorize animals and human perceptions of them, and these categories themselves inspire increasingly complex phenomenologies. As Howe notes in his description of the English foxhunt and its significance, invoking Edmund Leach (1964:46) before him, “Animals grouped into categories that mediate between the polar extremes of human and wild (i.e., pets, farm animals, and game) will...inspire linguistic and behavioral taboos, and ambiguous animals that fall between categories or straddle two of them will do so even more” (Howe 1981:280). Considering this, the categorization of the shark can be made more and more complex. But for the purpose of brevity and clarity, I describe in this chapter only the broad ways in which animals (specifically those which prey on humans or become human prey through hunting) have been perceived objectively as “ready-at-hand” in an anthropocentric, exploitative universe, and recently more subjectively as “present-at-hand” in biocentric forms of natural stewardship.

Ready-At-Hand: Hard Exploitation

Exploitation of animals can be clearly understood here as the use of animals for the benefit of humans. In this chapter I go beyond the most typical form of animal use (consumption by humans) to review the theoretically valuable literature related to hunting (animal used as an object of pursuit), the physical experience of animal encounters (animal used as an object of experience). These forms are what I refer to as *hard exploitation*, in which the animal's physical body or way of life (or death) is affected by human presence. I then discuss a softer, conceptual form of exploitation: the literature that relates to objectification of animals through Levi-Straussian totemism and through the political recruitment of wildlife as flagship species. Only by understanding both physical and conceptual use of the non-human animal as exploitative can we begin to understand what current conservationists are working to overcome (despite, as I discuss at the end of this section, the inherent exploitativeness of animal stewardship).

Hunting

Despite the moral argument for or against it, the study of hunting has yielded rich theoretical data to anthropologists, especially as urbanization has brought much of the American population away from the farm and from the realities of animal life and death, leading to both societal and individual conflicts (Ingold 1994). Despite our growing detachment from this life and death, hunting for sport or for food persists in this country and in many others, leading ecological anthropologists to question the meaning of this activity for its participants, to ask what contextual aspects of culture allow it to continue,

and ultimately how hunting animals affects not only the life cycle of the animal but also the identity of the hunter.

In her review of Cartmill's *A View to a Death in the Morning: Hunting and Nature through History* (1993), Misia Landau concludes:

It is we who have made hunting human, rather than the reverse. The rituals, superstitions, and beliefs surrounding hunting are what distinguish it from the killing that goes on between other animals. Though in the end we may not know why certain people take pleasure in what others condemn, one thing is sure: both hunting and protest against it are symbolic activities that will continue as long as there are humans and animals. [Landau 1994:687]

As I mentioned earlier, sharks are being hunted around the world at alarming rates, mostly for their fins, but also for sport. By studying the rituals, superstitions, and beliefs behind either shark hunting or shark conservation, we can uncover the meaning of the shark for the hunters and conservationists. This paper particularly focuses on anti-hunting rhetoric and how perception of sharks by conservationists sets them apart from the shark hunters.

Other scholars (Bird-David 1990; Brightman 1993; Ingold 2000; Marks 1991; Morris 1998; Scott 1996; Tanner 1979) have also challenged traditional notions of hunting as simply an acquisition of food and have thus promoted its anthropological value. Brightman (1993) observes that hunting by the Cree in Manitoba is far from being an organized, static pursuit. Rather, it is a constantly evolving, chaotic process that reflects the dynamism of human ideas. This point is useful as a guideline for multiple conceptions of the non-human animal—while it is tempting to interpret an animal encounter as a synchronic occurrence, hunting events are often disorganized and

contextualized by past influence and future expectations. From this, we see how the use of sharks (for food, sport, tourism, or science) is deeply immersed in the historical trajectory of American culture, changing each decade with each new book, each film, and the collective impact of intentional or accidental encounters.

By researching indigenous hunters, we can gain a reflexive appreciation for what draws Americans toward or away from the hunt. The work of Tim Ingold is especially relevant in comparing western conceptions of nature to that of indigenous groups. Ingold (2000) uses the term *ontology* in referring to the unique lifeworlds of hunter-gatherers, and explains how the natural ways of being of these groups are radically different from those of western environmental scientists. By simply conceiving of nature, the latter group separates themselves from it, whereas many indigenous groups understand society as being immersed within this nature. Ingold injects local and regional politics and culture into the lives of hunters; by contextualizing the hunter and “their” animals in these larger societal processes, he shows how relationships with nature are affected by human phenomena, and begins to distinguish between anthropocentric and biocentric ontologies.

While the above scholars and others have dedicated their research to the broad connection between humans and animals, few have focused their research on the human perception of specific taxa, and even fewer have ventured into the realm of marine life. Coming close to this specificity is a symbolic use of the non-human animal that is more conceptual than physical, and that concerns the use of animals as *flagship species* for the benefit of a political cause. This political use falls into the category I refer to as soft exploitation and which I address in the next section. First, however, we shall cover

another form of direct physical exploitation—the intentional animal encounter by tourists and scientists.

Encounters

In addition to hunting, another form of physical interaction between humans and animals is the intentional encounter. In the United States, the predominant form of this encounter takes place as an observation in a zoo or animal preserve, where physical touch between human and animal is regulated by both physical barriers and rules imposed by governing agencies and zoo management. Much of the anthropological focus on the intentional encounter concerns interactions between humans and non-human primates (Haraway 1989; Malamud 1998; Servais 1999), leaving much to be desired in our understanding of encounters with non-captive animals.

Thirty-six years after *Jaws*, truly the quintessential shark-hunting film, the perception of sharks in American culture has undergone a transformation, and many of us now prefer to see the shark in the open ocean rather than in the terrestrial aquarium, despite the well-known risks. Sharks, for simple anatomical reasons, cannot be held captive in anything but the largest aquariums, and are best encountered free-swimming in the sea. These purposeful, interspecies meetings yield rich cultural context that is described below and again in Chapter Three.

Philippe Diole, friend of Jacques Cousteau and crewman on numerous voyages of *Calypso* believes the modern encounter satiates a primordial need to hunt, enclose, and generally dominate other species:

We are still frightened wayfarers and superstitious hunters who have need of meat and of fur—and yes, even of witch doctors. We still seek the shelter of the cave. We are still afraid and we still require the haven of the trees to kill our deer, cut its throat, and thus encounter our gods. We still possess the patience, the skills and the urge to kill; and we still experience the need to make reparations after we have killed... Therefore we take our animals and enclose them in zoos and aquariums and preserves... means of deriving pleasure and, at the same time, soothing our consciences. [Dirole 1974:19]

Dirole argues the animal encounter is a reconciliation of our modern animal sympathies with our refusal to let animals live in complete freedom.

Through speaking of his love of encountering sharks underwater, Jacques Cousteau's late son (also named Philippe) affirmed it is "The beauty of a supple line, the thought of possible menace, the exaltation of a combat in which I know nothing of the rules"(Cousteau 1970:30). For him, Philippe Dirole, and others for which the magical *Calypso* has steered their dreams, we see how the motivation to encounter wild sharks echoes the man-versus-nature theme that has been so prevalent in the 19th and early 20th centuries.

By personally experiencing the shark (or any animal for that matter), the perception of the participant is either changed or reinforced based on the meaning generated from the encounter. And it is suggested that the behavior of sharks is altered by such encounters with humans (Sun-Sentinel 2011), although sufficient evidence of this influence has not yet been established.

Apart from the occasional (and highly controversial) shark cull, the hunt for sharks now takes place underwater by divers, armed with sophisticated video cameras and buckets of fresh chum to lure the sharks in. The "trophy" has become a brief, murky video of an anonymously wetsuited diver, bouncing around in a protective aluminum

cage opposite a curious, massive great white shark. In this form of extreme encounter, we not only see a human stepping outside their terrestrial comfort zone and into the sea, but we see an intentional action (at quite a large cost) by humans to *be* with sharks. As I describe later in the data analysis of this thesis, hard exploitation of sharks in the form of fishing and non-lethal encounters can significantly transform the identity of the human participant and ultimately decide the fate of the shark.

Present-At-Hand: Soft Exploitation

Much akin to the symbolic and quasi-spiritual interactions between hunters and the hunted animal, social scientists have contemplated the ways and forms in which the appreciation of an animal leads to ritual practice and even the categorization of materials and actions as either good, bad, or both. Such perception is not necessarily associated or drawn from with physical experience with the animal. Rather, it is strongly linked to thoughts and conceptions of animals that precipitate from the individual's experience as part of a larger societal superstructure. Beyond the killing of animals for food or experiencing them physically, humans form their perceptions of animals through totemistic beliefs and—more recently—through the politicization of the non-human animal for a particular cause.

Totemism

The earliest theoretical attempts at understanding the deeper forms of human-animal interaction were grouped under the banner of totemism. Ideas of the totem-animal

find their strongest roots in the work of sociologist Emile Durkheim (and later anthropologist Claude Lévi-Strauss). Durkheim considered totemism in *The Elementary Forms of Religious Life* (1912) to be a primitive and simple religion (Durkheim 2001[1912]:76). He saw religion as an explanatory vehicle, having purpose in the lives of the Australian clans he studied. In general, this purpose was “to express and explain, not that which is exceptional and abnormal in things, but, on the contrary, that which is constant and regular” (Durkheim 2001:30). Objects of religious experience were classed into two dominant forms, which then affected the daily practice of both individual and the society in which they belong:

All known religious beliefs, whether simple or complex, present one common characteristic: they presuppose a classification of all the things, real and ideal, of which men think, into two classes or opposed groups, generally designated by two distinct terms which are translated well enough by the words *profane* and *sacred*. [Durkheim 2001:36]

While the former category was guarded by prescriptive rules of engagement similar to the *tabu* system in the Pacific Islands, the latter, sacred items were revered by the society and had a unifying effect among members.

Durkheim describes the actual totems of these clans generally as species or varieties of animals having a sacred quality around which a common bond is formed between members. While some inanimate objects or phenomena may be used, such as the sun, the wind, the autumn, the summer, clans primarily choose animal species that reinforce “bond[s] of kinship, but one which is of a very special nature” (Durkheim 2001:110).

This line of thought can then be traced to the work of Lévi-Strauss, who embraced Durkheim’s idea of totemism in the anthropological discipline. Lévi-Strauss claimed that

animals are valued by society—not just as economic use-items—but also as meaningful totems. Departing from the Cartesian conception of animals as finely-organized machines, put on Earth under the dominion of human beings—Lévi-Strauss proposed that animals were not just “good to eat” but also “good to think” (Lévi-Strauss 1963:89). By this, he meant that by seeing beyond the dominated animal at-hand, we could open up new pathways to understanding a humanity that has universal ties to the non-human animal. By thinking with animals as subjects with cosmological, economic, and ecological importance—or thinking of societies thinking with animals in this way—human beings and the anthropologists who study them can conceive of a meaningful animal, one which has agency in the lives of its human neighbors but often with this agency prescribed by humans and deeply aligned (or maligned) with underlying contextual significance.

Lévi-Strauss’s totemism influenced later scholars such as Palsson (1996), whose work on Icelandic fishermen explores “how conceptual frameworks have changed in relation to changes in the political economy of fishing, from the era of subsistence to that of the commercial fishing industry (Palsson 1996:208). Here, the author departs from the synchronic limits of Lévi-Straussian structuralism and contributes a greater temporality to the subject. For Palsson, fish are not only an economic resource but also a symbol to think with that mediates the behavior of fishermen. The objectivism inherent to this totemism builds on utilitarian conceptions of non-human nature—the animals in corporal form are good to hunt for or good to fish for. In symbolic form, the images of animals are useful in the stratification of developing societies.

Of course the theory of totemism is not perfect, and it was met with criticism by scholars such as Marvin Harris (1974) in his book *Cows, Pigs, Wars, and Witches*. In this work, cattle in India were interpreted as primarily of utilitarian, material value—much like the Cartesian thought from the previous century.

The Politicization Of The Symbolic Animal

With this background in the theoretical advances concerning hunting, experiential tourism, and totemism, we can venture into a realm more specific to families and even unique species of animals to see how humans are using anthropomorphism and neoteny as tools to gain public support or otherwise pursue a political agenda. Most relevant to this project is the concept of *species*.

Every cause has an ambassador, either a literal or symbolic representative for an entire line of reason. To represent the natural world, interest groups, normally non-governmental organizations (NGOs), often choose a particular animal as ambassador, or flagship. The animal is normally chosen by virtue of its anthropomorphic appeal (Leader-Williams and Dublin 2000). The more charismatic animals (with big, doleful eyes, strength, and beauty) are recruited for flyers, websites, and logos to elicit emotional or sympathetic responses from the target audience.

The polar bear, for example, has been chosen to represent the fight against global climate change (Walpole and Leader-Williams 2002)—the image of the lonely white bear floating on a melting iceberg is intended to elicit human sympathy and gain popular support for renewable energy or some other socio-political cause. Interestingly, the majority of the First World has never experienced a polar bear in the wild and has no

conception of how many polar bears actually exist. They haven't hunted bear, nor have they had any violent encounter with these massive predators. For the carbon-consuming dweller south of the Arctic Circle, the polar bear itself is a mystery—the perception of it derived entirely from secondhand cultural and political influence. Nevertheless, the big, caring eyes, and the whiteness of its fur (Babb 1998; Dolgin and Kemnitzer 1977; Husni 1976) inspires emotional response, action, donations, lobbying, and eventually, changes in policy.

As the polar bear carries the flag for climate change awareness, the capriciousness of public preference and scientific devotion is now envisioning the shark as an oceanic ambassador (Monterey Bay 2011) for reasons I will explore in this thesis. For those of us who experienced *Jaws* and its sequels, these “man-eaters” seem a strange choice for a flagship, hardly capable of earning sympathy from humans. Yet in the latter part of the 20th century and into the 21st century, sharks are receiving positive attention from documentary filmmakers, major television networks, and environmental activist groups around the world (Papson 1992). This reputation has been influenced by the trajectory of the environmental movement that began in the 1950s and gained momentum through the '60s and '70s. Of course, changing the public perception of sharks is a daunting task, as a history of negativity haunts this animal.

Much of this effort has worked well (the World Wildlife Fund first comes to mind, with its cute and recognizable panda bear logo). And yet, utilization of animals as flagship species remains utilization, and is thus, by definition, exploitative. Human activists, though altruistic in their intentions toward the polar bears, koalas, sharks and so on are nevertheless exploiting these animals to further their cause, thereby objectifying

the animal as a creature awaiting (and in need of) human control and domination. Which leads us to ask, have environmental anthropologists fallen into the same trap as our predecessors who represented their indigenous human informants as *noble savages*, thus stripping them of their rich histories and cultural complexity? In the strictest sense, as we will see in Chapter Three, sharks do not fall so easily into the flagship category despite numerous attempts by conservationists to paint them in a more favorable light.

Through a softer, less physical attitude toward species other than our own, both totemism and the use of flagship species can still be said to demonstrate the objectification found in Heidegger's *Zuhandenheit*, wherein the cattle, polar bear, shark, and fox are all here on earth for the explicit benefit of humanity, ready-at-hand for the herdsman, hunter, tourist, and scientist.

The Animal As Companion: A Multispecies Endeavour

Largely because of climate change and the work that is being funded and undertaken at a feverish pace in that area, ecological anthropologists are now challenging the idea of human domination over all living things; we as a species should now envision ourselves as biological entities on the same theoretical plane as other animals (Argyrou 2005). In this perspective, there is no longer such a thing as a non-human animal, just as there isn't a non-animal human. Ultimately, this has become a quest to understand and redefine our human identity in a time of anthropogenic planetary degradation. Something is not right, and in an attempt to fix it, we are finally beginning to look inward.

In his book *Corporeal Compassion*, Ralph Acampora (2006) argues that this reflexivity goes beyond imagining ourselves on a similar plane with non-human nature to a point of actually being there, side by side. “Cultivating a bodiment ethos of interanimality,” he says, “is not a matter of mentally working one’s way into other selves or worlds by quasi-telepathic imagination, but is rather about becoming sensitive to an already constituted inter-zone of somaesthetic conviviality” (Acampora 2006:84). He advises a “shared sensibility” (Acampora 2006:116) as means of conceptually realigning the human identity within a biocentric planetary ecosystem.

Conceptual merging of species in the West is a relatively new idea. In medieval Europe, the animal was distinct from humanity, provided by God and subject to human domination. Then in the 18th and 19th centuries, labor-saving technology and widespread industrialization enabled Europeans to no longer feel like their lives were at the mercy of nature, and the machine replaced the work animal. During this radical growth and urbanization, the idea of domination was still present but was overlaid with nostalgia and affection for an agrarian past (Mullin 1999; Ritvo 1987:3). While Darwin’s (1859) *On the Origin of Species* briefly questioned the human exceptionalism of 19th century Europe, processes of colonization reasserted the boundaries between civilized humanity and the non-human *other*—be it a wild beast or indigenous “savage.”

Elevating the importance of the this human-animal equalization and casting a new light on human identity, recent work on the boundaries of species (Haraway 2008; Nader 1996) has questioned the divide between human and non-human animal. As Martin (1990) suggests, attempts to distinguish humans from machines, individuals from society, and societies from the global population are useful in understanding the similarities and

differences between the human species and our ecological counterparts. In this respect, and again invoking Lévi-Strauss, animals are good to think with, humans are animals, and thus, humans are good to think with.

This border crossing is especially prominent in the work of Donna Haraway, who criticizes what she sees as a provincial notion of human exceptionalism (Haraway 2008:244). Using the term “natureculture” to articulate the interdependence between humans and their planetary counterparts, Haraway is among the first scholars to conceptualize agency in species other than our own. Her focus on primates (Haraway 1989) and domesticated dogs (Haraway 2003) has inspired recent adventures in what is now known as *multispecies ethnography* (Kirksey and Helmreich 2010; Tsing 2009).

An entire issue of *Cultural Anthropology* (2010, 24[4]) is dedicated to this interesting scholarly trend. It is worth quoting from this issue at length to describe this particular mode of research:

Multispecies ethnographers are studying the host of organisms whose lives and deaths are linked to human social worlds. A project allied with Eduardo Kohn’s “anthropology of life”—“an anthropology that is not just confined to the human but is concerned with the effects of our entanglements with other kinds of living selves” (2007:4)—multispecies ethnography centers on how a multitude of organisms’ livelihoods shape and are shaped by political, economic, and cultural forces. [Kirksey and Helmreich 2010:545]

Besides the issue of *Cultural Anthropology*, specific examples of this multispecies approach are loosely scattered through the discipline but have nonetheless been influential to environmental anthropologists. Tsing (2009) has focused on a particular species of mushroom, effectively demonstrating a “human nature that has shifted historically along with varied webs of interspecies dependence” (Kirksey and Helmreich

2010:553). Although an anthropological study of mushrooms may seem an errant trajectory from the disciplinary core, Tsing's work emphasizes the need to look beyond human exceptionalism and consider an interspecies ecology. Kosek (2010) explores the honeybee as a species exploited by the Department of Defense for strategic emulations (swarming as a tactical combat approach) and as a commandeered sensory vehicle, capable of detecting illicit explosive material. By conceptualizing non-human animals as socio-political agents, multispecies ethnographers blur the distinction between our species and what can now be seen as subjects with active (and sometimes shared) agency.

As environmental anthropologists consider the obvious effects of a globalized humanity on the planet, they are using their work in an attempt to reconcile humans within a deeper ecology. As Susan Board (2002) notes in *Ecological Relations*, this recent scholarship is “premised upon the realization that all animate life forms possess intrinsic value and have an equal right to live and blossom” (Board 2002:153). With this, and as evidenced in the above references, scholars are increasingly approaching *all* non-human entities as agents with their own biographies and politicized lives—essentially marking a species turn in anthropology. Such conceptualization gives a voice to the dog, the tiger, and even the honeybee. The mushroom, of course, grows on the fringes of this revolution. As we shall see in later sections, there has been a crescendo in the agency of the ever-charismatic shark as it affects the lives of both the American public and occupational conservationists.

Stewardship As Exploitation

Beginning with Durkheim and Lévi-Strauss and moving through the newer generation of multispecies ethnographers, environmental social scientists have approached the non-human animal by examining interactions that I have categorized here as either physical or conceptual—both of which are exploitative to some degree. Whether in hunting, tourist encounters, totemism, the use of animals as flagship species, or the blurring of conceptual boundaries between man and beast to further clarify the human identity, animals have been used or conceived as objects for the benefit of humankind. This use is practically facilitated by the non-human animal's lack (or loss) of agency when compared to that of our species—simply, we can easily manipulate and control the destiny of what doesn't talk back.

Around the 1970s when the precautionary approach to conservation gained momentum (Weber 2002:116), which I discuss further in Chapter Three of this thesis, the professionals in this field have been divided in both means and objectives for “saving the world.” At the forefront of this division is yet another question of objectivism versus subjectivism; particularly, whether the animal kingdom should be “managed” in the form of natural stewardship, or otherwise if we have over-managed nature to a point where it no longer has any independent agency. As Joan McIntyre (1974) remarked in *Mind in the Waters*, “We have, for too long now, accepted a view of non-human life which denies other creatures feelings, imagination, consciousness, and awareness. It seems that in our craze to justify our exploitation of all non-human life forms, we have stripped from them any attributes which could stay our hand” (McIntyre 1974:22).

McIntyre was essentially calling for two things here: first was a reexamination of the role of humanity in balancing a global ecology; and second was a plea for the involvement (and acceptance) of emotions in scientific conservation. Incidentally, her call and others were answered by the passing of the Marine Mammals Protection Act (MMPA) of 1972 and the Endangered Species Act (ESA) of 1973, both of which “explicitly recognized that individual species are members of broader communities and ecosystems” (Weber 2002:116), while also taking a step in the direction of animal independence and functional agency.

In the first sense, McIntyre is arguing for what Arne Naess has termed “biospherical egalitarianism,” which is “premised upon the realization that all animate life forms possess intrinsic value and have an equal right to live and blossom” (Naess 1973:95). This jibes more with the companionship ethic found in multispecies ethnography, which explores bilateral causative relationships between species. In the second sense, McIntyre supports the liberation of emotions in scientific management, much to the disdain of some conservationists who favor strict managerial procedure to “deal with nature” (which is evidenced in the following chapter of this work). Ralph Acampora has identified one such emotion, which he has called “interpersonal empathy” (Acampora 2006:81). In this, he advises against forced projections of meaning from one animal to the next, but rather he supports a realization of essential equanimity wherein the “inferential procedure of external redemption, internal processing, and projective transmission” is discarded and “the shared affect simply happens” (Acampora 2006:81). Quite simply, Acampora rebukes this meaning-making and fear of emotions; we *are* animal, not some managerial robots.

Both this call for egalitarian perceptions of nature and for emotional involvement in science allow the possibility for action on the part of humans to not only understand nature differently, but to correct previous mistakes in dealing with the natural world. This “meliorative action” as Edith Wyschogrod describes it, “constitutes a proscriptive “corporeal plea” against violence, as if the other’s body were saying ‘do not injure me’...which may even result in a pattern of radically generous altruism” (Wyschogrod 2003:22).

Circuitously, however, this line of reason arrives once more at a form of objectification, but perhaps a better-informed one. Wyschogrod’s meliorative action is what hundreds of NGOs are doing everyday in their politicized form of natural stewardship. Here, the mitigation of past wrongs—whether boots-on-the-ground activism, legal appeals, or political lobbying—attempts to amplify the agency of whales, dolphins, tigers, and the polar bears with which we share this planet, effectively utilizing the “human microphone” to speak for the unspeaking. Very much so, these organizations embrace emotional connection as a tool to strengthen their argument for animal protection.

In the case of tiger conservation (similar to sharks in that both animals have been called “man-eaters”), Priscilla Weeks (1999:19) makes the following statement in support of the World Wildlife Fund (WWF):

As a mother, it sickens me to know that there could be a chance that my children won't be able to see another tiger again. My children have the love of animals as I do!! What we have done to the World we live in almost makes me embarrassed to be a human, except for the fact that there are people and organizations like WWF that do their best to make a difference. Thank God for WWF and its agencies. I know my family and I

are doing what WE can, to save the Tiger, other endangered animals and the environment. [US (Year of the Tiger)]

So here we have a meaningful, emotional statement in support of the WWF that is altruistic toward a known human predator yet exploitative in its motivation to enrich following *human* generations. Stewardship has a kindly, Biblical image to Americans, but the practice of it opens up a whole new set of conflict for both the sheep and their shepherds. What species should we protect? How do we protect them while remaining true to our own need for survival? Concerning the Great Sharks, why should we protect these large predators when they occasionally take a bite of the innocent swimmer on a tranquil Florida beach? Like a good philosophy lesson, each pathway opened leads to a hundred more locked doors.

The Shark As Agent-Experienced

The above scholars demonstrate a constant struggle within the world of conservation. On one hand, the objectification of the non-human animal has practical/managerial use in the form of stewardship, but weakens conceptually with regard to recognizing the inherent and independent value of animals. On the other hand, the subjectification of animals (recognizing humans equally as such) has proscriptive but generally unrealized advantages in practical conservation. In other words, it may help to *think* of a biocentric universe where the standing, slithering, swimming, and soaring creatures are held equal in value, but this logic has a long way to go in stopping the melting of polar ice, the poaching of tigers, or the wasteful finning of endangered sharks.

Having established this struggle through the relevant literature, we can now cast off the lines and embark on a study of conservationists as they experience and perceive the great sharks—an intellectual encounter between highly-politicized, symbolic fish and complex primates bearing a unique ontology of nature that is contextualized through history, media, society, individual morality, and so on. Beyond another exploitation of the shark as a window into human culture, the following chapter portrays the shark as a subject with agency interrelated to that of the human; two animals with intertwined fates that, for reasons I argue here are largely enmeshed in culture and history, continue to affect each other's bodily presence on this planet. Such description allows this analysis to embrace a Heideggerian phenomenology of not only the shark-as-intended, but also the conservationist-as-intended.

DATA PRESENTATION

"There is, one knows not what sweet mystery about this sea, whose gently awful stirrings seem to speak of some hidden soul beneath.

[Melville 1851]

Spatial Context

Beach As Borderland

Like many Americans raised inland, my first trip to the seaside was unforgettable. On a summer vacation in New Jersey sometime before my tenth birthday, I walked toward the water, away from the shops lining the beach and from the villages, towns, and cities of the mainland. The water pushed itself up onto the sand and then pulled back leaving a patch of earth dark and wet for a few seconds before flooding it again in a soothing tidal rhythm. A few feet past this physically abrupt and conceptually remarkable boundary and beneath the shallow waves was a shifting stage of sand and rock, and in the small tidal pools I took a closer look at unusual forms of life that clung to anything solid they could find. Alien forms were everywhere—from symmetrical ovals seemingly fossilized into the rock to circular orange orbs that somehow grasped to the shallow seafloor and shook with the surging waves. The water was frigid, but my sister and I would swim for as long as we could, run back onto the beach to thaw in the sun, and then ease ourselves back into the sea awhile later to continue exploring. A few porpoises jumped offshore—the first I ever saw. As I looked to the horizon, I realized, *over there is Europe and Africa.* And to a child, that was a very powerful thought.

That summer vacation left me with more than sunburn. From it I gained a distinct impression of the sea, scripted by the strange sights of this new world: the picturesque seaside villages, the smells of barnacles and oysters exposed under bridges and along the muddy banks of grassy marshes, and the sounds of seagulls as they haggled for dropped French fries on the weathered boardwalk. This was the ocean; yet I would later find out how the raw sense data of such a unique geography is not only unique in its difference from land, but varies with latitude and circumstance. In the tepid warmth of the Great Bahama Bank or the stagnant humidity of a summer in Trinidad, the sea presents itself in other ways. Throughout my life, the ocean of that childhood holiday has largely remained, but has been compounded by other experiences on, around, and under the sea in disparate locations with disparate companions—and the land that lay beyond the horizon has been Europe, Africa, Japan, Hawaii—alternating by origin and direction but always the land of the Other.

Beyond the reaches of this personal experience, America has a long history with the water surrounding it: over two hundred years in its current iteration and well beyond that when considering the many populations that inhabited the continent prior to European colonization. Just as I have accumulated knowledge in the past twenty years since that exploration of the New Jersey shore, the contemporary American has forged an impression of the sea influenced by reason, explanation, and practicality. In these times of planetary peril (more or less apparent to the Western environmental conscience), there is no longer a knowledge of the sea per se, but rather multiple knowledges grown from multiple forms of reason, themselves formed from disparate perceptions of marine nature.

As residents and visitors to this country flock to the beach when the weather is warm, they simultaneously confront the end of one space, the beginning of another, and the sandy borderland between. Many never take that step into sea-space, but prefer instead to stay on dry land. Others run straight into the waves. Practically, the beach is a gateway to the sea, yet many remain on land—content with remaining in the foyer of a huge ballroom, taking in the sights, sounds, and smells, but never fully committing to the strange sublimation that takes place with the first dance.

For my informants, as we shall see in following sections, that first sea-moment is a comforting affirmation of their identity—echoing a return to our watery origin, if only for the afternoon. For others, and by way of this difference they become Others, the sea remains a place for exploitative use—whether through transport, recreation, or some other material or immaterial profit. There is a difference here in the way the sea is understood—an epistemic divide between those who keep the sea ready-at-hand for human use and those for whom the sea is present-at-hand, as a companion space with which they form their individual and collective identities.

Bridging The Epistemic Divide

Marine space and the life within is alien to the conscious experience of the landlocked. But just as the big-eyed, egg-headed alien from outer space has moved from the nightmarish imagination into the living rooms of the heartland, the sea-creature too has found its way to the American sensory experience. These forms of life may be strange relative to the common house cat (indeed, they are extraterrestrial), but they are certainly not strangers in the modern world.

Turning the corner of a supermarket in Anytown, USA, one is greeted by the off-putting but somehow exotic odor of the seafood aisle. I always liked it. Behind its counter is the part-time suburban fishmonger, who spends half his days here and the other half studying for a midterm exam. The fish itself is “fresh-frozen”: salmon fillets colored orange from farm feeding, rubbery red tuna steaks, and the ubiquitous pink shrimp which likely spent its formative years in Vietnam or Thailand. Most customers will opt for the frozen ring of these shrimp pre-arranged on a black plastic tray with the included cocktail sauce: thaw and serve for a special occasion. Despite the availability of seafood to the mass market, the living, breathing, swimming octopus, tuna, salmon, shark, cod, seal, and seahorse are forgotten forms of life in this agro-technological marketplace.

The dwellers and design of this fanta-sea are introduced to children at a young age. Walls of the local elementary school are lined with drawings of oblong fish evenly-spaced under “W”-shaped waves—orderly dashes of colored pencil that hint to the conceptual disconnect between the reality of the fluid sea and that of supermarket. There is order and organization in the drawings of this undersea world, and why shouldn’t there be? Looking out the window of the classroom, the young American sees order all around: cows in a square field fenced in by a square pattern of identical composite posts, shrubs cut to length along the edge of a rectangular brick building, mulch spread around the adolescent maple tree, everywhere are “right” angles; space defined by precise and prescribed borders. The experienced world out these windows is ordered, the order preserved by law, and the very dominance of such regularity reinforces its virtue in the formative minds of successive generations.

Empowerment Through Experience

It is therefore no mystery when the middle managers that were once these young children attempt to impose order on the sea when they meet marine nature *in-situ*. With memories of fenced nature ingrained in their now-educated minds, and lingering impressions of the salmon and shrimp at the market (*always* at the market), the American adult plans their experience in and around the sea with an epistemic endowment deeply contextualized in popular culture and history.

It works quite the same whether the trip to the sea is for work or pleasure. Turn the knowledge that is out-there into knowledge at-hand, and use these factoids to prepare for unexpected challenges. Plan days and dates. Flights and accommodations. Activities? What does the place offer? Exciting but not dangerous, the essential activities of the managed marine encounter are carefully chosen by virtue of their tempered memorability.

It is thrilling to see the marine environment red-in tooth and claw, yet families must be taken care of, jobs returned-to, mortgages paid, and in-laws visited. A snorkeling trip is arranged in a placid, shallow bay, where the boat captain tosses bread crumbs off the back of the vessel, adding a dash of excitement to an otherwise tranquil scene of fish swimming, crabs crawling, and coral, well, being pretty. Nature observed becomes nature interacted-with, the bread crumbs briefly bridging the divide between human and non-human. Through this brief encounter, humans affect nature—do something to it and within it—and such causal action becomes a form of management, of domination; an establishment of order on an otherwise fluid geography—essentially an empowerment over new territory.

Thus, marine nature is recognized as a geographic reprieve from the mundane and as a welcome setting for this human empowerment. Whether through work or pleasure, humans going to the beach, diving under the surface, and riding the waves with bodies or boats, and are imposing their land-based epistemologies on a distinctively fluid environment.

The Sea As Flooded Land: Management Of The Modern Unmeasurable

A terrestrial pasture is made to enclose livestock—to breed them, count them, study them, and ultimately enable the human landowner to wield final responsibility for the lives and deaths of their animals. Quite easily, a fence is built of rigid material, which, in its calculated assembly, is deemed stronger than any one anarchic cow, horse, or chicken. Encompassed by such fence, the pasture and the animals within become the domain of the human rancher. In this Baconian arrangement (excuse the pun), management of nature for human use carries on in its traditional sense by measuring and counting and then by the actions supported by scientific or practical reason that yield the highest output for the least input of capital and labor.

The United States is a nation of these land managers, raised from early childhood to learn, practice, acquire, enclose, improve, trade, grow, and finally to bequeath whatever is left to the children and grandchildren—enclosed in their own way by the pillars of generational capitalism and held to ever-higher standards of progress. The virtues of successful land management are woven into the fabric of Old Glory, an integral part of the American Dream.

On a broader spatial scale, two vast oceans fence in the managed lands of the United States—the Atlantic to the east and Pacific to the west. In the coastal regions from Maine to Florida, west along the Gulf of Mexico to Texas, and from California north to Washington, populations have settled in, encouraged by natural harbors, accessible rivers for shipping, and convenient access to marine resources. Here along these shores and out into the surrounding seas, humans who have been raised to enclose natural space have attempted to ascertain rights beyond the shoreline—to fisheries, waterways, and minerals deep under the seabed.

Through national histories that encompass maritime conflicts, careers, and contrived conveniences, the American sea has been conceptualized as yet another geography to be managed. Iterations of this ethos are clear and have been so for decades. In New Orleans, a city physically below sea-level, levees were built to fend off its immense power of the Gulf of Mexico. In Washington, the Columbia River was dammed for hydroelectric power, creating huge reservoirs where farmland or forest once stood. Along the Eastern seaboard, the Atlantic Intracoastal Waterway was dredged just behind the coastline to conceal domestic shipping from Nazi U-boats. And of course, the glamorous absurdity of Miami Beach is built upon a loose array of this dredged material, with iconic places such as Star Island resting on a perfect oval of mud, sand, and coral rubble. Through all of this action, the migratory routes of fish have been changed, estuarine habitats have been both created and destroyed, and ambitious mitigation projects have virtually formed new land on what was once open water—the literal fabrication of inhabitable waterfront space.

Seen through this lens of patriotic progressiveness, Americans largely view the sea as deeply flooded land, which, like its terrestrial borderlands, is divisible into jurisdictions and can be managed accordingly. Space itself is managed, but within this space lives hundreds of millions of organisms that are, by the stroke of the pen, enclosed by imagined polygons of protection.

Oftentimes this protection benefits local seagoing fishermen whose families and fortunes rely on relatively static fish populations: the snappers, groupers, and other groundfish that remain in one place for much of their life cycle. Yet this scenario gets immensely more complicated when considering highly migratory species (HMS) like pelagic sharks and tuna.

The environmental movement has had (and continues to have) practical difficulties enacting science-based conservation policy to protect species of migratory birds, so imagine the difficulty in managing the lives and populations of undersea migratory animals, concealed by hundreds of feet of seawater, hidden beneath the driving spray of onerous marine weather, and hindered by the immense cost of oceanic research. A doctrine of modern management states that what is measurable is manageable, and perhaps the sea is neither.

South Florida

On the flat spit of land that drops southward from the American mainland, seemingly a geographic spawn of Georgia but with immense cultural differences from its northern neighbor, the Florida peninsula is surrounded on three sides by saltwater: the Gulf of Mexico to the West, the Florida Straits to the South, and the subtropical Atlantic

Ocean to the East. Generated in the warm, shallow water of its namesake, the infamous Gulf Stream current wraps around the southern tip of this landmass, washing its warm water over the Florida Keys and then shooting northwards between the Great Bahama Bank and the Gold Coast of the Sunshine State at up to three knots. As the fast-moving current runs offshore, it spins off into eddies of lesser currents often running in the opposite direction from their source.

Deep underwater cliffs, or shelves, guide these flows of water. The predominant shelf lies only a mile or so offshore Miami, follows the coast northward to Palm Beach, and then gradually breaks off toward the northeast. This shelf not only guides the Gulf Stream current but also the migratory species that travel with or against this flow of water. Each year, thousands of blacktip and spinner sharks can be seen from the air, sometimes only a few feet off the beaches of South Florida, steered by this underwater ledge and forces of habit that biologists have yet to fully understand. Hammerhead sharks enact similar patterns of movement, and can be found just a mile or two offshore. The occasional Great White shark makes an appearance here, first on the surface and then straight onto the evening news.

This area known as South Florida is in many respects a poor geographic choice for human life and development. Mostly low-lying swamp, the counties of Monroe, Miami-Dade, Broward, and Palm Beach are prone to hurricanes, wildfires, and plagues of mosquitoes. Most arable land has become that way only by systematic draining of the region by humans in a series of dams and canals. It is a constant struggle to maintain comfortable life here, and numerous ecological conflicts arise from persistent human presence in a formidable yet fragile environment.

Despite this precarious existence, many who live in South Florida have embraced the geography of the region for both its resources and recreation. The draw of sunshine, warmth, and the aquamarine ocean outweigh the obvious disadvantages of life in such a place. Those who might normally hunt elsewhere enjoy the fishing here. Those who would hike or climb in the northern or western states can find plentiful opportunities to swim and scuba dive along the beaches and reefs just offshore. For visitors spending only a week or so, it is paradise. And while locals tend to be a little more jaded, most appreciate the pleasure of sitting on the shore in the middle of January as the rest of the country battles the winter frost.

From its warm beaches, one can look east and see boats and their passengers moving by: some fishing, some diving, and others simply moving to their next port-of-call. Parasailing tourists fly high above the water tethered to the boat below. Speedboats race by for the simple pleasure of going fast. Scuba divers drift along a coral reef, pulled gently by the current. And fishermen, from those in kayaks to others in million-dollar sportfishing yachts, search for their next big catch. Through the air, on the surface, or deep below the waves, the sea is an engaged space for the people of South Florida. The Five S's of tropical living—sun, sea, sand, sex, and shopping—all can be found in this strange borderland. Regardless of their activity, and which 'S' dominates their daytimes and nighttimes, those people who flock to the Florida shore are exploiting the sea for its spatial, biological, or relational wealth.

In an unspoken dialectic, the sea gives as it receives. A receiver of human thoughts and behaviors and an enabler of experience, it is the mysterious target of conscious human intentions. Here in South Florida, the sea is *used* space; it is explored,

fished, dived, swum in, sailed across, and tested by scientists; a welcoming repository of the dirtied fresh water flowing from inland rivers and the cultured patterns of thought and behavior flowing from human bodies and minds.

Here, the sea yields resources, from its exotic fish to its spatial wealth—for sailing, transportation, and moving people about. Resources are exploited, either too much, too little, or otherwise in some sort of shaky balance as determined by ecologists, oceanographers, or geologists. And the degree to which these resources are exploited is of course a hot topic among these professionals. By their obscure quantifiability, marine resources beg to be studied, and in such a transitional, inaccessible environment, they beg even more to be disputed. The marine scientist cannot simply walk through their chosen geography and document, as one does in the forest, the presence of certain species and their health. What data one can obtain is normally gathered at tremendous cost and amid variable weather and constantly shifting surroundings that make the research nearly impossible to reproduce. In this respect, again invoking the language of Lévi-Strauss, the sea is good to *do* with, yet difficult to describe scientifically.

Just as the sea provides resources, it also provides relationships; “an accomplice of human restlessness” as Conrad said. And it offers this companionship to those restless souls who would rather deal with its variable temper and strange ways than the monotony of land-life. While resources are taken from it and used, the sea provides solace (free of charge) to minds and bodies weary from the desk chair—if not by physical contact in its waters, then otherwise through the tranquil imagery of calendars and screensavers that temporarily draw the weary mind away from the *here* and transport it *there*.

In Florida, the *there* is right out the window of the myriad hotel rooms, stacked into ever-higher buildings between the sandy beaches and the traffic-jammed Highway A1A. Waking up on the first morning of their holiday, tourists enlighten their dark rooms by splitting the heavy floral curtains, bearing the pain of the inevitable hangover to soak up the late-morning rays as they bounce off the sea and into their groggy eyes. The paradisiacal image saving their computer screens (and perhaps their own sanity) back in the Midwest materializes in swaying coconut palms, a glimmering turquoise pool, soft amber sand, and the warm sea breeze. The warm Florida ocean on that first morning of the vacation is a salacious tease; seemingly the sublimation of a good dream...real and there, but keeping its companionship just beyond the pale arm's reach for five days and four nights.

As we are drawn toward its companionship and attempt to get closer and more intimate with this fantastic friend, however, the ocean confronts us with physical barriers. It remains a wild place, and the animals within differ immensely from those on land. It is vast, and the forms of life under the surface are largely unapproachable to the awkward swimmer, diver, and fishermen. Most fish and mammals swim away from us, sometimes diving thousands of feet under the surface to evade humans and our noisy watercraft. Only with recent advances in diving technology have humans been able to safely explore under the surface, but this increased visual understanding of marine life still leaves much to the human imagination. Empirically, we know very little about this aquatic world, and therefore our perceptions of undersea life are derived from the complexities of cultural and historical experience.

Considering the power of humanity to modify our physical surroundings, these contrived perceptions of the marine geography and life within it have immense ecosystemic consequences. The ocean is no longer considered to be an infinite space, and the interrelatedness of each species—from the microscopic microbe to the blue whale—is gaining recognition with progressive advances in marine science and ecology. Though we still have much to learn about the flora and fauna of the sea, it is now clear that the marine environment is much more fragile than ever imagined; its health and survival are critical to the continuity of the human species. Florida—the Sunshine State—with its developed beaches lining the coast and its tourists (some who return home, many who stay indefinitely) is the epicenter of this interaction between Americans and the marine world. How we have chosen to modify this geography is closely reliant on our perceptions of it, and the choices we make regarding the survival of its life forms will ultimately decide the availability of this extraordinary companion for the forthcoming generations.

Ultimately we have not completely reciprocated the warm friendship of this subtropical sea, and the actions of our species hold immense influence over the lives beneath the waves. In South Florida, however, there is a community that continually fights to maintain companionship with not only broader, conceptual sea-space, but also with specific species of fauna living within it. Sharks have received much of this recent attention, as marine biologists and activists invoke either scientific or moral reason to raise sympathy for the plight of this oceanic predator. Before an explicit description of this community, the following section presents the temporal context in which its members have developed their values.

Temporal Context

The questions posed by this project—questions of meaning associated with the shark and with shark conservation—are situated along a continually evolving trajectory of fisheries policy in the United States. Such legislation made in the last fifty or so years precipitates from the ways in which both policymakers and the public understand marine space and the life within. Especially visible in the relatively young realm of fisheries management, environmental policy is a reflection of human culture meant to bring order (or at least a sense of order) to our surroundings.

Since the mid-20th century, the fisheries policy of the United States has been driven by a common understanding of the sea as a boundless source of wealth to be exploited both economically and scientifically (Weber 2002:20). Slowly, these understandings are changing, as my informants suggest. Yet there still is an underlying ethos of *use* that continues to dictate the details of this policy. Apart from the emotional reactions inspired by the sea that I discuss in other sections, the shark during this time has been just another fish stock to be developed for the benefit of humanity. In the following section, I discuss the historical context in which my American conservationist-informants have come to understand the shark.

Managed Exploitation

In the post-War 1950s and '60s, the United States encouraged the exploration and exploitation of the sea to deflect the pressures on land-based resources and stimulate the business of fishing along the nation's coast. Increased bureaucratization after the War was not limited to land, but was organized also around the sea and the resources it held.

One such agency, the Bureau of Commercial Fisheries (BCF), which later became the National Marine Fisheries Service (NMFS), was created to develop new methods and markets for fishing and fish consumption. In the mid-60s, the BCF marketing staff began a public relations campaign to change the American perspective of fish from a smelly protein that was difficult to cook to an easy source of inexpensive and tasty food (Weber 2002: 22). Until fish sticks and frozen fish fillets were literally invented (a curious but accurate term in the realm of modern food production), there was an aversion to anything but chicken, beef, or pork as a dinnertime staple in the country. Not only did this government effort open up new markets for the fish, but it led fishermen to seek more plentiful and economically viable sources of catch.

With the support of an optimistic *maximum sustained yield* (MSY), the BCF encouraged the growth and development of various new species, including shark. As a former employee of the BCF recalled, “We had people in the agency saying, ‘We’ve got to help your guys. We’ve got to promote Spanish mackerel and king mackerel. We’ve got to develop the shark. We’ve got to do all this because according to our estimates, we have blanket-blank out there that’s available for harvest” (Weber 2002:22).

Worth quoting at length here is an article published in the *Los Angeles Times* in 1968 in which a contemporary biologist summed up the American impetus toward further shark exploitation in the mid-20th century:

Dr. Gilbert should know—being chairman of the Shark Research Panel of the American Institute of Biological Sciences. His thesis is that man and the shark should get much better acquainted. To begin with, Dr. Gilbert insists that shark meat is delicious. Aside from its comestible value, the shark has other goodies to offer. His outer skin makes fine sandpaper; his inner hide, first-rate leather. Those pearly teeth look well in necklaces. Shark liver oil is rich in vitamins. The cartilage provides very fine glue.

Anything left over makes edible if not palatable fishmeal. Dr. Gilbert may well be right in his contention that the shark has been unjustly maligned. After all, he points out, only some 30 of the more than 250 known varieties of sharks have developed a taste for human flesh. And these gourmets succeed in polishing off a paltry 50 men a year. If man ever acquires a liking for shark, he can be counted on to do much better than that. [Los Angeles Times 1968]

Fisheries policy at this time was wholly based upon plans for economic growth that were green-lighted by scientific professionals. As Weber notes, “Many marine experts believe that about 90 to 95 percent of the ocean’s productivity presently is unused and that utilization can be increased at least tenfold without endangering aquatic stocks” (Weber 2002:14). While numbers were often estimates that varied by a few hundred million tons of catch, MSY was nevertheless touted as an exacting measure that brought objectivity and precision to fisheries science. In the 1960s, the establishment and oversight of an increasingly liberal MSY (eventually being called Optimal Sustained Yield) was used as a weapon to support various management agendas and empowering both politicians and their scientific advisors with deceptively superior facticity.

Following this bureaucratization and regulation over what was once a self-regulating occupation, and with external competitive pressure from foreign fishing fleets, an intense nationalism developed among the fishermen who worked the American coast. Subsidized by the federal government for expenses and even the construction of new vessels, the fishermen pressed for a restriction on foreign fleets to use “their” fishing territory. In essence, this drive to encompass and to control the use of arbitrary tracts of marine space led to the Magnuson-Stevens Act of 1976, putting the government officially in control of *its* waters by establishment of a 200-mile fisheries conservation zone (FCZ)

extending out from the shores of the United States. The Act essentially “loosed an unprecedented expansion of fleets, landings, and exports” for American fishermen (Weber 2002:85), with little concern for the capacity of the marine ecosystem to sustain such exorbitant pressure.

With the passage of Magnuson-Stevens, the function of the NMFS changed from a scientific agency to a managerial one, with newfound control over the fishermen, boats, and fishing methods in the territorial waters of the country. The breadth of the Act created a bureaucratic muddle that bewildered not only the fishermen who worked hard to reach allowable quotas and exploit certain fisheries, but also the NMFS scientists who were entrusted to organize and enforce and generally manage this encouraged effort (Weber 2002:88). It is here that the true politicization of fisheries took full effect: the maritime space of the country was now under federal oversight (not to mention that of state and local authorities), and there was a growing disconnect between the decision-makers, fisheries scientists, and the fishermen who had perhaps the most intimate connection with the sea and the most at stake in terms of livelihood.

Precautionary Science And Conservation

During the 1970s and into the 80s, scientists increasingly questioned this idea of an endless supply of marine resources. The concept of MSY persisted (and still does), but was reduced to levels that reflected a growing suspicion that the ocean was not as boundless as once imagined. Furthermore, the difficulties in determining an accurate MSY continued to confuse policy decisions. Dr. Stephen Kajiura, a shark biologist at Florida Atlantic University discussed with me how MSY currently relates to shark

conservation. “One fourth of shark fatalities are from shark finning,” he said, and he “has no issue with people killing sharks for meat as long as it is done sustainably. Shark finning is incredibly unsustainable, but there is a difficulty in establishing parameters for safe harvest of sharks.” Because they are always moving, obscured by thousands of miles of contemptuous ocean, it is difficult to count how many sharks exist, and therefore Kajiura suggests, “Precaution must be used in establishing sustainable numbers for harvest.”

Especially in the 1970s, social scientists began to orient their work toward the systemic thinking borrowed from post-war advances in computerization (Bateson 1972; Wallerstein 1974). With this systems theory, the scientists whose work concerned the environment focused not only on the populations of one species alone, but instead how that species fits into a greater *ecosystem*. Along with this new perspective came the precautionary approach to fisheries science, whereby the burden of proof was shifted from conservationists to resource managers and fishermen. As Weber recalls about the Marine Mammal Protection Act of 1972 (MMPA), “Instead of requiring a demonstration that an activity was harmful, the MMPA required a demonstration that it was not” (Weber 2002:116).

This intense politicization of fisheries certainly influenced American perceptions of the sea during the latter half of the 20th century, but perhaps more influential to individual conservationists was the rebellious cultural climate of the late 60s and 70s that encouraged such phenomenon as the anti-whaling movement begun by Greenpeace and the countless other environmental non-governmental organizations (ENGOS) that formed during this time. Such activity by these groups marked the beginning of a sympathetic

appeal to the public to save the oceans and the creatures within—a legacy that has been passed along to subsequent generations.

Important to mention here is not only the huge impact these large ENGOs had (and still have) on conservation policy and how various animals were subsequently perceived by the public, but also important are the jobs that these organizations create for scientists and many different types of activists. From the 1970s onward, these groups provided not only seasonal jobs to millions of Americans, but lifelong careers to environmentally conscious individuals. Certainly this fueled the fire of the environmental movement; “saving the world” no longer was just a weekend hobby, but a full-time occupation in which one’s voice could be heard above the static of the 1980s and 90s.

With the influence of Cousteau still strong, the technology of SCUBA making the undersea world available to the public, and “cool” jobs available that one’s parents would actually see as legitimate, what better career for the curious mind than a marine biologist? As I have seen with several of my biologically-inclined informants, these decades and the momentum of conservation formed within them became the early impetus to begin a life near the sea, working to save marine mammals, fish, and sharks.

The Shark In Popular Culture

As economic exploitation of the sea was encouraged after the War and then questioned in the 1960s and 70s, the understanding of the sea by political agents was influenced by contemporary marine science. Hard facts from which to base sound

policies were needed: the genesis of what is currently lauded by the current regime as evidence-based policy.

Cousteau's Boundless Sea

Perhaps the most influential marine figure of the post-war period was Jacques Cousteau, whose unique combination of science and public entertainment inspired countless present-day marine scientists and conservationists, and portrayed the sea as a powerful, fantastic space.

Cousteau was an iconoclast of the sea; formerly in the French navy and liberally funded to carry out explorations throughout the world's oceans in his converted minesweeper, *Calypso*. Through their adventures, Cousteau and his crew glamorized the life-aquatic, spending weeks or months at sea in the companionship of like-minded aquaphiles, diving with all forms of curious marine life, sinking below the waves to the black depths in fantastic yellow submarines, and describing the adventures with a matter-of-fact deliverance that made the sea and the strange creatures within seem like old friends.

His expeditions were at once scientific, technological, and entertaining. In the first capacity, Cousteau and his crew gathered samples, studied the habits of marine life, and described the reactions of the sharks, rays, and groupers to the rubber-clad divers. In the second capacity, they constantly developed and improved upon new diving technology, from submersible machines to the self-contained underwater breathing apparatus (SCUBA) Cousteau and friend Emile Gagnan invented. And in the third capacity, the films and books about *Calypso* and her adventures entertained millions of

Americans dreaming for a different, more exciting, way of life—vagabonding around the world, but with legitimacy commendable by the Great Generation. The crew of *Calypso* made the underwater world practically and conceptually accessible to a generation of terrestrial baby-boomers—individuals who now sit as faculty in marine science departments throughout the country, advising the newest generation of aquatic conservationists.

And yet perceptions of the ocean and the fragility of it were different then, even in the eyes of Cousteau. He once remarked confidently about the impossibility of the shark's extinction:

The shark need have no fear of such a fate. The majority of the races of squali, to which sharks belong, are perfectly adapted to their mode of life and their enormous number makes their extermination extremely difficult, if not impossible. This, in turn, makes the shark one of the last of the animals dangerous to man and still uncontrolled.

He continued on,

Whether it be through the study of human reactions or through a study of the habits of the squalus, our civilization now must establish an effective method of protection against sharks. Unless we do this, our invasion of the oceans will be delayed or made difficult of accomplishment, because the great mass of nonprofessional divers will be afraid and will hesitate to venture into the sea.” [Cousteau 1970:24]

Indeed, these poignant words represent an outdated perception of the boundless resources of the sea. Nevertheless, Cousteau's words accurately represent the optimistic, perception of the oceans that pervaded public and professional thought after the War.

While scientifically motivated, Cousteau's expeditions on *Calypso* opened up vast tracts and unexplored depths to those on land willing and capable of exploiting such an inhospitable resource. The journeys of *Calypso* remained true to their fight for marine

biodiversity, but they also showed how marine science was largely in tune with an exploitative, managerial attitude toward nature in the developed world.

In 1964, when Cousteau was probably floating around somewhere in the Red Sea, surrounded by dolphins and bathed in salty air, many present-day tenured marine biologists were taking their first steps across that sandy threshold dividing the land from the sea. As they grew from children to young adults and then to scientific professionals, the text and images of Cousteau encouraged this curiosity for “all things ocean” as my informants described.

The three fronts of American involvement with marine nature in the 20th Century—science, economics, and entertainment—have significantly enlightened policy and public with suggestions for ways in which human society can better interact with the sea, although the predominant approach to such interaction was through regimented and bureaucratized control. Much of this advice has led to protection for certain animals determined to be under threat. Yet it must be realized that this same optimism that has protected many species has led to further human interactions with marine life, which has ultimately been detrimental to many other forms of sea life.

These interactions have brought not only human bodies into the ocean to swim and to explore, but have also led to diverse human conceptions of nature that vary between nations, cultures, and individuals. While each is unique, these conceptions are mostly derived from land-based ideas of harmony and balance that tend to be at odds with a very dynamic and often hostile undersea environment. In the realm of popular culture, nothing represented this hostility as strongly as *Jaws*.

Jaws

In the summer of 1975, as families packed into the station wagon and infiltrated the beaches of the American coast, Steven Spielberg's blockbuster film, *Jaws*, hit thousands of movie theatres across the country. Instantly, Chief Brody's words "Get out of the water!" echoed in the minds of these beachgoers, and millions of people did just that. Almost forty years later, that theme music still haunts swimmers in all but the clearest water, and it is still rare to find any sober person swimming along the coast past dusk. This film is most often cited by conservationists as the biggest detriment to American perceptions of the shark, but in this capacity, the film has marked an epistemological departure between those who understand the *real* shark and those who still see it as the bloodthirsty monster that was the star of this horrific show.

In 1973, Peter Benchley wrote the book *Jaws* that inspired the film. Like most fiction writers, he absorbed that which was around him—interesting characters, history, and fictional literature—and used it to create a dramatic story loosely based on real events that elicited strong emotion from the public. It wasn't so much that he was putting fear into their hearts, but was showing them the tacit fear they possessed but had largely repressed. As Benchley (2002) aptly said in another of his books, *Shark Trouble*, "Sharks come from a wing of the dark castle where our nightmares live" (2002:xi). Such description so eloquently summarizes the American feeling towards sharks after the book and the film.

The great irony here is that Benchley's statement is composed as a confident fact, and yet the story he wrote helped create that very fact. In the minds of the public, sharks became a suitable enemy, diametrically opposed to the relaxing atmosphere of the

holiday beach with their sharp teeth, gaping mouths, expressionless black eyes, and raw predatory power. In a sign of the times, the late author and his wife have since fought a constant battle to portray the shark in a more favorable light to the public.

Jaws was not the only story that maligned particular forms of life. Since 1975, numerous summer blockbusters about aliens, snakes, giant squid, ghosts and so on have aimed at triggering the same fearful response as the film; in essence, the goal is to find what is comfortable, traditional, and peaceful, and then insert some pseudo-fictional non-human to shake the tranquility straight out of the viewer. By deliberately contrasting the accepted norms of peaceful life with its exotic opposite, the film industry has and continues to produce valid reflections of culture, if at least to the trained anthropological eye.

Yet what differentiates *Jaws* from some of these other films is the lasting impact it had on the actual lives of hundreds of millions of sharks and thousands of conservationists. I asked every person I interviewed about this impact, and they unanimously agreed that the film singlehandedly set back the progress of shark conservation more than any other book or film to date, especially in terms of maintaining sustainable shark populations. By framing the shark as a worthy and formidable opponent to the good, the peaceful, and the innocent, the film reified the theme of man-versus-nature and encouraged shark fishing tournaments, shark culls, and a general loathing of the unknowing animal to all that saw it.

Such impact! And the perceptions of so many individual Americans have been altered, despite the fact that the mechanical shark “Bruce” was, in retrospect, a clumsy fake. As biologist Stephen Kajiura told me, “A friend of mine watched the movie with a

stopwatch and timed how much actual footage of real sharks was shown, and the final time was only 24 seconds of actual shark footage!” Such statements are made by individuals who were young kids when *Jaws* came out, yet are working tirelessly to protect the shark and overcome Bruce’s horrible image.

Not only did the book and film scare many away from the dark ocean depths, but it helped to form the boundaries of what has become a community of individuals drawn to the sea in an effort to protect what they envision as a final planetary frontier

Recent Developments- The Discourse Of Sustainability

Peter Fricke, chief social scientist for the NMFS, is well aware of the change in perception of the ocean’s resources since the early 1980s. Fricke remarked

A major change has been the notion that fisheries were open, were an inexhaustible resource. Everyone recognized that this was now a finite resource and that fisheries were essentially closed. There is a generation, that changed generation between 1980 and 1995, that moved from the expectation that fisheries were open for the taking to the new generation that realized that it was finite. [Weber 2002:170]

Part of this realization originated with commercial fishermen, with their lines slackened from decimated coastal fish stock. More came from ENGOs that used scientific evidence to effectively influence political action that addressed the decline in sharks, marine mammals, and various pelagic fish populations. Through these decades, the precautionary approach gained strength.

Now in the 21st century, sharks broadly remain under the jurisdiction of the Magnuson-Stevens Act, and are specifically regulated by several other recent policies to reflect changing evidence. As the NMFS website describes:

Since 1993, there have been numerous changes to the shark regulations as a result of stock assessments, changes in stock status, and other fishery fluctuations. Despite these modifications, the Atlantic shark fisheries, specifically the non-sandbar large coastal shark (LCS) fishery, continues to sometimes experience problems such as commercial landings that exceed the quotas, “derby” fishing conditions, increasing numbers of regulatory discards, and declining market prices. [NOAA]

As more and more evidence came to light that effectively demonstrated certain marine populations to be in precipitous decline, further regulation of fisheries was pushed through local, national, and international governance. The most current NMFS fishing regulations show the species of shark which are now prohibited in Florida waters, and supplementing these regulations is the Shark Conservation Act of 2010, which restricts not only the types of shark that can be caught but the methods by which legal sharks can be landed. On January 4, 2011, President Obama signed this Act into law, amending Magnuson-Stevens to:

Prohibit any person from cutting the fins of a shark at sea and from possessing, transferring and landing shark fins (including the tail) that are not ‘naturally attached to the corresponding carcass.’ In addition it prohibits any person from landing a shark carcass without its corresponding fins being ‘naturally attached.’ [NOAA]

This recent regulation reflects the awareness of the public and the administration that shark populations are indeed in decline, and that shark finning is the most unsustainable of these practices.

The contemporary discourse of shark conservation centers on this sustainability: particularly what is sustainable and what is not. Defined as that which “does not cause or lead to undesirable changes in the biological and economic productivity, biological diversity, or ecosystem structure and functioning from one human generation to the next”

(BSD-NRC 1999), sustainable interactions with sharks are seen by my informants as virtuous, fair, scientifically and morally correct.

Early in 2012 I called shark biologist Neil Hammerschlag at the University of Miami and spoke with him about his work with sharks. Dr. Hammerschlag went to undergraduate school at the University of Toronto and had been raised nearby. Here, he spent his breaks from school volunteering with various scientific agencies, studying anything “from coral to algae to invertebrates.” Then he did an internship in Santa Cruz, California, where he became primarily interested in sharks. From that point on, he said, he “knew he wanted to work with them.”

I asked him about his current work, and about his well-publicized battle with a chartered fisherman in Miami who catches various species of shark for sport, and boastfully assures he has killed tens of thousands of sharks in his life. Hammerschlag said his problem with Mark is that “he is targeting species that are in serious decline,” and that “by bringing them back to the dock just to hang up and promote himself” Mark is “being wasteful.”

I related my similar concern for such practice and my observance of sharks I had seen in Ft Lauderdale that are brought back to the dock to be mounted. Neil said that often these boat captains and crew will, in the “heat of battle,” say to their customers, “wow, this is a big shark, you should have this mounted.” Then, “the shark is brought up on the boat and killed, and when they get back to the dock, the cost of mounting is discussed, which can be in the thousands of dollars.” The shark carcass then becomes a “burden” on the customer—“your responsibility now”—who then subscribes to the mounting service, unknowingly providing a “kickback” to the fishing crew by way of the

local taxidermist.

When asked about morality/immorality of killing sharks, Hammerschlag said that killing animals and not consuming them is “immoral.” “Catch and release fishing is one thing, provided it is done sustainably,” he said. Yet here he added, he “is not one to impose multicultural beliefs on other people.”

According to Hammerschlag, Mark the Shark has told him he is “hypocritical” for complaining about the shark killing because he still eats steak. The difference here, Hammerschlag says, is that “cows are killed in a sustainable way, and humanely. They are farm raised, organic, and raised to be eaten by me.” This is “different from killing animals that are proven to be in a 90% decline.” Again drawing on a theme of cultural relativity, he “could not say that people shouldn’t be allowed to catch fish, because *this* would be hypocritical.”

I then attempted to uncover more of the connection between sustainability and morality by discussing the hot contemporary issue of the dolphin killing in Taiji, Japan, where thousands of these cetaceans are herded into a secluded cove each year and “traditionally” killed by local fishermen. Interestingly, Hammerschlag said the killing of dolphins in Taiji is sustainable, because “they are not threatened around the world.” Yet the way they are killed, “inhumanely, stabbed with spears” is immoral, and it should thus be prevented. He said he has an “emotional attachment to dolphins” and that they are “highly evolved and capable of showing emotion,” and thus should not be killed. Yet from a standpoint of pure sustainability, killing dolphins is not wrong. They are sold for meat, and while the meat has been shown to contain toxins, Hammerschlag says, “I consume Aspartame, and it has been shown to be toxic too.”

Dr. Hammerschlag was more spirited in his description of sharks and shark conservation than some of the other biologists I interviewed. Like Drs. Kajiura, the primary theme of Hammerschlag's interview was the definition and manifestation of sustainable fisheries practice. I was surprised that all three of these biologists said explicitly that they were not totally against the killing of sharks, as long as it was done in a sustainable way. Conversely, the activist informants with whom I spoke were against the killing of sharks, period. Hammerschlag was very concerned with being called hypocritical, so he made it a point to establish his position as not hypocritical, based on the arguments of sustainability. His emotional connection to dolphins showed that emotions are not completely absent from his overall impressions of marine nature.

Contemporary shark conservation stresses sustainability, but this word carries not only scientific, measurable, weight, but cultural and historical significance as well. From early exploitation to the precautionary principles that have established sustainability as the benchmark of good conservation, we have seen a trajectory of fisheries policy that has developed alongside shifts in human perceptions of the sea. Having clarified this trajectory, we can now explore just who the people are that have both affected it and been affected by it.

With inspiration from Cousteau and the lure of the undersea world, we have seen why many of these people have chosen the path of marine scientist, activist, and generally as steward of the silent voices of the deep. But what is it about these individuals that has heightened their opinion of the shark in particular? Of all possible choices, why work to protect *this* animal? The following section describes these people as part of a larger community deeply rooted in the precautionary science of the 1960s and

70s, bearing the rebellious spirit of those decades, and intimately aware of the biological and ecological advancements of the last forty years that continue to establish why sharks really do need to be saved.

Getting To Know The Water People

In March 2012, I spoke with notable shark protection advocate, Shawn Heinrichs, a photographer and writer in his early forties, about his work with sharks and how he came to this life upon and under the waves.

Asked how he became interested in sharks, Heinrichs first said he is “part of the dive community.” Two decades ago, when diving in the Caribbean, he said he “saw sharks on every dive, all over the reef.” Then through the 90s he saw fewer and fewer during dives, and now there are “barely any sharks to see while diving.” He realized “something is really wrong here” and being a “person of conscience,” he started asking questions about where the sharks had gone and what has happened. The more he asked, the more he “heard answers about the shark fin trade and overfishing.”

“There is still,” Heinrichs said, “a lingering perception of sharks from Old Man and the Sea, yet this is far from the truth. Sharks are scavengers of the sea.” He went on, “There is no chance for a fair fight, when they are caught by sport fishermen who bait hooks with pieces of fish, the shark’s typical diet, and these hooks are attached to wire leaders and high-test fishing line.” He then reiterated a moral stance that has been so pervasive in petitions against terrestrial hunting and the hunted animal: “It is not a fair fight.”

Relevant here is the reference made by Heinrichs to the “dive community.” Along with him, several other people with whom I spoke noted their belonging to a “community.” Pronunciations of “we” and “us” were more prevalent than “I” when I asked them to speak about the goal of their work and the obstacles set against shark conservation.

This community is recognizable formally and informally. Nova Southeastern University has a group of graduate students working at the *Guy Harvey Research Institute*, and Florida Atlantic University students interested in sharks can gain research supervision from Dr. Stephen Kajiura. In doing so, they formally join other individuals with similar interests, and share thoughts, ideas, and quite often are socially involved outside the classroom.

Informally, these students, professors, artists and activists within the local conservation community are united by their view of the natural world and the external and internal ways by which they identify themselves within it. Conceptually, they join together in a shared aquatic ontology. On the surface, so to speak, there are differences in the way they describe the problems and envisioned solutions. Yet a deeper examination indicates that the community of shark conservation is not only adjoined by method, purpose, or perception (as I originally had thought), but finds its predominant unity in the shared, natural religiosity of its members.

An Aquatic Religion?

I see this community aligned with what Durkheim (1912) defines as a social fact. General, external, and coercive, the social fact (religion, for Durkheim) functions

systematically through a series of beliefs and rituals to bring the *profane* order of individual experience into the common order of the *sacred*. In doing so, social organization functions to preserve social solidarity. In another work, *The Rules of Sociological Method*, Durkheim (1964) describes this social fact as:

Every way of acting, fixed or not, capable of exercising on the individual an external constraint; or again, every way of acting which is general throughout a given society, while at the same time existing in its own right independent of its individual manifestations. [Durkheim 1964:13]

The “dive community” described by Heinrichs is *general* in that it “is collective (that is, more or less obligatory)...a group condition repeated in the individual because imposed on him” (Durkheim 1964:9). The generality of this community is that it first exists in the whole and subsequently exists in its parts, and not the other way around (in contrast to Marxist social theory wherein individual material conditions determine a secondary sociality). Its generality is its seductive aura; one wishes to be a member of this group, and not the other way around. Individuals join the community in a lighthearted ritual “baptism”: the first open-water scuba dive. Soon thereafter, the distinctive red-white flag sticker miraculously appears on the rear bumper of their car.

Similarly, the *externality* of this community is that its “existence prior to [one’s] own implies [its] existence outside of himself.” It “function[s] independently of [one’s] own use of [it]” and thus exists “outside the individual consciousness” (Durkheim 1964:2). It is external in that some people are *born into it* as a result of their place of birth or the activity of their parents; the “diving world” or similar “surfing world” continues in its existence even as individuals are born into it and later pass on.

Finally, the *coercive* power of the community is that this externality functions to keep the individual diver in line with the general; that is, it promotes social solidarity by tacitly nudging the wayward individual back into the mainstream. The dive community quietly coerces its members into agreement and often action to uphold its ideal—that is, the preservation of the sacred planet. It is rare to find a diver emerge from the sea and empty the boat’s trash bin back into the ecosystem they have just intimately enjoyed.

In his study of Australian Aborigines, Durkheim further establishes the fundamental element of this religion-as-social fact; that is, its function as a bridge between an ontologically distinct *sacred* realm with the *profane* reality of individual existence. “Society”, he writes, “raises man above himself” (Durkheim 2001:313) and religion is not merely an abstraction of this society, but rather “the very image of it” (Durkheim 2001:316). Ritual acts and the beliefs held by members of this society are expressions of this religion, and are the means by which the individual ascends this “world of experience...and conceives of another” (Durkheim 2001:318).

Fortunately for my argument, there is room in this theory for forms of religiosity distinct from the “big five” world religions. Considering the parameters above, we can now consider the contemporary work of Bron Taylor (2010) who recently outlined the parameters of so-called “Dark Green Religion.” Taylor describes this as a set of beliefs and practices characterized by a central conviction that “nature is sacred, has intrinsic value, and is therefore due reverent care” (Taylor 2010:5). Dark Green Religion can be seen as a multifaceted force acting upon individuals whose realities and spiritualities are founded in a biocentric ontology, a qualification I further ascribe to a broader iteration of the dive community in the next section.

If Dark Green Religion is to fit Durkheim's definition of religion, it not only must be general, external, and coercive, but also composed of both *naturism* and *animism*. The former addresses natural things, "whether great cosmic forces like winds, rivers, stars, the sky...or objects of all sorts that populate the earth's surface—plants, animals, rocks, etc." The essential corollary of naturism is animism, which addresses spiritual beings—spirits, souls, genies, demons, divinities proper" (Durkheim 2001:47). Concurrent with this definition, the Dark Green community, and as I argue, Heinrichs' "dive community," directs their naturism toward the sea and the seashore—in general, the marine wilderness and forms of life within it. Their animist, spiritual being to which their social action is intended is not a being as such, but the Blue Planet—what Jimmy Buffett humbly refers to as "Mother Ocean" (Buffett 1974).

In Taylor's nature-religion, the profane is the worldly existence of human individuals living within and denigrating the planet as agents of the Anthropocene—an existence diametrically opposed to the sacredness of the planet itself. Profanity here is best seen as a guilty sum of human consumption. Pollution, chemical and nuclear proliferation, development, and unsustainable resourcing have sullied the everyday existence of the human species. Opposed to this reality is the ideal, paradisiacal image of the harmonious, diverse ecosystem. In believing that this planetary (and thus individual) salvation is possible, and through expressions of this ideal through ritualistic practice (surfing, diving, hiking), the Dark Green Religion systematically raises the individuals above themselves. In doing so, it maintains social solidarity—the essential function of Durkheimian religion.

A key part of Taylor's description of the Dark Green Religion is participation of its members in recreational sports such as surfing, diving, hiking, and so on. Here, recreation can be seen as transcendent of its usual definition, as both a higher form of personal expression of faith and as a catalyst to social integration. The various sport-oriented communities go *into* nature and thus *become* nature; "material maneuvers intended to conceal mental operations" (Durkheim 2001:314) to use Durkheim's words. It follows that Taylor's Dark Green Religion, enacted in these ontologically oriented rituals, is truly worthy of its bold title. This nature-religion, it appears, is not merely a trend, but a significant moment in history that realizes individual human animality while respecting the sacredness of human sociality.

Each of my interviewees mentioned something about a love of the ocean, either from a childhood spent near its waves or, conversely, a childhood spent inland infused with a longing to escape their landlocked home geographies and move to the coast. One biologist (who stoutly rejected any emotional connection to sharks or to their preservation, saying he was "not a shark-hugger") softened noticeably when describing his formative years as a child in Africa when he "played in the waves all day long." This individual's work in conservation had little professed emotional connection, yet a favorable association with the sea at a young age had oriented the general direction of his life.

Another shark biologist, Dr. Hammerschlag first resisted notions of emotionality but nevertheless credited his childhood near Toronto as the genesis of an ocean-fantasy—away from the sea and polarized by both statute and conceptual mileage—and fueled by

the ubiquitous imagery of Cousteau and his three yellow air tanks submerged in a faraway alien paradise.

My conversation with the manager of a local diver shop beautifully illustrates this connection to not only the undersea world but to the other individuals who similarly enjoy this world and work to protect it.

“My students and customers learn to respect the ocean,” he said. “We teach them here to keep their hands and fins off the coral, to pick up fishing line they see tangled up in sponges, and that kind of stuff. Our shop organizes with local dive boats to do reef cleanups every few months, where the divers pay to go out and actually do conservation work themselves.” He then emphasized their functional interaction through the experience: “They come back with beer bottles, nets, lines, and other trash in buckets, and have a great time while making a difference. It’s a win-win for the shop, the boat, the divers, and the fish.”

I asked, “What is your typical customer. Regular local people or tourists? Men or women, old or young...that kind of thing.”

“We get a lot of local divers that come in each weekend to get their tanks filled, and we get to know these guys pretty well. Its guys and girls, actually; a pretty good mix. Mostly middle aged I’d say, but some young people too. There are tourists each day too, coming down from the Midwest to dive here in South Florida and see our wreck and reefs.”

“Do the divers become friends outside the shop too? Like during the week, that kind of thing?”

“Oh yeah,” he said. “We have this core group that goes out eating and drinking together after the dive trips, watches football on Sunday. Pretty close group. In a way, the dive shop is a good meeting place for people that would otherwise never meet, and they get together through their love of the water. Sometimes the people in our basic diver courses stick together for years after the initial class. Not just dive buddies, but they get to know each other’s families and stuff like that.”

A local dive boat captain with whom I spoke supported this sense of camaraderie: “We tend to get some tourists coming through, but mostly rely on local groups of divers who come out each weekend to fill the boat. They do reef cleanups, and usually bring all their camera stuff out and take pictures on the boat and underwater. They like diving our deeper wrecks, *The Rebel*, *The Mercedes*, *Tenneco Towers*, and will book these trips weeks in advance so they can all come out together on these deeper dives.”

“Are they pretty good divers?” I asked.

“Some are, and some are new to it, and others are just plain bad.” He laughed and added, “Some people are a handful for me and the crew, but they come out regularly and really enjoy it. They drive us nuts but we smile and nod and go find their mask when it falls off their head and overboard.”

“Do you get scientists out here as well? Biologists doing research?” I asked.

“Yeah we get a few of the local universities coming out here. Mostly marine biologists either out for fun, doing cleanup work on the reef, or observing fish, coral, sponges, or whatever else they’re studying.”

I asked what the typical composition is on the boat on a weekend.

“Some of the scientists, mostly local recreational divers out here for fun, some photographers, some catching lobster during the season. It’s a pretty good mix. A big part of our business is the classes that come out from the local dive shops.”

“Do the students come back after they’ve been certified?”

“I think so. There are so many of them that it’s hard to track that kind of information without going back through the waivers. Most of the regulars have made friends in the classes and come out with those friends after the class is finished. Also certain instructors seem to have more fun with the students and encourage this kind of buddy system even after the class is over.

“Some of the marine biologists are instructors too, and they bring one or two students out on the weekends. They get their divers involved with reef conservation projects, fish counts, and that kind of stuff.”

“It sounds like a good way of getting this knowledge across to the students...out on the dive boat, actually doing the work of conservation,” I said.

“Definitely,” the captain agreed.

Considering this sense of coalescence around the ocean and particularly around the ritual of the dive, the term “Water People” seems appropriate to identify this community: more meaningful than just a simple association—fitting better with Taylor’s concept of nature-religion than with a gathering of weekend warriors. Through various associations with surfers, scuba divers, scientists and sailors, I suggest here that this title better identifies that which I previously have referred to as the “conservation community.” Individuals within are broadly united in identity—by personalities, activities, and beliefs sculpted by affections for the sea and preference toward either work

or recreation in, on, or around the marine environment. These identities are thickly contextualized in the histories of the individual, popular media such as film and text, and generally, an overwhelming fantasy in which humans and nature (especially aquatic nature) are one. In other words, this community finds meaning through a biocentric planetary ecology in which the significance of the aquatic extends beyond its geographical dominance to deeper conceptions of purity, pristinity, and paradise. Solidarity of the community in the Durkheimian sense is maintained through rituals of science (marine biology and ecology) and sport (primarily diving, surfing, and sailing).

This aquatic reverence is partially accomplished by demonizing its spatial counterpart—the terrestrial, profane Earth and the unclean life upon it. Through this spatial polarization of sea and land, wherein the latter is maligned and the former is ultimately understood as a sacred, virginal frontier, we gain insight into the shared meaningful perceptions by which the Water People understand not only the Great Sharks, but also themselves.

The Aquatic Sacred And Terrestrial Profane

Through their formative years, whether raised by the sea or inland, these aquaphiles have cultivated ideologies and fantasies of a paradisiacal marine space distinct from land by its sensed characteristics and by significant conceptual differences between these two disparate realms. Historically, as mentioned before, the strangeness and conflicted notions of abundance and scarcity of species that lie below the ocean's shapeless surface define, in part, this watery area.

“I was drawn to the water through books and movies, mostly,” said one of my informants—an activist who volunteers with a shark conservation NGO. “It was Cousteau a little, but also *Jaws* and films like that that made me actually want to be in the water. Weird, right?” She continued on, “I just felt better near the beach or in the water than on land. And from watching these things as a kid, I just always wanted to actually move to the beach—be a lifeguard or something. I think a lot of kids in my generation, through watching this stuff on TV and reading magazines and books, we wanted to be marine biologists, swimming with dolphins and saving beached whales. While I didn’t go that route—I realized it was too much time in the lab, applying for grants—I still wanted to protect marine life, whether it was whales, dolphins, or even sharks.”

I asked another activist in the same organization how she got into shark conservation. “It was probably when I learned to dive and got to see sharks feeding in the Bahamas. For some reason I realized just how powerful these things are and I when I read later that millions of them were being savagely killed just for their fins, I thought something needs to be done. I’m not a scientist really, but I still try to change public opinion about the shark for the better.”

Whether through the *Silent World* of Cousteau (1953) or the adventurous terror of *Jaws*, the Water People were shown something at an early age that sparked a passion that would either lie dormant in the imagination or immediately start them down a path to oceanic living. Exposure to these films and books or otherwise experience with the sea itself and those often-eccentric characters who lived and worked on it led the Water People to initially conceptualize the ocean as an alterity—an impassioned and exotic, Orientalized other—fluid not just physically but variable in its tempestuousness and

tranquility, its comfort and solace; “a place of romance, exotic beings, haunting memories and landscapes, remarkable experiences” (Said 1979). Burgeoning with opportunity for the curious individuals to immerse themselves in this alluring space, the Water People at some point in their lives realized a “pull” toward the sea.

Regardless of what inspired this initial draw to the exotic, mysterious sea (film and literature or an aquatic childhood were most common in my subjects), or by the recognition of an ecological problem and the challenge to “do something about it,” these individuals have at some point in their lives shifted their conceptions of the ocean from an alterity to more of a homeland. These conservationists now seek to preserve the integrity of a geography made-sacred through cultural phenomena deeply contextualized in each of their life histories.

To further define this aquatic-sacred, we must dive deeper into what, for the Water People, opposes the sacred, or in other words, how they conceive of the profane. I depart from the great sociologist here in respect to this dichotomy, showing furthermore how this community views the natural world not as a network of assumable totems but rather, as an indomitable force of mystery to be lived in, succumbed to; gently stewarded but not dominated. Durkheim (2001) notes:

Admiration for the great forces of nature, even the sentiment of infinitude, are not enough to inspire us with the thought of sacred things and to separate them by an abyss from the profane world. Yet no religion exists without the notion of sacredness. Besides, must one believe that primitive man feels himself “crushed” by natural forces? Far from believing them to be so superior to his own, he ascribes to himself a control over things that is not his, though the illusion prevents him from feeling dominated by them. [Durkheim 2001:39-40]

Certainly the enlightened sentiments of the last three hundred years and especially the fisheries policies of the 20th century have aligned with the themes of control and dominance mentioned in the passage above. The Water People rebel against this, instead choosing a path of acquiescence and gentle stewardship over outright control.

Furthermore, this might be seen not so much as a choice but as a compromise with sea-space that is simply overpowering. Durkheim described a savage nature that was to be conquered through exploration and then made livable—its resources exploited for human survival and profit, but that crusade is the very definition of the profanity that, for the Water People, opposes the aquatic sacred.

Simply, the Water People view the profane as that which has been dominated. The built, managed environment: the rail lines and the skylines; the roads and homes; the shops and stores that both facilitate and necessitate a level of control over the natural world; these are all entities of pollution that threaten the pristinity and sacredness of the sea—taboos in the sense that they are forbidden yet essential elements of organized human society.

There is an important paradox here that is never mentioned by my informants. Surfers protest development on a beach that may alter a savored surf break—yet they rest their heads in the lodges lining this very beach after a long day on the water. Divers complain about fishing lines entangled in the delicate soft coral they enjoy photographing, yet house their complaints over a good fish dinner back at the dockside restaurant. The very activities near the water through which they express their oceanic identities are facilitated by iterations of human progress. In this sense, the terrestrial profane is not something to be remedied by the Water People—*its continuation is*

essential to theirs—but the fight against it is the unifying force that gives deep meaning to their individual lives and legitimizes their membership in a larger community and societal force. For them, at least, the importance of this fight in terms of sustainability, preservation of biodiversity, and planetary balance is enough to obscure the little ironies and inconsistencies that might weaken their collective argument. Joining this fight is the shark—an unlikely and unknowing companion.

The Shark In Paradise

Sharks belong to the undersea environment. They rank among the most perfect, the most beautiful creatures ever developed in nature. Their absence means disappointment for the divers, while their appearance is disquieting. When their formidable silhouette glides along the populated coral cliffs, fish do not panic; they quietly clear the lord's path, and keep an eye on him. So do we. [Cousteau 1970:45]

With geographical and temporal settings established, and the meaningful valuation of the sea by this community now framed in terms of the aquatic-sacred and terrestrial-profane, I now focus on how the shark is understood within this aquatic ontology.

The shark is no longer a free-swimming animal, but is inextricably entwined with humanity—both an agent and a subject of human intentionality. Considering the tremendous threat to global populations of sharks by finning operations, sport fishing, and lethal research practices, these animals are swimming in an increasingly viscous global aquarium.

To the Water People, this thickened environment is a paradise under threat. Various sects throughout human history have defined this word *paradise* in various ways, whether as Biblical conceptions of Eden, Islamic conceptions of Heaven, or modern interpretations of untouched islands and pristine earthly geographies. The latter is most accurate in describing the sacred seas my informants have been so inclined to understand, appreciate, and protect. As part of this geography and even more so as sovereign of this mysterious environment, the shark holds special meaning for this aquatic human community.

Unlike major religions, where emphasis is placed on the establishment and evangelism of a community *church*, the Water People have an individual relationship with the sea that has developed through their own life histories: where they lived as a child, what they watched on television or film, what books they read, their parents' occupations and recreations, and various other contextual aspects of preference and choice. Each has his or her own story of how they stepped into the role of oceanic steward, but each has a companionship with the marine biosphere that is reinforced through their work or leisure. Sea-space, as host to both individual and collective beliefs, *is* their church.

In John Steinbeck's (1951) *Log from the Sea of Cortez*, the author muses, "men really need sea-monsters in their personal oceans" (1951:27). It is in this companionship that the shark finds deep meaning as both a sovereign and a gatekeeper. As an apex predator of the aquatic world, and by the very monstrosity bestowed upon it by sensationalized human intentions, the shark is a ruler and a gatekeeper of paradise—of the aquatic sacred.

As a companion of the Water People, the shark, by virtue of its ecological role, keeps out the profanities of the terrestrial world. This role is defined through two forms of agency: the first involves physical encounters with humans; the second involves tacit exertions of power over the way humans understand the sea. The relationship between human and shark has become a reciprocity of intentions and unintentional sentiments of fear, admiration, and respect looming over ecological reality—pervading, defining, and threatening the present and future of both humans and this aquatic companion species.

Physical Agency

In the first, physical, form, this relationship is defined through shark encounters. Whether an unfortunate “attack” or a planned shark experience, encountering the shark affects the way humans view this animal specifically and the aquatic world in general. Americans enter the sea with expectations of the shark, and this sensuous experience is defined by expectations either fulfilled or refuted by the realities of sight, sound, and touch. The diver finds it strange that the shark’s skin feels like sandpaper, yet looks silky-smooth. Attacks have been described as impulsive acts of a confused animal, rather than the premeditated crimes of a monster, and a diver within an anti-shark cage can see firsthand that the shark “feels” the iron bars with its gaping mouth. In this sense, entering the water with sharks can (and often does) lead to a better understanding of the biological realities of this animal. Through its behavior toward human observers, the shark either reinforces or challenges the perceptions of its terrestrial interlocutors.

At a marina restaurant in Fort Lauderdale over lunch, I had a conversation with one of my frequent dive buddies, Chris Humphrey, about sharks and the meaning of a shark attack. Chris works in the music business in Nashville and is a recreational dive enthusiast—a self-professed “water-junkie” who travels to Florida and the Bahamas as much as possible when he “badly needs to get in the water.” I asked him what he thought about a fatal shark attack in Australia that had just made international news.

“Why do you think it happened?” I asked.

“They were in the water, and got bitten!” he exclaimed.

“But there’s more to it than that,” I said. “Isn’t there?”

“Well who knows what the shark wanted really. It may have just been swimming around and bumped into this guy surfing, thinking he was something edible. Sharks don’t have any hands, right? They feel with their mouths, which for Great Whites are full of teeth. Unfortunately this happened and it sucks that the guy died. But it wasn’t the shark’s fault.”

“So it was just an accident?” I asked.

“Pretty much. Really unfortunate. I know they put nets up there to keep the sharks away, but as long as humans keep going into the water where there are Great Whites, there’ll probably be more of these attacks. Not attacks, but yeah, accidents.”

“So do you think the government should kill sharks that come in close to the beaches?” I said.

“No!” Chris exclaimed. “They are already endangered enough. The nets near the beaches are already killing the sharks that come close to shore, and the last thing we need is some idiot fishermen going out in their boats and shooting at these things.”

Now, for some time I had known that Chris's family in Kentucky has a large hunting property which is used for deer hunting, and flooded for duck hunting in late autumn.

I pressed further, "But what about the deer hunting in our own national and state parks, where, when too many deer are determined by experts to exist in one location, the government sanctions a deer hunt within the park?"

Chris replied, "Deer hunting is different."

"Why?"

"Because deer are land animals that can be counted, pretty accurately, with infrared tree cameras and stuff like that. Too many deer leads to not-enough food, which ends up collapsing the whole deer population, and leads to inbreeding and other weird stuff. Sharks are in the ocean; they can't be counted. How many are there? Who knows. Scientists think they do, but even those facts are only guesses. How can you count great whites?"

"So don't kill them at all if you can't count them" I added.

"Yeah exactly. Don't kill them at all. We need them here, even if they take a bite once in awhile. And besides, seeing one underwater is awesome. It makes a great dive, even a nurse shark, and seems to put you in your position on the food chain."

Chris's responses, as a non-scientist, but certainly as a member of the dive community arguably situate him as the "ideal type" of Water Person. The shark encounter, for him, is a privilege: sought after and exulted; a humbling brush with marine nature that shows some order to the universe—even though that order may occasionally tolerate the gruesome death of one of our own species.

In the physical encounter, especially in stories of it, there seems in these people to be a disconnect between actual corporeal human death and the physical agency of the shark. A bite is a bite, but something is missing in between the shark's bite and the human impact of it. This is, I think, intentionality without blame, where tragedy is reimagined as natural tragedy, and thus more cognitively aligned with the normal workings of biological life. The shark is absolved of all blame due to its essential survival instinct, and blaming the human surfer doesn't seem right either, and therefore the deadly encounter becomes "unfortunate"—an effect stripped of blame; intentionality without direction.

A few days later, I spoke with local conservationist Hannah Medd. With a Master's in Marine Biodiversity, Medd now works as a shark protection advocate. She talked specifically of a conflict between humans and sharks that is occurring worldwide, and that has particular reference to the ways in which South Florida residents and visitors experience and therefore understand these animals.

I asked, "What brought you from the more physical sciences to the position of advocacy you're now in?"

Medd replied, "After a few years working in my chosen field, I eventually grew tired of this work and didn't feel like I was doing enough in the lab to address the problems facing sharks around the world."

Like any young Water Person would do in a similar call-to-duty, Medd then traveled to South Africa to work with great whites. There, she realized there were substantial "negative perceptions" of sharks, and these perceptions were directly impeding conservation efforts in the area.

“There is a big misconception of the cage-diving industry,” the form of encounter where the diver is lowered into the water within the protection of an aluminum cage.

“This industry has made the waters of South Africa famous around the world with divers and aquatic ecotourists, but also has led to conflicts within these groups,” she said.

I asked Hannah more about this, and she related it to the “chumming” controversy here in Florida that happened a few years back. Largely because of the fear of shark attack inspired by the media sensation that was the “Summer of the Shark” in 2001, policy was enacted that forbid divers to draw the sharks toward themselves by using this cut-up bait. Incidentally, and hinting to an imbalance of power in the legislation of this case, fishermen are still allowed to use bait to catch sharks. Hannah mentioned that “shark feeding still occurs in the Bahamas,” and that “the research of Neil Hammerschlag has shown little behavioral change of tiger sharks at ‘Tiger Beach’ as a result of the feeding.”

In this capacity, through intentional encounter and unintentional “attack,” sharks have physical agency, or control, over the way humans act in and around the water. But the agency of the animal is not, as far as scientists know, emotionally driven. Medd agreed that the monstrosity seen in *Jaws* and in the “Summer of the Shark” is largely a human creation, an endowment of agency upon this animal by the bipeds with whom it is increasingly in contact. Through thousands of years of real interactions and sensationalized fantasies with the shark, our own species has written the impassioned script for which the shark has no choice but to read. Humanity, or more precisely human culture, is both the creator and moderator of this multispecies intentionality. In such

relationship, however uneven the exchange, the shark is both subject and object of human emotional response—evocations of respect, fear, admiration, and so on.

Although the danger of sharks to humans is comparatively rare—it has been shown that “sharks bite fewer people each year than New Yorkers do” (Holland 2007)—each injurious encounter has reinforced the *Jaws*-era fear that Americans have of the ocean. It is here that we can depart the physical confrontations between sharks and humans and move on to the more tacit forms of meaning that form out of cultured perceptions of the shark over time.

Metaphysical Agency

From years of encounters, whether attacks or planned experiences, and the ensuing literature and film that has profited from such phenomena, a metaphysical shark has emerged which has in many ways superseded the influence of the physical animal’s toothy reality, and which I consider to be a second form of the sharks agency. As an emotional stimulus, the shark uses its endowment of power as gatekeeper of a world not yet inhabited by humanity and all of its excesses. To the Water People, this is the locus of a deep alliance with the animal—a reciprocal understanding in which the shark keeps out the profane while its human counterparts fight for its sustainability through scientific understanding and political activism.

By exerting its prohibitive power over an ocean-going humanity—power bestowed upon it by the structural and popular culture of the people it now keeps from entering its waters—the shark strengthens the conceptual divide between land and sea.

Beyond its very presence in the waves—the triangular grey fin piercing the surface; the grey torpedo body watching from the deep—the shark’s metaphysical presence in the human mind is just enough reason for many Americans to prefer the tucked-in warmth of their terrestrial beds over a life at, on, or under the sea. Why else do we not move into a watery world? Space on the ocean’s surface is relatively boundless and undefined. It is free of highway traffic, with few rules and multidimensional lanes of travel.

Yet still, the life-aquatic is too much for most Americans to handle—an uncomfortable geography where our senses are inferior to the animals already living there. After hundreds of millions of years of life in such a medium, the shark has developed sensory capacities far beyond our distorted vision and confused hearing in the sea. Accustomed to living a life on land, humans prefer to continually assert the power and dominance we have on our own dry Earth—battling each other for the limited space and energy on land with well-adapted senses of sight, hearing, smell, taste and touch.

Like a wayward dictator elected by the people to fill some socio-cultural void, this meta-shark has become a sublimation of fear itself, and it is this fear that establishes its prohibitive agency over the encroachments of terrestrial humanity. As I suggested earlier, the Water People seek to keep the terrestrial profane from sullyng the sacred aquatic. As a companion species, the shark does just this, either through physical encounters with these humans or through more tacit, psychological forms of power.

Ultimately, this meta-shark has greater prohibitive power than the physical shark. Although each physical encounter changes the way humans see sharks, the sensationalized, historicized perception of the shark in the American mind is

exponentially more effective in its reach. While the real shark is occasionally seen by those who wade into the beach, or by those who fish for sharks or scuba dive in their marine habitat, the meta-shark percolates deep into landlocked middle-America, infesting the minds of those who might otherwise take their terrestrial profanities to a more pristine place.

To the Water People, therefore, the shark is a means of distinguishing the individuals within this community from the broader population. In sharing their interests with the shark (that is, in maintaining the sacredness of the sea), these individuals profess their identity as a Water Person and align themselves with a biocentric conception of humanity in a fragile planetary ecosystem—truly a multispecies endeavor.

The Problems With Shark Conservation And Their Solutions

With a greater understanding of what it means to be a Water Person, and a better idea of the ways in which they understand the sea, the land, the shark, and themselves, we can now explore the problems with shark conservation and what this community identifies as possible solutions. Their discourse—the descriptions and prescriptions—is a window through which we can further understand their cultured perceptions and thus, what the shark means to this community and the individuals who embrace their aquaphilic identities. There are several discrepancies in the argument I describe here, both at the community and individual level. The degree of action required to save the sharks, the continued burden of proof upon conservationists to obtain clear evidence from an unclear ocean, inherent hypocrisies of the argument, and the debate on the scientific utility of emotion are all divisive factors within this community of shark advocates.

Despite these, there is a general agreement as to what needs to be done to save the sharks. Describing first the problems and then the proposed solutions is intended here to provide a constructive critique of the argument and thus strengthen its anthropological integrity.

Community Level Problems

To my informants, I posed the question, “what are the most difficult hurdles in the race to stop the precipitous decline of global shark populations?” To fully understand their responses, a discussion of the overriding theme of each interview must be initially presented. In each interview, my informants identified the “unsustainability” of shark use as the dominant issue to be addressed through various means of shark conservation. Shark finning was especially noted as the most unsustainable of practices—a “wasteful” act in which the fins are cut off the shark and its body discarded back into the sea, enabling fishing vessels of all sizes to load more fins in the limited space of their cargo holds. This, as Dr. Kajiura noted, accounts for “one quarter of approximately 100 million sharks that are killed every year.”

As Heinrichs offered, something is “really wrong” when he no longer sees any sharks on the same reef where, just ten years ago, he saw many sharks on every dive. Even with the immensity of the world’s oceans, it has become apparent to these people that the continuation of current fishing practices will lead to the extinction of several species of shark in the “immediate future.” Whether determined through their observations while diving or their review of the most recent fisheries literature, these

people agree that current use of sharks by humans is unsustainable, and that the hunting of these animals for their fins must stop.

Evidencing such decline in the sea is inherently more difficult than land-based population studies, as sharks migrate over thousands of unseen miles and range throughout the world from the ocean surface to thousands of feet underwater. The sustainability of shark populations, therefore, is based upon imperfect postulations of maximum sustained yield (MSY) measured against predictive population metrics. While these predictions are becoming more and more accurate with the use of new genetic methodologies, the MSY figures by which they are compared are, according to Heinrichs, “based on teleosts” (smaller fin-fishes) and “doubtfully accurate when considering the unique life history of the shark.”

While some biologists stated that “they have nothing against the killing of sharks, as long as it is done sustainably,” Heinrichs and several other non-biologist advocates said, “until we know more about the shark’s behavior, we need to shut down shark fishing completely, worldwide.” So while the sustainability discourse pervades the rationale of my informants, there nevertheless remain discrepancies between individuals within this community in respect to the extremity and means to attaining this sustainability.

While the sea is becoming more and more like a viscous aquarium over which humans have established control, there still are parts of it that cannot be seen—parts where sharks feed, sleep, and reproduce in indeterminate number; parts where the life histories of individuals and greater populations remain an exotic mystery of the deep.

In the policy arena, just as there was in the 1950s and 60s, there remains a burden of proof on conservationists. Ideally, as my interviewees suggested, the burden of proof would be on fishing operations seeking to maintain or increase exploitative actions in the maritime environment. In other words, it should be assumed that *all* sharks are threatened because, first, we know so little about their population and behavioral dynamics; and second, because of the inherent complexity of ocean space. The current burden of proof on the conservationists begs this community to unite in its ideology and methodology— which as we see below, is plagued by problems at the individual level.

Problems At The Individual Level

While sustainability (or lack thereof) is the dominant theme pervading the discourse of the shark conservation community, there are other problems among the members of this community that, in effect, prevent productive cohesion between the individuals working to establish this elusive and ill-defined ideal. The problems at this level are first, accusations of hypocrisy and the effect this has on the actions of the individual, and second, the legitimacy of emotion in conservation methodologies.

Individual Water People are faced constantly with accusations of hypocrisy from shark fishermen and those who benefit in some way from the killing of sharks. Dr. Hammerschlag's response to my question of how he could eat beef from a cow yet still protest the killing of a shark is a good example of this. His response centered upon the sustainability theme, but he also said that the killing of sharks is “just wrong” and “a waste.”

Despite this, Hammerschlag agreed that he could not tell others to stop catching fish because of personal beliefs. The majority of my informants had, in some way, expressed knowledge of this uncomfortable hypocrisy when I asked them directly “how they could work so hard to protect sharks yet still support the killing of land animals for food, and even other fish.”

This hypocrisy poses another challenge to a sound conservation morality that arises when shark conservationists are asked how they could protect an alleged “man-eater.” While my informants agreed that conceptions of the shark are “slowly changing for the better,” there is still a pervasive image in American culture of the shark as a killing machine. Asked such a question, the responses of conservationists inevitably invoked the sustainability argument. Yet to many outside this water-community, the shark remains a “man-eater”, even if humans are exploiting it in an unsustainable manner. Each “attack” supports this murderous reputation, and with each of these incidents, the rationality of shark protection is weakened (if only in the traditional form of a causal argument). This hypocrisy (or at least accusations of it) can be seen in some way as a weakness in the armor of shark conservation.

The Water People, however, persist with their pursuits of science or activism, only momentarily hindered by these confounding accusations. Such questions are therefore waiting to be addressed by the macroscopic viewpoints of the social sciences, especially philosophical and anthropological inquiry of natural morality and the relevance of traditional logic and rationality in the management of an ill-defined global ocean.

In addition to the hypocrisies of shark conservation, the scientists and activists with whom I spoke had differing opinions on the use and legitimacy of emotionality in

the battle to protect sharks. Among the marine biologists, several wanted no association with feelings or passions that, I imagine, might tarnish the perceived objectivity of their research. Though I was beginning to think this emotional detachment would be a pervasive theme among this group, I spoke with other biologists who suggested that, although they try to keep emotions from influencing their work, impassioned positivity toward the shark might “accompany traditional science” to contribute to the cause of shark protection. Emotion, in a sense, could be an accomplice to hard scientific evidence.

Should the community attempt to elicit emotional response from the public to gain sympathy for their cause, essentially framing the shark as a flagship species? Many interest groups have chosen a particular flagship species based on the anthropomorphic endowments of an animal and the capacities of these endowments to create change in the public and political arenas. But when asked whether the shark could or should be promoted in this way, my informants varied in their response. One biologist was optimistic, saying that emotions could be used to supplement evidence of the decline of shark species worldwide. In effect, he suggested that emotions could ice the cake of hard evidence. Others were less enthusiastic about this idea, and through their discourse they suggested that emotions had no place in the biological sciences, and that “proper evidence should be able to speak for itself.”

Several interviewees who took more of an activist approach to their work were less likely to denounce the presence and prospects of this emotive accomplice. These individuals used words like “terrible,” “wrong,” and “horrible” to describe shark finning rather than simply “unsustainable.” The passion in which they described their work and their perceptions of the shark could, in effect, be channeled to create positive change in

the policy arena. On the other hand, it may be seen as a weaker tool of argument, filling in for evidential voids—essentially what would be called “bad science” by strict positivists. Considering these responses, I sensed a palpable discomfort in the discourse of these individuals when asked about the legitimacy of emotions in shark conservation, certainly among the biologists and even among the activists. While some of my informants exuded emotionality, they seemed to be aware of the provocativeness of such expressions in the dominant evidence-based epistemology.

The point of this section has not been to choose the *right* way to conserve sharks but rather to constructively describe the complexities of the argument for shark protection. At the individual level, we are shown an example of this complexity: the disparity with which shark conservationists view the boundaries of their work in regard to the functionality and legitimacy of emotions in the realm of marine stewardship. Considering this debate of emotional utility, as well as the hypocrisies of shark conservation and the continued burden of proof upon conservationists to prove an ecosystemic problem empirically when the ocean cannot be completely understood as such, there remain continuous fractures in the argument at both the individual and community levels.

The Solutions

From an anthropological perspective, the problems described above are not simply hindrances to a cohesive conservation methodology. Rather, these conflicts at the community and individual level allow us a glimpse into the world of these Water People.

Determined to protect the shark, each biologist or activist is led down their own life-path, which—paved with an aggregate of experience, education, and exposure to popular culture—leads them past dynamic vistas of meaningful understanding. Each has a vision around the next bend, toward and around potential obstacles, and although each person prioritizes these obstacles differently, there is nevertheless a faraway summit toward which the “science” or alternately the “movement” seeks to transcend. Whether this summit can be described as “global sustainability of shark populations” or another ideal directive not yet on the map is subject to debate, but through these interviews there emerged a few prescriptive domains that outlined what “needs to be done” to improve the status quo and promote a better future for the shark.

Water People overwhelmingly agree that “better education” is necessary to change the negative public perception of sharks that they unanimously believe is a primary cause of the global decline of shark populations. Films and media, most- obviously *Jaws*, but also the modern *Shark Week* television series have created, reinforced, or otherwise modified perceptions of the shark by the American public.

Promoting sympathy for the plight of the shark-as-monster is not easy. Unlike other flagship species like the polar bear—whose cuddly image continues to garner awareness (and donations) for various climate-change interest groups—the shark has no such endearing physical attributes. “Even baby sharks,” as Dr. Kajiura noted, “are mean-looking, toothy animals that bite.” To overcome this lack of anthropomorphic sympathy, education of the public—and specifically a long-term (trans-generational) educational effort—is needed to “slowly replace the negative views of the shark with more positive

ones.” Essentially, a perceptual sea change is required to save the sharks, and accurately informed education is the most agreeable way of bringing this about.

Important to note here is the time required for this perceptual change to have any real effect. Most of these individuals realize that “old people in China are stuck in their ways” and that there “is little to do to change the old generation’s liking of shark-fin soup as a traditional dish at weddings and banquets.” The problem, as the biologists accept, with such drawn-out effort is that we still understand so little about the life history of sharks. Considering the time it will take for this generational change (fifty years?), myself and some of the activists with whom I spoke wonder if more immediacy is required to pull global shark populations back from the brink of certain demise.

Immediate action takes the form of either direct action (such as that carried out by the Sea Shepherd Conservation Society in their fight against whaling in the Southern Ocean), or alternately through political pressure from interest groups like Shark Savers and Shark Angels. This direct action involves protests and other actions that interrupt the killing of sharks *in situ*, and it is used to some success. Other action occurs far from the oceanic arena, in boardrooms of state capitals and in Washington, DC. It has been the predominant way for scientists and activists to express their concern for sharks and present suggestions for more effective fisheries policy. This by-the-book form of conservation is not always immediate in its effect on sharks. As we have seen from fisheries policy of the 20th century, this latter form is more likely to be a gradual process, entangled by bureaucratic red tape and encumbered by a problematic base of evidence in an evidence-based polity.

Summary of Data Analysis

The Great Sharks swimming past South Florida are both subjects and agents of human intentionality. By their instinctual actions, sharks create and modify human understandings and exploitations of themselves and their ocean territory. Through this reciprocal exchange of power, sharks have simultaneously activated and acceded to the dominant agency of their land-based counterparts. Inspired by this agency, human perceptions of the shark are cultivated within historical, experiential, and referential contexts. Perceptions of the shark and the meanings formed from these perceptions function to define and unite the identities of the Water People, and in this ideological formation the shark is both sovereign of the marine ecosystem and guardian of its spiritual and ecosystemic value. Biologists and activists within this community create and continually recreate a fantasy of oceanic restoration and reunion—optimally a sustainable biocentrism—but one in which is mired by physical and conceptual inconsistencies.

A guardian by virtue of its lived reality and given surreality, the shark repels the profanities of land while drawing this particular community of humans toward a sacred marine space. In their effort to protect the shark, the Water People ignore the fear that has kept others out of the water, and in doing so they offer a multidimensional, though imperfect, embrace to not only this animal, but to the ideal of human stewardship in this final paradise.

CONCLUSION

I often think we need to come back to shore; to step on firmer ground. I know if I were to ask my informants if they see the shark as a god and themselves as members of an aquatic religion, they might laugh at me or even worse. After all, the shark is one of the most corporeal images one could have. Toothy, grey, often bloody, it is indeed strange without the deep contextual meditation above to think of a shark as a heavenly ally. And it is for this very reason that we continually move back and forth between the meta-shark and the physical, biting shark, which in taking each bite, plunges our minds back into this perpetual contemplation of a more powerful Other.

Amid all this meaningful talk is the corporeal sum of the encounter: shark plus human; human plus shark. Once in the water, during a typical deliberate encounter, the shark is drawn in by frozen blocks of fish and is made exploitable to photographers, researchers, tourists, and other awestruck participants. While green-lighted by most of the conservation community as sustainable practice, these encounters nevertheless bring the human body in contact with the business end of these great animals. Normally this scenario ends well for humans, but it still is not clear how these intimate encounters affect the behavior of sharks.

Above the waves, or rather pushed by them, surfers are more likely to experience sharks unexpectedly and badly, as the confused animals occasionally bite these littoral Water People. Yet once the bitten is hospitalized and the biter culled by panicked

beachgoers, the semblance of order is restored and people reenter the water and await subsequent waves. Interestingly here, it is often not the bitten who seeks revenge against the shark—shark “attack victims” have even organized recently to promote a nationwide shark fishing ban in Washington D.C.—but it is the local shark fishermen and the beachgoers who arm themselves and take to the sea in sturdy boats to kill whatever sharks are unlucky enough to fall into their nets and bite their baits. This disjunctive revenge is yet another example of the terrestrial profanities the Water People must constantly resist.

As we move toward the sea to enrich our lives, it *must* be remembered that real sharks sometimes kill people. And like us, sometimes they eat what they’ve killed. So is all this attention—this meaningful companionship—a smart move for us as individuals? As a species? And what are the limits of this multispecies, biocentric, religious conception of nature? It seems odd that we would protect an animal that is capable of killing and eating us. The rabbit, after all, cares little for the sustainability of the fox.

While in India earlier this year, I heard of a European tourist who had come to the northern part of the country for a spiritual retreat that placed him deep within a forest in a cave that had hosted several other pilgrims over the years. When he never returned, his family flew down weeks later to find him, but found only his shoes, his passport, and all his money neatly laid out on the floor of the cave. The locals agreed that a tiger had likely taken the unfortunate seeker. Although low in global population, tigers have been relegated to those deep Indian forests surrounding the cave and care nothing for the taste of weathered rupees and colorful passports but are known to occasionally prey on

humans. In a micro-Darwinian, individual sense, we must remember what can kill us, and sharks are undoubtedly in this predatory category.

Yet in a larger, planetary sense, *Homo sapiens* enter the water not just along the shores of Miami Beach but throughout distant parts of the world that are only recently beginning to see divers, sailors, and surfers. For decades these same areas have been assaulted by large-scale fishing operations that take shark fins indiscriminately and leave nothing but dying carcasses on what was once a beautifully diverse underwater ecosystem. More and more, as Western divers arrive in these remote locations for a trip of a lifetime, they are greeted not by the Great Sharks but with other less photogenic and less inspirational predators: coral bleaching, carpets of red algae, invasive species, and a view of a marine environment that is palpably *sick*.

This brings up a spatial limitation of this research, in that its focus was initially on local conservationists in South Florida, but having considered the problem with unsustainable shark exploitation is decidedly a global issue, I noticed my methodological focus creeping outside this strange southern state to individuals in California, New York, and elsewhere. The meaningful valuation of sharks by those who seek to protect them takes place not only in a local context, but in regional, national, and international contexts—from the beachside bar in Fort Lauderdale to the banquet tables of Beijing, the ways in which we understand the shark are determined through a shoving match of multiscalar cultural perceptions of a nature. In this nature, hard facts are inherently difficult to quantify but can be progressively qualified through the comprehensive rigor of the anthropological gaze.

It is juxtaposition between the natural and the non-natural that this research finds its cultural significance. When speaking of sharks, my informants agreed that there was a major problem in the way the animals are perceived by those shark killers who took the opposite, terrestrial path post-*Jaws*. The conservationists have backed their protective claims with personal observations, peer-reviewed academic research, or conversely by citing a dearth of knowledge about sharks in general—attempting to shifting the burden of proof away from the conservation community and toward those who intentionally and unsustainably kill these “beautiful” animals. Whereas the fisheries policy of the 20th century was in favor of exploitative shark fishing operations for reasons largely economic, my informants believe the tide is slowly turning in favor of those who protect the shark and the shark itself—allies in a united front of oceanic preservation. They unanimously agreed that education was essential to this perceptual and ultimately political sea change.

In the 21st century, the shark encounter is likely to be deliberate rather than accidental: thrill-seekers, researchers, and recreational divers increasingly seek to experience the shark in its wild element. In Papua New Guinea, my personal experience with the shark forged a companionship with this animal that I had previously only seen through film and read in books, and in this way the encounter became deeply meaningful. The emotionless black eyes of that hammerhead, “doll’s eyes” as the character Quint described in *Jaws*, professed no emotion of their own but elicited it in me. The awkward swimmer deep under the surface of the Solomon Sea finds meaning not only through sensory experience but also through an oscillating intentionality that may find the

traditional human subject in a dubious role of prey-object. What is more humbling than the thought of being eaten?

The people with whom I spoke about sharks were united in their knowledge that worldwide shark populations are under serious threat. This knowledge is not only an amalgamation of significant factoids, but a constellation of natural knowledges, experiential moments, and ensuing reflections. The Water People could rarely identify just one moment that “got them into shark conservation,” but rather identified a series of moments, emotions, and realizations that “just sort of led them this way.” By “this way,” they speak of a shared aquatic ontology—a way of being in our environment distinct from its profane terrestrial alternative.

The *Jaws* phenomenon explicitly affected many of my informants. It often was the spark that turned their ways of being into practical ways of working, leading some of these biologists and activists down their particular paths to a “cool” occupation near the water. The film marked a fork in the road in the way Americans deal with sharks—much of the public ran out of the water and has since harbored a deep fear of what lies beneath the surface, while the Water People dove into this receding tide, back into the sea to face their inner monsters head-on. Cherishing the image of Richard Dreyfuss’s “Dr. Hooper,” and further inspired by Cousteau’s splendid undersea world, these men and women realized that life as a marine scientist could not only be thrilling, but had become a fully-legitimate career path. *Jaws* catalyzed their aquatic identities by setting them apart from these screaming masses. And the continued plight of sharks in the 21st century has dramatically reinforced this legitimacy. Among this subjective identity formation and its

practical utility, in which the actions of the Water People become meaningful through shared actions with their comrades, intentionality begets a collective aquatic ontology.

In the Heideggerian sense, the ways in which the Water People perceive and thus find meaning in the shark are drawn from different but often complementary attitudes: the animal in the human mind oscillates between a ready-at-hand object and a present-at-hand, agential subject. As we have seen through informal conversations with members of this community, the former, harder form of exploitation—the shark dives, particularly—elicit a respectful admiration of this powerful animal. The latter, softer form of exploitation—the shark as present-at-hand—has similarly affected these individuals, drawing them closer to the water as stewards of an animal worthy of human protection.

Here, enmeshed in various contextual webs, we see that both hard and soft exploitation can work together to form meaning. Depending on age, place of birth, and other circumstances, maybe it is the encounter that first draws the individual into contemplation, contemplation leads to sympathy, sympathy to active conservation strategy, and strategy to public policy. Or conversely, maybe the softer, contemplative attitude precipitates from broader societal influences such as film and thus leads one into the sea, thus materializing a childhood fantasy. Once the shark is experienced firsthand, the imaginary, meta-shark is reified. As an agent bridging the duality of earth and sea, we may even venture to say *deified*. Regardless of which form of exploitation comes first or to what height the individual holds the great shark, within this process a new human emerges: the Water Person in a community of Water People. Within this emergence, however, lies a critical paradox.

This paradox is best seen in the polarization between what I have termed the aquatic sacred and terrestrial profane, and within it lies the answer to the question asked of me by the fisherman: *How could I protest the killing of sharks and continue to eat terrestrial forms of meat?* The answer is this: The Water People form an alliance with the Great Sharks to protect the pristinity of the final planetary paradise. In doing so, they set themselves apart from the taboos of the built environment and the hard exploitation that has situated terrestrial Americans over and above the earthly natural world. By setting themselves apart—through the conceptual and physical experience of shark conservation—these individuals find strength to defend something whose very existence in an abyssal space keeps it beyond the reach of traditional empiricism. Shark conservationists take the unreasonable and make it workable by infusing it with fantastic meaning—the shark as protector of the sacred sea; guardian against the profanities of the over-developed world. Policy is merely a measure of the degree to which this meaning finds legislative acceptance.

The sacred sea is what we aim to protect, yet if not for the terrestrial profanities that continually push toward the crystal blue waters of the Gulfstream, the conceptual heterogeneity between land and sea would cease to exist, the beach would lose its divisive allure, and the cherished identities of the Water People would lose all practical and personal significance. Florida and all of its paradisiacal charm would absorb back up into the American South.

APPENDIX

Interview Participant Type and Quantity

Marine Biologists	5
Shark Conservation Activists	4
Non-Professional Public	4

Site Distribution

Interviews were conducted in Fort Lauderdale, and Miami, Florida between December 1st, 2011 and March 1st, 2012. Six interviews were conducted in person while seven were conducted over telephone with individuals in these locations. One shark activist was traveling in California at the time of phone interview, but all other interactions took place in South Florida.

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