

Abstract

Creating the Papahānaumokuākea Marine National Monument: Discourse, Media, Place-making, and Policy Entrepreneurs

by

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President George W. Bush established the Papahānaumokuākea Marine National Monument in 2006. Environmental conservation efforts surrounding the Northwestern Hawaiian Islands began more than 100 years ago with President Theodore Roosevelt, yet creation of the Monument by executive order under the authority of the 1906 Antiquities Act occurred seemingly overnight. In a mere decade, protection of the islands progressed from Coral Reef Ecosystem Reserve in 2000 to Marine National Monument in 2006 to United Nations World Heritage Site in 2010. However, geographers have understood for decades that text, discourses, and cinema create a powerful sense of place and that geographic imagination can spur collective action. This case study offers coastal resource managers and ocean advocates broadly an in-depth examination into a well-orchestrated and successful environmental communication campaign.

This case study applied social, critical, and mediated discourse analysis techniques to several forms of data—56 media reports, 13 email surveys or telephone interviews, a collection of

photographs in the book *Archipelago: Portraits of Life in the World's Most Remote Island Sanctuary*, and the documentary film *Voyage to Kure*—to reconstruct the genealogy of place-making by an elite network of scientists, writers, photographers, filmmakers, environmental advocates, and policymakers. Media reporting identified possible factors influencing the Monument's creation and informed survey questions. Discourse analysis of policymaker surveys suggest the existence of important, strategic communication networks between state and federal governments and interested groups inside and outside of government. Established models from the disciplines of environmental communication and political science helped interpret results, including John Kingdon's 2003 policy window concept. The effectiveness of *Voyage to Kure* is explained using Nichols' (2001) elements of documentary voice and Whiteman's (2004) coalition model of filmmaking.

The rise of the Northwestern Hawaiian Islands to the top of a full 2006 political agenda resulted from a combination of factors and complicated interactions, all achieved through orchestrated communication efforts employing evocative media. The collective efforts of an elite network 'made place' by envisioning the Northwestern Hawaiian Islands as a unique, fragile ecosystem—distinct geographic space inscribed with particular characteristics and meanings worthy of territorial boundaries and policy protections. The National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries perhaps exercised the most control because its director and staff understood the power of persuasive media and managed communication between interested parties.

Comparing the media and policy entrepreneur narratives of the Monument's creation validates case study, discourse analysis, and multidisciplinary research approaches. Monument designation in 2006 can be explained by incorporating communication into Kingdon's policy window model; policy entrepreneurs within the National Oceanic and Atmospheric Administration and two White House administrations organized a sophisticated environmental communication campaign. Through a collection of photographs and compelling video, artists co-opted and reframed scientific information in the advocacy process, revisiting powerful strategies for communicating place and geography within the policy community and to the public.

Creating the Papahānaumokuākea Marine National Monument: Discourse, Media, Place-making,
and Policy Entrepreneurs

A Dissertation

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List of Acronyms

ANILCA	Alaska National Interest Lands Conservation Act
DA	Discourse Analysis
CDA	Critical Discourse Analysis
CEQ	White House Council on Environmental Quality
CFR	Code of Federal Regulations
CRM	Coastal Resources Management
DOI	Department of Interior
EO	Executive Order
HI	Hawaii
MHI	Main Hawaiian Islands
MDA	Mediated Discourse Analysis
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NWHI	Northwestern Hawaiian Islands
NWR	National Wildlife Refuge
PBS	Public Broadcasting Service
PMNM	Papahānaumokuākea Marine National Monument
USFWS	United States Fish and Wildlife Service
UNESCO	United Nations Educational, Scientific and Cultural Organization

Chapter 1: Purpose and Introduction

The focus of this dissertation is geographic—*people* interacting with *places* and the resulting environmental *policy* choices. Language connects all three dynamic geographic components. Coastal managers already understand that they need broad-based knowledge of multiple disciplines—geology, ecology, political science, and resource management to name just a few. The pervasiveness and immediacy of modern media demands that coastal managers also understand the basics of successful scientific and environmental communication in order to teach and employ strategies that will improve human connections to and protection of threatened littoral places. This dissertation aims to move decidedly in that direction.

The word ‘geography’ (Greek ‘geo’ and ‘graphe’) literally means to write about or describe the earth. According to geographer Gordon Waitt (2005, 164), “There is no geographical knowledge other than the ordering that people impose on the world through their linguistic description of the world.”

Environmental managers try all sorts of ways to control and mitigate human activity in coastal areas vital to our nation’s ecology, economy, and overall quality of life—zoning and local land use plans, regional fishery management committees, federal marine protected areas, and international conventions—to name just a few. Communicating science and technical information to the public and policymakers is an integral part of all these management efforts. Language—private, public, and policy discourses—creates our perceptions of the coast, influencing our willingness to rethink historical land uses and the value we assign to natural

ecosystems. Considered communication practices and inspired, orchestrated discourse can rapidly transform human behaviors toward the natural world. Communication and discourse study should be added to coastal management training and discourse analyses added to the coastal management toolbox alongside food web diagrams, sediment cores, and Geographical Information System (GIS) maps (Alderman and Ward 2008).

The overall research aim is to uncover and better understand how communication methods and discourse practices influence coastal and ocean stewardship at the public policy level.

Broad research questions include, how is language used within coastal management communities and how can we wield language more vigorously as a coastal stewardship tool in the future?

Much can be learned about coastal management, qualitative geographical research methods, and environmental communication in action through a case study titled *Creating the Papahānaumokuākea Marine National Monument: Discourse, Media, Place-making, and Policy Entrepreneurs*.¹

Specific research objectives include (1) reconstructing the media and policymaker narratives of the Papahānaumokuākea Marine National Monument's creation; (2) comparing the two narratives to explain the timing of the Monument's creation and to assess the accuracy of media coverage; (3) employing visual geography methods to investigate the power of documentary voice in Jean-Michel Cousteau's 2006 Public Broadcasting Society's video *Voyage to Kure* and

¹ The Papahānaumokuākea Marine National Monument is the single largest U.S. conservation area and one of the largest marine conservation areas in the world. It encompasses 139,797 square miles of the Pacific Ocean - an area larger than all the country's national parks combined (NOAA 2010).

(4) enriching theoretical foundations for the Coastal Resources Management (CRM) program by including the study of language and discourse analyses.

This study analyzes multiple texts using Discourse Analysis (DA) to deconstruct the communication methods and political maneuvering that helped create one of the largest marine protected areas on Earth. Social discourse analysis views language (written, spoken, and visual) as a mode of action, influenced by environmental and historical contexts, and continually reworked as surrounding cultural or institutional conditions change. DA techniques help interpret media reports, email surveys and film. Established models from geography and political science lend structure to this sometimes-controversial qualitative technique.

Researchers have shown that carefully orchestrated communication campaigns can shift public support and, in the case of the Papahānaumokuākea Marine National Monument, make unprecedented and internationally-inspirational public policy. (This is even truer when natural events punctuate the importance of an issue much as hurricanes Bertha, Rita and Katrina did for anthropogenic global warming). People are nearly always part of any intractable conservation problem and communication is always part of the solution—to recycle, reduce poaching, set aside habitat and so on.

Scientists and environmental managers unopposed to action research or advocacy may use a variety of media to convey conservation objectives, including press interviews, research websites, podcasts, fact and tip sheets, and large electronic email lists. But, they must embrace communication as an integral part of their academic careers, rather than as an afterthought or as

tasks accomplished by ‘soft’ social researchers. Scientists need to approach communication as seriously and systematically as they do their research, defining communication objectives, identifying audiences that can benefit from the knowledge they have acquired (often with public monies), developing communication plans and strategies, and periodically evaluating results.

The case study serves as a demonstration of the utility of discourse analysis to the coastal management field and suggests that communication and discourse management take a more central role in our scholarly and management pursuits. Reconstructing the narrative around the Monument’s creation is of interest to CRM students and faculty as well as ocean conservation professionals broadly. CRM students should see from this case study the challenges inherent in communicating the importance of distant, remote places within a government structure that lacks a preeminent, authoritative ocean agency. Coastal professionals should benefit from the communication practices revealed in this analysis of a successful ocean conservation effort. Subsequent research and journal articles building on this dissertation will identify more specific communication techniques and strategies to facilitate coastal and ocean stewardship and hasten the creation of other protected areas.

Perhaps the most important purpose for choosing this topic is to increase awareness within the coastal management community of the importance of discourse management in achieving stewardship objectives. The final chapter will begin to address how discourse analysis (DA) can be employed as a tool, first to help explain and then improve coastal and ocean policymaking processes. Abilities to convince the public and policymakers about the urgency of ocean-related

environmental problems are not keeping pace with the scope of degradation to watersheds, wetland buffers, and fisheries.

The creation of the Papahānaumokuākea Marine National Monument should be an especially illustrative example of political scientist Kingdon's (2003) policy window concept, used by political scientists to envision how and when windows of opportunity open in political processes. A richly-detailed or 'thick' description of the Monument's creation and the policy window concept will be useful for political scientists, NOAA coastal managers and advocacy groups eager to replicate successful environmental lobbying efforts. Several survey respondents expressed confusion about the Monument creation process and surprise when final designation seemed to occur so quickly; a thick description of the Monument designation process should explain the seemingly hurried and confusing pace. In addition, comparing mass media coverage to eyewitness accounts will give us an indication of how well society and policymakers are served by contemporary journalism. This case study will be an excellent addition to gray² literature in conservation biology. Contemporary undergraduates in the classroom—at once masters of multiple forms of media—find this confluence of photography and video, exhibitions and screenings compelling political maneuvering.

This analysis will demonstrate the importance of oft-neglected coordinated communication strategies. Orchestrated discourse bridges the gaps between sterile scientific information, subjective 'local' perceptions, and coordinated public policy. Yet, communication is neglected in university curricula, an afterthought for many academic researchers and discounted within

² Gray literature is a term used by research, intelligence, and medical communities to describe materials produced outside of peer-reviewed publishing. Gray literature is more readily available in specialized channels; examples might include government technical reports, non-profit studies, or interest group magazines.

government institutions. This dissertation aims to convince readers of the importance of environmental communication, illustrate the value of critical language awareness, and suggest ways to wield language more vigorously and effectively as a coastal management tool.

Overview of the Northwestern Hawaiian Islands

The Papahānaumokuākea Marine National Monument (the Monument) was formerly known as the Northwestern Hawaiian Islands Marine National Monument and for a few short years was the largest marine protected area on Earth. President Bush formally protected the area in 2006, and then subsequently protected more extensive tracts of American-controlled Pacific Ocean islands, reefs and sea floor. In 2008, the small Pacific island nation of Kiribati established what is now the world's largest marine protected area—a near-California size ocean wilderness.

The PMNM contains the waters surrounding a chain of ancient volcanic islands and coral atolls from Ni'ihau (or Nihoa) northwest in the Pacific to Kure Atoll. The Monument encompasses 360,000 square kilometers (139,797 square miles) of the Pacific Ocean and includes the Northwestern Hawaiian Islands Coral Reef Ecosystem, Midway Atoll and National Wildlife Refuge (NWR), the Battle of Midway National Memorial, and the Hawaiian Islands NWR.

The Monument, designated a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site in July 2010, is intended to protect near-pristine habitat, archaeological sites, and a wide swath of American and international maritime history. Some one quarter of the approximately 7000 species in Monument waters and on its islands are

endemic. The Monument is the second largest site and the first U.S. site added to the World Heritage List in 15 years (Crowley 2010).

Many refer to the Northwestern Hawaiian Islands (NWHI), situated in the middle of the North Pacific Ocean and the 6,126 kilometer (km) long Hawaiian-Emperor seamount chain, as the most geographically isolated archipelago in the world. The small islands, atolls, submerged banks, and reefs are approximately 3,800 km from the nearest continental land mass; Johnston Atoll, the nearest other island, is 900 km southwest of the NWHI (Rooney et al. 2008). Northwest from Kauai, Nihoa is the first of the NWHI formed more than 7 million years ago, a small (0.6 km²) steep basalt island with a summit 275 meters above sea level. Circular-shaped Kure Atoll is the farthest north of all the atolls and islands in the NWHI and likely the oldest at 29.8 million years old. French Frigate Shoals lies roughly in the middle of the chain and is the most southerly atoll in the Hawaiian Islands. NWHI reefs are primarily composed of the coral *Porites*, but *Acropora* table corals are more common in this lagoon than at any other location on the archipelago (Rauzon 2001).

Larger scale ocean-atmospheric coupling and the location of the subtropical front³ significantly affect the ecology of the NWHI and the concentration of marine debris on islands and atolls.

Researchers have noted biomass changes on the order of 30-50%, partially due to fluctuations in nutrient enrichment and availability of prey species (Rooney et al. 2008).

³ The term 'subtropical front' refers to the boundary between oligotrophic (low nutrient, high dissolved oxygen) surface waters of the North Pacific Gyre and nutrient-rich surface waters of the North Pacific Subpolar Gyre (Rooney et al. 2008).

Extreme winds and wave energy events from tropical storms and hurricanes are a potential, but infrequent threat to the NWHI's coral reefs (Friedlander et al. 2008). On average, between four and five tropical cyclones occur annually in the Central Pacific; however few regional tropical storms develop into hurricanes. Hurricane Patsy in 1959 was the strongest hurricane reported in the last 50 years, passing between Midway Island and Kure Atoll with winds above 100 knots. Hurricane Nele passed near Gardner Pinnacles in 1985.

All of the Northwestern Hawaiian Islands grew as shield volcanoes from the sea floor as layers upon layers of lava accumulated over a central Pacific volcanic "hotspot." Built almost entirely of fluid lava flows, some of the largest volcanoes in the world are shield volcanoes. Highly fluid basalt pours out from a central summit vent or a group of vents, forming a broad, gently sloping dome like a warrior's shield (Rooney 2008).

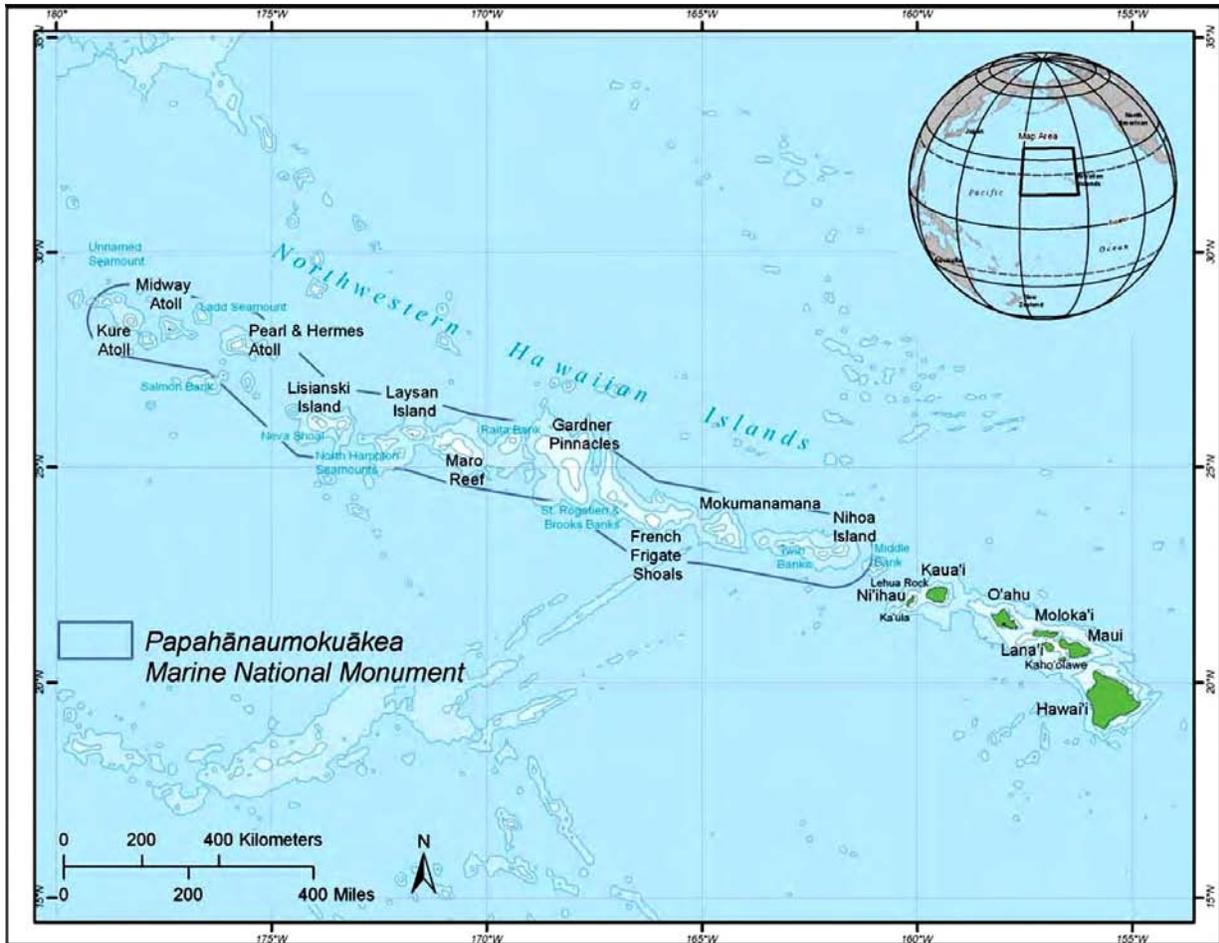


Figure 1: NOAA Map – Papahanaumokuakea Marine National Monument
 (Courtesy of the National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries)

A trail of islands formed from the Aleutians in Alaska to Hawaii as the Pacific plate moved northwest at about three and a half inches a year (Juvik and Juvik 1998). The Big Island of Hawaii is the last in the chain and is still being created over the hotspot. Shield volcanoes along the NWHI become inactive after about 1.5 million years of growth (Rooney et al. 2008). The island subsides under the weight of the massive shield, is further eroded by ocean waves and weather, perhaps forming a coral atoll before finally disappearing beneath the waves as a seamount.

Geography limited the type and number of species that could survive the vast oceanic distances to reach the NWHI—only creatures able to float, fly, sail or swim. Once there, colonizing plants and animals faced little competition or predation. A geology of rich volcanic soils, warm tropical sun and abundant water instigated and sustained a variety of habitats, including rainforests, lava deserts, coral atolls, and snowy mountaintops—a paradise of evolutionary creativity (Rauzon 2001). Relatively low species diversity and high endemism in island archipelagos are a consequence of oceanographic isolation. Sheer remoteness and limited reef fishing activities in the NWHI maintained habitat crucial for a number of threatened and endangered animals (Friedlander et al. 2008). Population trends for many marine species in the region remain unknown, simply because opportunities for research and sampling have been few and far between.

Reefs in the NWHI represent rare intact, large-scale, predator-dominated ecosystems and a baseline for examining the potential for no-take marine reserves. According to Friedlander (2008), more than 54% of the biomass on NWHI forereef habitats consisted of apex predators, primarily sharks and jacks. By comparison, this trophic level accounted for less than 3% in the Main Hawaiian Islands (MHI). Mean fish standing stock in the NWHI was more than 260% higher than in similar MHI habitats.

The biogeography of the NWHI is determined largely by oceanographic conditions, currents that adjust over time, wave energy, temperature, salinity, turbidity, and availability of nutrients and larvae. However, the region is hardly immune to human activities that now impact the entire planet. Marine debris, lost or abandoned fishing gear from Pacific Rim fisheries and plastics, are

the most obvious anthropogenic impacts to NWHI reefs. Nets damage corals and entangle marine mammals, including endangered monk seals, seabirds, turtles, and other marine life (Selkoe et al. 2008). Two continent-sized patches of garbage swirl around in the Pacific Ocean, concentrated by the North Pacific and Kuroshio currents. Pelagic seabirds ingest small pieces of plastic and then feed the trash, instead of squid or fish, to their chicks (Day et al. 1989; Martinez et al. 2009; Moore et al. 2001). Climate change affects coral reefs around the globe in multiple ways. Coral reefs are extremely sensitive to changes in water temperature and acidity. Rising sea level threatens to inundate the lowest lying atolls and islands (Rooney 2008).

The NWHI are still recovering from past land development and disturbances, including guano mining at Laysan Island, naval base construction at Midway and French Frigate Shoals, a Long-Range Aid to Navigation (LORAN) site at Kure, navigation channel dredging at Midway and so on. Human population, construction, and visitor use over the last few decades has been minimal, limited by the lack of air charter services to Midway.

About 1,000 years ago, the paradise of evolutionary creativity that was the NWHI, changed dramatically with the arrival of adventurous Polynesians and their pigs, dogs, rats, and chickens. Native Hawaiians discovered the archipelago first and inhabited some of the islands for hundreds of years prior to Western contact. Archaeological surveys done on Mokumanamana and Nihoa found some 140 ancient Polynesian sites of worship, residence, aquaculture, and agriculture and cultural artifacts (Terrell 2006). In Hawaiian tradition, these remote northwestern islands are considered sacred space—primordial regions from which life springs and where spirits return after death. Four Hawaiian words compose the name “Papahānaumokuākea.” ‘Papa’ is a

Hawaiian deity similar to Mother Earth. ‘Hanau’ means to give birth, ‘Moku’ means island and ‘akea’ refers to a broad expanse (Nakaso 2007).

Modern maritime heritage resources abound along the island chain. Historians are aware of more than 120 maritime heritage sites, including traditional voyaging and fishing craft, traders, whaling ships, Japanese sampans, and U.S. Navy aircraft, ships and submarines (Terrell 2006). Midway was the first land annexed outside U.S. continental borders and the center of one of the most important WWII naval battles in the Pacific. In June 1942, four Japanese aircraft carriers and one American carrier were sunk; at least 67 naval aircraft are recorded as lost near the island.

Following European and American discovery, commercial exploitation and extraction began in earnest. Activities included sealing and whaling, fishing, harvesting of birds and feathers, and the collection of guano for fertilizer. Honolulu became a critical Pacific provisioning port by 1825; Midway and Laysan reportedly were discovered by whalers around the same period (Terrell 2006).

Designing marine reserves with both habitat and marine heritage preservation multiplies supportive constituencies. The Monument designation process followed a five-year study by the National Oceanic and Atmospheric Administration’s (NOAA) National Marine Sanctuary Staff. State and federal agencies, native Hawaiian leaders and the public submitted testimony and comments and most supported strong protections.

The National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service (USFWS), and State of Hawaii Department of Land and Natural Resources (DLNR) now are co-trustee management agencies of the PMNM (NWHI MNM 2006). Monument management responsibilities and bureaucratic communication challenges mirror those in other sanctuaries, wildlife refuges and combined state-federal protected areas. The three government agencies responsible for managing the Monument continually negotiate and revise unified management plans (Papahānaumokuākea Marine National Monument 2008).

Because the U.S. Congress has never created one agency responsible for overseeing oceans, defining agency responsibilities is complicated and often contested. NOAA officials within the Department of Commerce are responsible for managing marine areas in consultation with the U.S. Interior Department. U.S. Fish and Wildlife Service (USFWS) staff manages the Midway Atoll NWR, the Battle of Midway National Memorial and the Hawaiian Islands NWR and consult with NOAA conservation managers. The State of Hawaii continues to manage state-controlled waters while consulting with all of the above federal agencies.

Permits are necessary for research and education activities, native Hawaiian practices and non-extractive uses. Oil and gas extraction and the recreational or commercial harvesting of corals, reef species and crustaceans were immediately prohibited in Monument waters. Commercial fishing is being phased out over a five-year period ending in 2011.

Efforts to preserve the remote northwestern Hawaiian Islands began incrementally more than 100 years ago with President Theodore Roosevelt. Roosevelt issued an executive order in 1909,

creating the Hawaiian Islands Reservation to protect seabirds from Japanese plume hunters.

Presidential Proclamation 8031, issued by President George Bush on June 15, 2006, created the Northwestern Hawaiian Islands Marine National Monument, renamed the Papahānaumokuākea Marine National Monument in March 2007. Media reporting at the time suggested that President Bush made this landmark conservation decision after watching a White House screening of Jean-Michel Cousteau's compelling documentary about the region, *Voyage to Kure*.

Chapter 2: Theoretical Foundations in Geography

Poststructuralism and New Cultural Geography

This chapter outlines the dissertation's theoretical foundations and argues that that language is an underutilized and potentially valuable geographical and coastal management tool.

Poststructuralist theories enlarged the interpretive horizon of human and cultural geography (Johnston et al. 2000) and offer a firm foundation for my studies for multiple reasons. First, poststructuralists understand that knowledge is situated and always open to negotiation and redefinition. Secondly, they favor analyzing the interconnections between macro and micro-level workings of power, particularly as they play out in specific domains, such as educational settings, government bureaucracies, or extended political networks (Peterson 1999). Thirdly, they use discourse analysis to systematically unpack particular texts, exposing socially-constructed meanings, rhetorical devices, assumptions, ideologies and agendas, and resulting policy relationships and outcomes.

Poststructuralist theories led to the notion that discourses are embedded in our social, institutional, and political lives. Discursive networks not only have their own geography in communities of practice, but can create new geographic boundaries by directing geographic imagination. Appendix A is a glossary defining poststructural and discourse analysis terms as used in this dissertation.

Poststructuralism is a subset of postmodern thinking that views truth as subjective, knowledge as situational and constituted by culture, and language as a valid means of understanding individual experience and social relations. Originating in 1960's France, prominent poststructuralist thinkers include Baudrillard, Foucault, Derrida, Deleuze, Lacan, Lyotard and Kristeva. The first three are most relevant for this dissertation.

- Poststructuralists suggest that there is no real outside cultural systems, no objective truths, only constructs. They do not deny the existence of structures, merely the stability of their form (Shurmer-Smith 2003).
- Rather than viewing language as merely expressive or simple representation, structuralist and later poststructuralist theorists viewed language as taking on a type of agency, affecting the way individuals think and act (Mills 2004). Poststructuralists argue that language subtly and overtly creates meaning and organizes individual psyches, society and ultimately policy choices (Best and Kellner 1991).
- Because they view the production of knowledge as a means of power and domination, *deconstructing* meaning and *destabilizing* truth claims are hallmarks of poststructuralism (Johnston et al. 2000).

We share a concrete, physical world whose truths are best understood by employing scientific methods. Reality, however, is mediated—through individual experiences, institutional norms, cultural codes, and political discourses. Meanings are constructed, worth assigned, alternative

conceptions and competing views result. Power relationships determine whose ‘knowledge’ and ‘reality’ count. Poststructuralists across disciplines attempt to expose the assumptions and knowledge systems (or discursive practices) that encourage thought along singular or approved lines (Mills 2004).

Several poststructuralists are particularly relevant for this dissertation:

Jean Baudrillard (1929-2007) suggests the absence of a discernable objective truth in *Simulacra and Simulation* (1981), writing that modern culture and the media have replaced reality and meaning with symbols and signs. Baudrillard was fascinated by how media affects our perceptions of the world. He concluded that postmodern societies experience something called "the death of the real" (Baudrillard 1994). We live our lives in the realm of hyper-reality, connecting more and more deeply to mere simulations of reality presented in the form of television sitcoms, music videos, virtual reality games, or Disney. We can conceive of ‘the coast,’ for example, as an idyllic tourist destination, working waterfront community, or wilderness ecosystem.

According to Baudrillard, modern man experiences simulations of reality—simulacra—rather than reality itself. Contemporary commercial marketing, for example, blurs the lines between human wants and needs and politically-powerful groups use ideological discourse to obscure real injustice and inequality.

Baudrillard's critiques of the media and notion of the hyperreal are important because they suggest an inability of human consciousness to distinguish between fantasy and reality, especially in technologically-advanced, information-saturated cultures. This dissertation will not argue that we cannot determine reality or facts, only that policymakers and the public are finding it more and more difficult to do so in media-saturated environments.

Michel Foucault (1926-1984) remains perhaps the most influential of poststructuralists thinkers, best known for expanding the concept of discourse and investigating the strong connections between language, knowledge and power. Foucault moved beyond the narrow linguistic meaning of the term discourse as "connected writing or speech." In *The Archaeology of Knowledge* (1972), he envisioned discourse with agency, as a framework around the production of knowledge through language (meanings) and its influence on our actions (practice). Language both conveys and creates thought and institutional or cultural discourses help fashion knowledge. Those whose knowledge becomes accepted as truth claim and exercise power, even if the knowledge is flawed and the 'truth' bears little resemblance to reality.

Foucault did not reject the existence of a reality outside human thought, but he suggests how difficult it is for people to understand the world and their attitudes outside of the linguistic structures in which they operate. By analyzing discourse, Foucault tried to describe shared contexts and expose the unconscious constraints in thinking behind religion, science, or any authority that presents itself as grounded in evidence and argument.

Foucault explored the ‘archaeology of thought’ in three subjects—treatment of the insane, medical practice, and modern social sciences—to demonstrate that seemingly modern conceptions and moral codes are contingent upon particular historical situations (Foucault 2002). Foucault referred to a group of discourses that serve as the ground of thought at a specific time in history as an ‘episteme.’ He named the trail of causal explanations for an episteme, a ‘genealogy’ (Foucault 1977).

Jacques Derrida (1930-2004) is most closely associated with the idea of ‘deconstruction,’ a method used to challenge coherence and unsettle truth claims within a text by exposing contradictions and inconsistencies. Derrida’s most widely read books, including *Of Grammatology*, *Writing and Difference*, and *Speech and Phenomena*, are ‘deconstructions’ of other philosophers who together constitute the Western intellectual tradition. Derrida exposed the logocentric nature of modern Western culture, inherited from Jewish and Greek philosophers. ‘Logocentric’ refers to the search in Western thought for truth. According to Derrida, this logocentrism creates arbitrary dichotomies, such as signifier/signified, mind/body, sacred/profane and so on, that impose a simplistic order on reality and subtly repress other thought (Lamont 1987). Deconstructing how knowledge is produced within culture(s) became a preferred technique among poststructuralist thinkers: Foucault examined conceptions of the nation-state; Jean Baudrillard above examined how media and technology shape thought and meaning (Johnson et al. 2000).

Deconstruction is inherently geographical because it moves beyond simple description to how things are situated in historical time and cultural space, according to Shurmer-Smith (2002). The

concept of deconstruction in cultural geography is somewhat looser and methodological, referring to the process of critically decoding and interpreting the meaning of texts. Texts include any data collected during research—notes, survey or interview results, video, brochures, photographs, maps, or monuments.

My scholarship rests comfortably within the disciplines of geography, specifically ‘new cultural geography’ and coastal resources management. New cultural geographers envision reality as a construct of environmental variables combined with human actions, past and present, imbued through language with individual and group symbols and meanings. “Landscapes influence cultures, and cultures influence landscapes, and the cultural landscape is the cumulative and ongoing outcome of these inter-relationships” (Dunn 2006). In their 1992 collection, contemporary geographers Barnes and Duncan characterize ‘landscapes’ through human experience and language, specifically discourse, text and metaphor. “For these social scientists the philosophy of language is as important as the study of differential equations is for physics” (Rosenberg 1988, 94; Flowerdew and Martin 1988).

Geographers employ discourse analysis to show that “science cannot offer unmediated access to something called truth and that none of our forms of representation (‘scientific’ or otherwise) can provide a simple mirror of ‘reality’” (Massey 2001). According to Poststructuralists, science—our most objective version of knowledge—at best provides ‘snapshots’ or incremental mirrors of reality. Geographical research within the last decade demonstrates that knowledge is socially constructed (Rydin 2004) and that language helps create place, shapes social processes within government agencies, and ultimately influences policy decisions:

- David Demeritt (2001) looked at the interrelationships between the language of climate change and the social processes within government agencies, raising important questions about how politics and policy demands shape scientific research and assign expertise to particular individuals and analytic methods.
- Meindl, Alderman and Waylen (2002) analyzed reports and testimony by a mid-level engineer in the U.S. Department of Agriculture in the early 1900s. James O. Wright's "preliminary report bubbled with optimism regarding the feasibility of drainage and ultimate prospects for the Everglades, and it fanned the flames of land speculation in South Florida" (Meindl et al. 2002). Language created the place. Modern Floridians are living still with the settlement patterns and drainage problems Wright inadvertently set in motion.
- Carvalho (2005) examined the climate change discourse of the British government and the 'quality press'. She traced conceptions of 'the greenhouse effect' from a strictly scientific problem in the 1980s to an accepted subject for regulation in today's United Kingdom.

Political Geography and Critical Geopolitics

Political geography, for the purposes of this dissertation, is concerned with the intersection of place and environmental policy, political power and governance—the intersection of ‘politics’ and geographic knowledge that ultimately creates perceived and actual territory. Jones et al. (2004) see political geography as the three-dimensional interaction of two sets of triangles. The set of processes involved in achieving, exercising, and contesting power is politics – power, politics, and policy. Political geography marries politics with a second triangle of space, place, and territory. Geography dictates political realities and geographic space becomes in many cases a political construct, reflecting purpose and agenda.

Political and ‘new cultural geographers’ drew on the conceptual writings of poststructural thinkers. Michel Foucault first linked two key concepts that helped to define the subdiscipline—discourse and ‘governmentality.’ Discourses creates ‘knowledge;’ governmentality is about how the state uses those ‘apparatuses of knowledge’ to define citizenship, territory or national rights and thus to govern. When discourse and governmentality are employed in tandem, space itself becomes a tool in the exercise of power (Jones et al. 2004).

The analytical approaches of several political geographers are especially relevant to this dissertation:

Peter Hall (1974) encouraged geographers to focus on the organizational dynamics at work in the policy process—actors, networks, coalitions. What roles do different levels of government and advocacy groups take in imagining and producing space, such as a neighborhood, or a city?

Simon Dalby and Gearoid O'Tuathail's (1996) '*critical geopolitics*' treats geopolitical knowledge as a discourse. Critical geopolitics deconstructs and questions geopolitical assumptions by examining powerful communication metaphors, such as 'hinterland' and 'heartland' or 'ribbons of sand' and framing strategies, including Ratzel's concept of the state as a spatial organism, the Cold War concept of 'containment,' or the contemporary tactic known as 'astroturfing' (Barnes and Duncan 1992). ('Astroturfing' refers to any public relations campaign that tries to disguise its efforts by giving the impression of spontaneous, grassroots origins.)

Geographic Imagination and the Media

Geographers have studied place images since the 1970s, recognizing that all of us possess a geographic imagination. Picture specific images, such as Stonehenge, Yosemite Valley, or Machu Pichu and then abstract or generic places, such as "Margaritaville," "the beach" or "the hood" or "middle America" (Bowen 1997). Geographic imagination is the result of both direct visits as well as '*mediated experiences*' from films and television, photography, graffiti, websites or travel diaries. Culture and landscape images constitute each other; direct and mediated experiences mingle.

- In "The Beholding Eye," Meinig (1979) described ten versions of the same scene, revealing how people conceive of landscape differently—as nature, habitat, system, problem, artifact, history, ideology, place, wealth, and aesthetic.

- Denis Cosgrove (1994) was especially interested in the role visual images play in shaping geographic imagination, explaining how the Hasselblad photographs of the ‘Whole-earth’ taken on board the Apollo 17 spaceship reshaped contemporary geographic imagination, discourses about our planet, and geopolitical goals.

Visual media and journalism are primary ways that individuals obtain geographic knowledge about the world and culture and policy are matters of media. (Zimmerman 2007; Rogoff 2000; Jameson 1987). Knowledge is not a neutral representation of an objective world, but realized through discourse determined by interests (Chilton and Schaffner 2002).

Places are represented and “Reality is brought into existence, is produced, by communication—by, in short, the construction, apprehension, and utilization of symbolic forms” (Carey 1988). How do place images become part of practice and policy? Political geographer Sir Halford MacKinder connected physical and socio-political space, natural and ethnographic worlds in 1902, influencing British thinking on the ascendancy of the territorial state (Jones 2004). Edward Said, formerly of Columbia University, argued in *Orientalism* (1978) and *Covering Islam* (1981) that Western writings and media representations of the Orient were biased, racist, and imperialistic.

Geographers explore how place is represented in ‘texts’—discourse, brochures, documentaries and so on—and also the contexts surrounding geographic imagination. Networks operate in distinctive geographic spaces. Ehrenhalt (1991) describes how small-town American politics

often takes place between community elite over coffee in a particular restaurant or diner. Kennedy and Luckinbeal first contested the perceived objectivity of documentary films in 1997 and in subsequent work, Luckinbeal (2005) described how “Theater, text, image, industry, event and narrative come together in cinematic landscapes” to shape “the viewer’s cognitive map.” Dittmer (2007) employs media content analysis to reveal the language of colonialism surrounding the 1997 Pathfinder mission and in representations of the planet Mars.

Culturally reproduced and mediated landscapes help form local and national identities, a sense of belonging, and self-understanding as a people. Unable to compete with continental Europe’s Old World classical, architecturally-unique sites, designating national parks and monuments via executive order proved an efficient way for the relatively new American republic to create epic, large-scale, ‘monumental’ landscapes (Dolin 2003). According to Sorlin (1991), the sea is common space, but lighthouses—the people, ships, and national infrastructure they represent—begin to demarcate national space. Goss (1993) noted five themes of spatial geography in tourist campaigns conducted by the Hawaii Visitor’s Bureau between 1972 and 1992. The repetition of these themes helped create an ideal space to attract tourists. Hawaii was characterized as a (1) *timeless*, (2) *erotic*, isolated (3) *paradise*. The suggested process of discovery—lush vegetation and verdant valleys—(4) *feminizes* Hawaii even as a history of oppression of the native Hawaiian people is (5) *erased*.

Language and landscape articulate territory. Talking about places is an important mobilizing discourse, place-making that can serve as a foundation for collective action. Martin (2003) describes how neighborhoods in St. Paul, Minnesota constitute themselves, and legitimize and

circumscribe their sphere of activism using place-framing. Minority organizations in Cordele, Georgia constructed place meanings as part of an effort to secure federal funds for local projects in their low-income African-American neighborhood (Larson 2004).

The discursive nature of environmental conflicts is evident in a case study of the Oresund Link project between Malmo, Sweden and Copenhagen, Denmark. Alternative representations of place and the environment contested institutional policies and development plans and altered the political agenda (Linnros and Hallin 2001).

Scholars have studied the media's role in government agenda setting for decades (McCombs and Shaw, 1972; Iyengar, Peters, and Kinder, 1986). Reporters, editors, newsroom staff, all producers of media play an important part in shaping political reality. McCombs and Shaw found a correlation—supported by much subsequent research—between media coverage and significance assigned by the public.

Bell's media studies in the 1990s demonstrated that mass media also is constrained by its own production. Journalists work within institutional deadlines and space limitations, their writing styles and content influenced greatly by the intended audience (Bell 1991). The details included and the final shapes of news stories are affected by the subjective selection of the journalists, layers of editing, print space, previous editorial positions and so on. Journalists—those who expose most of us to complicated and nuanced research—work with limited scientific or technical knowledge against tight and competitive deadlines (Murray et al. 2001).

Agenda-setting scholars examine how media creates what the public thinks is important (McCombs and Shaw 1972; McCombs et al. 1997). One aspect of agenda-setting theory is especially important for this dissertation—the political power of documentary films. Nonprofit organizations are successfully using independent documentary film and video projects in environmental and social campaigns—to publicize their organization, educate the public, generate grassroots support, attract larger media outlets, influence elites and ultimately pressure decisionmakers. Targeted screenings are particularly effective (Whiteman 2003). Film screenings may advance group interests and social change by developing “counterdiscourses,” “parallel public spaces” or “parallel discursive arenas” outside the dominant media interpretations and popular culture (Kellner 1995; Whiteman 2004; Herbst 1994; Fraser 1992). Proress et al. (1991) identified three aspects of agenda-setting enhanced by investigation journalism—issue priority, pace of consideration, and particularity (meaning the content of specific policy proposals). All three are in evidence in this case study.

Raising scientific information to the attention of upper-level policymakers is an especially difficult challenge. Framing analyses reveal that policymakers and the public do not use the scientific information or the news media as scientists assume, particularly on issues at the intersection of science and politics, such as climate change, evolution or infant vaccines (Nisbet and Mooney 2007). People evaluate information using standards familiar to them and within particular social contexts.

For most people, but especially nonscientists, facts take on meaning only when embedded in a frame or a story line that organizes and lends coherence (Gamson 1989). Healey and Hennessey (1994) found by studying the Puget Sound and Fraser Estuary management programs that science enters into the policy process in an ‘episodic’ way, exercising the most influence at the early policy development stage. Douglas and Wildavsky (1983) contend that science only drives the policy process when the evidence is clear and uncontested. Since that is hardly ever the case, they reveal three other ways that science contributes to public understanding and policy creation: (1) by providing a paradigm; (2) providing objective information amid contentious issues; and (3) offering common terms and language that facilitate discussions.

Framing involves selecting aspects of a perceived reality and making them more salient in a communicating text. Framing shapes problem definition, hints at the forces creating the problem, makes moral judgments and leads the listener or reader toward a preferred remedy (Entman 1993).

No great stretch of academic imagination is required to consider the framing and creation of the Papahānaumokuākea Marine National Monument an important topic for media or political geographers.

“...words alone, used in an appropriate situation, can have the power to render objects, formerly invisible because unattended, visible, and impart to them a certain character....”
Yi-Fu Tuan (1991)

Chapter 3: Environmental Communication: Past and Present

Writers and artists beginning in earnest in the mid-19th century employed their craft to extol and protect natural wonders. The artists involved in this modern monument designation, Cousteau, Littschwager, and Middleton in particular, continue this tradition of giving voice to natural spaces and conservation movements. Only the form of media and the means of transmission have changed. Building on a foundation of poststructuralism, scholars in the discipline of Environmental Communication (EC) assume that communication mediates relationships between human beings and nature and that they are mutually constituted. Most importantly, EC scholars believe that the ways people communicate about the natural world have far-reaching and transformative effects (Milstein 2009; Schwarze 2006).

This chapter first outlines a few familiar examples of environmental communication techniques used in the United States to further preservation. The intent is to set the stage for discussing the strategies employed in the Monument designation process. A condensed literature review of the field of environmental communication studies follows.

“Why should not we, who have renounced the king’s authority, have our national preserves...in which the bear and the panther, and some even of the hunter race, may still exist, and not be “civilized off the face of the earth”...Or shall we, like villains grub them all up, poaching on our own national domains.”

Henry David Thoreau, *Atlantic Monthly*, 1858.

Deliberate, well-orchestrated oral and written communication always has been part of environmental campaigns and advocacy. In the 1890s, influential sportsman and ornithologist Dr. George Bird Grinnell used the pages of *Forest and Stream* to rail against market hunters, advance the idea of federal game preserves, and call for the establishment of reserves to protect endangered marine animals (Dolin 2003, 36). John Muir had the ear of President Theodore Roosevelt while serving as his lone guide through Yosemite Valley in 1906 (Dolin 2003). Aldo Leopold's concept of a "land ethic," explained in two books targeted at different audiences—*Game Management* and *A Sand County Almanac*—transformed environmental ethics and natural resource management. Leopold wrote, "In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such" (Aldo Leopold quoted in Meine and Knight 1999).

U.S. government biologist Olaus Murie's series of slide shows and lectures about the upper Sheenjak River in Alaska provided the impetus to create the Arctic National Wildlife Refuge (Borneman 2003), despite opposition from Alaska's Congressional delegation. Mardy Murie (Olaus' wife) testified before Congress in support of the Alaska Lands Act, also known as the Alaska National Interest Lands Conservation Act (ANILCA). Signed by President Jimmy Carter in 1980, ANILCA increased national park acreage from 7 million to 50 million acres; added 54 million acres to the National Wildlife Refuge System, and 56 million acres to the National Wilderness Preservation System.

Rachel Carson—author of *Silent Spring*—worked part-time in the 1930s for the educational division of the U.S. Bureau of Fisheries as a feature writer on scientific subjects (Lear 1997). Her writing included scripts for a series of short radio programs on marine life. Later, the U.S. Fish and Wildlife Service embraced her idea for a series of booklets introducing the public to the refuge system—the *Conservation in Action* series (Dolin 2003). Carson wrote of declining shad populations in the *Baltimore Sun*, “If this favorite of the Chesapeake Bay region is to hold its own against the forces of destruction, regulations must be imposed which consider the welfare of the fish as well as that of the fisherman” (Carson 1936).

Countless painters, photographers, and filmmakers used their art—often unabashedly emotional—as powerful, persuasive communication tools.

- Thomas Moran’s sketches and William Henry Jackson’s photographs of Yellowstone proved critical in establishing the world’s first national park. Moran’s watercolors helped convince Congress to preserve an alien land of geysers and hot springs; his painting *Grand Canyon of the Yellowstone* was the first landscape hung in the nation’s Capitol.
- Dorothea Lange intended her photography as catalysts for change. Her images helped put rural poverty issues high on the F.D. Roosevelt Administration’s agenda and influenced policy outcomes. Gawthrop (1993) found that, after publication of Lange’s *Migrant Mother* and similar photographs, “the federal government dispatched 20,000 pounds of food to California to feed the homeless migrants.”

- The Still Picture Branch of the U.S. National Archives holds 226 Ansel Adams photographs taken in the 1930s and 1940s. In 1941, the National Park Service (NPS) commissioned Adams to create a photomural for the Department of Interior, but the project was halted during World War II. Adams photographed Kings Canyon when establishment of a national park was first proposed. In 1933, Adams wisely gifted a photograph of Yosemite to the head of NPS, Horace Albright.
- Through his Pulitzer prize-winning political cartoons, Jay Norwood “Ding” Darling advocated for migratory bird and waterfowl refuges (Dolin 2003).

Contemporary conservation problems extend well beyond national boundaries into shared spaces, including the ocean and atmosphere. The science is more complicated, difficult to explain and scales daunting. Likewise, modern conservation communication campaigns increasingly combine forms of media and blur the lines between artists, scientists and policymakers. Environmental photojournalist Gary Braasch documents biodiversity loss and environmental changes triggered by global warming. He wrote and photographed *Earth Under Fire: How Global Warming is Changing the World* (2007) and an award-winning citizen science book about global warming for middle school readers. Al Gore combined climate statistics, graphics, animation and personal narrative in *An Inconvenient Truth*. The 2006 documentary made plain complicated climate science, outlining why anthropogenic global warming is an acute environmental problem. The film won two Oscars, for Best Documentary and Best Original Song; Gore and the U.N.'s Intergovernmental Panel on Climate Change won the 2007 Nobel Peace Prize. Marine biologist turned filmmaker, Randy Olsen, now writes and

directs short films and documentaries addressing complicated scientific issues, such as the declining health of the world's oceans (*Shifting Baselines Oceans Media Project*) and the response of scientists to public perceptions of evolution (*Flock of Dodos*). Humor, celebrity and exposure of hypocrisy feature prominently in his environmental media campaigns.

The modern environmental movement began in the early 1970s with the passage of landmark legislation, notably the National Environmental Policy Act of 1969 and Endangered Species Act (1973), but also the Coastal Zone Management Act, Marine Sanctuaries Act, and Marine Mammal Protection Act in 1972 and the Fishery Management Act in 1976. Environmental scientists began documenting environmental degradation at local, regional and global levels, but knowing about environmental problems did not guarantee subsequent government, business or citizen action (Hanson 2010). A more mature environmental movement and related academic disciplines now acknowledge the importance of understanding in a critical way the cultural, political, and communicative processes impeding social change.

Environmental communication (EC) is a relatively new subfield of communications theory, emerging in the United States in the early 1980s (Cantrill and Oravec 1996; Cox 2010; Littlejohn and Foss 2009). EC also cuts across disciplines, including rhetorical theory, cultural and media studies, political ecology, political economics, conflict resolution, risk communication, and ecofeminist and social systems theories (Milstein 2009).

The most prominent journal in the field is *Environmental Communication: A Journal of Nature and Culture*. Other academic journals with environmental discourse articles include *Media*,

Culture and Society, the *Western Journal of Communication*, and the *Quarterly Journal of Speech*. Applied communication guidance is found most often in less prominent government-oriented ‘trade’ publications, such as the *Journal of Extension*, *Journal of Park and Recreation Activities*, *Society and Natural Resources*, or the *U.S. Forest Services General Technical Reports*, or in agency-specific reports.

Discourse Analysis generally and Critical Discourse Analysis (CDA)⁴ in particular are methodological approaches employed by EC scholars to raise awareness about ongoing discourses that are harmful to the environment and to suggest alternatives (Foust and Murphy 2009; Prelli and Winters 2009; Todd 2010; Wagner 2008). The subfield possesses a strong applied and activist contingent, interested not just with understanding, but improving human-nature relationships. Schwarze (2006) relates case studies of Superfund and oil spill cleanup sites to argue for melodrama in environmental campaigns. Emotional appeals and sympathetic depictions of victims helps counter dominant ‘cost-benefit’ and ‘jobs versus environment’ discourses. Deluca (2005) examined ‘image events’ as a rhetorical tactic employed by environmental activists to construct new discourses, world views and political opportunities.

Some scholars argue that EC—like conservation biology—is a *crisis discipline* with an ethical obligation to alter the social practices that cause ecological collapse (Cox 2007; Heath et al. 2007). Activist EC scholars analyze the rhetoric of environmental controversies, critique advocacy discourses, suggest alternative representations or communication techniques, and often choose research sites and topics with political influence in mind (Peeples et al. 2008; Pezzullo 2007; Milstein 2008; Muir and Veenendall 1996; Wagner 2008). Wagner (2008) completes a

⁴ CDA as an analytic method is discussed more fully in Chapter 4.

content analysis of 155 news stories from 1984 to 2006, revealing ‘ecotage’ (illegal acts of sabotage in defense of nature) increasingly reframed as ‘ecoterrorism.’

Moving academic understandings about media discourse and critical analyses of language use into practical guidance for government and public environmental advocacy campaigns is a slow process. Communication scholars are not alone. Likewise, geographers create multi-layered GIS maps and deconstructions of cultural geography, but offer precious-few practical suggestions about how conservation managers can create and communicate a ‘sense of place’ around threatened areas that engender protection.

Academics outside geography have written comprehensive environmental communication texts aimed toward advocacy, including two compilations from Island Press—Julia Corbett’s *Communicating Nature: How We Create and Understand Environmental Messages* (2006) and Susan Jacobson’s *Communication Skills for Conservation Professionals* (1999). Corbett (2006) takes a cognitive approach, exploring how people form their sense of place and environmental belief systems. Jacobson (1999) provides practical guidance for achieving conservation goals through more effective communication. She offers ‘how-to’ suggestions for researching public attitudes, designing targeting communication campaigns, cultivating media relationships, strategies for using mass media, and evaluating communication programs.

The literature review for this dissertation revealed little critical examination of environmental communication efforts specifically within the coastal management community. Much can be learned from successful case studies. In 1986, political scientists King and Shannon studied the

distributive or 'clientele' network supporting the National Sea Grant College Program. They found that in distributive networks perceived benefits are concentrated—generating a small, but loyal constituency that can be mobilized, if the program is threatened. Costs are widely distributed, providing little motivation for organized opposition to a program. In 1999, the National Center for Atmospheric Research received a MacArthur Foundation grant intended to improve communication between scientists and non-governmental groups on the topic of climate change. Multidisciplinary workshops followed. This type of effort should be duplicated for coastal and ocean-related topics, similar to North Carolina Sea Grant's and East Carolina University's efforts to improve communication surrounding hurricanes and tropical storms (Mosher 2009).

Chapter 4: Methods

The focus of the chapter is a discussion of research questions and qualitative data collection and analytical methods, including the case study approach, survey techniques and discourse analysis (DA).

Research Questions

Primary research questions include:

1. What explanations did the media generate for the creation of the Monument in 2006 and how accurately did the media cover the monument designation process?
2. How do policy entrepreneurs both inside and out of government explain the Monument's creation? What was the communicative role of policy entrepreneurs in creating the Monument? Did they orchestrate documentary screenings and photographic exhibits or merely benefit from serendipitous timing?
3. What was the relative importance of the media and policy entrepreneurs in this policy-making process? Specifically, how helpful were screenings of Cousteau's documentary in Washington

D.C. and Hawaii and the *Archipelago: Portraits of Life in the World's Most Remote Island Sanctuary* photographic exhibit in creating a policy window? Additionally, how did the film and photographs assist (or not) in creating geographic space and promoting a particular ecological paradigm?

Data Set and Collection Methods

This dissertation makes use of pre-existing 'natural' texts in the forms of media reports, documentary film and books as well as solicited email surveys, telephone interviews, and personal observation notes. Using several methods for collecting data is consistent with qualitative research objectives and reflects a concern for validity and triangulation (Miles and Huberman 1984; Silverman 2001). Silverman suggests comparing different kinds of data (quantitative against qualitative) and different methods (observation versus interviews) to see if they corroborate one another.

The data set for this dissertation consists of the following:

1. More than 50 media reports (newspaper and magazine articles and television and radio broadcast transcripts) about the NWHI and the Monument collected via Lexis-Nexis between 2000-2009
2. Thirteen completed surveys or telephone interviews.

3. Cousteau's Public Broadcasting Service (PBS) documentary, *Voyage to Kure* (2006).
4. Several books written about the Northwestern Hawaiian Islands, especially Littschwager and Middleton's *Archipelago: Portraits of Life in the World's Most Remote Island Sanctuary* (2005), but also Rauzon's *Isle of Refuge* (2001).
5. Spring 2008 observation notes from *Archipelago: Portraits of Life in the World's Most Remote Island Sanctuary* photography exhibit at Mariner's Museum in Newport News, Virginia.
6. Eight collected scientific reports about geology, coral reefs, fish populations, and shipwrecks of the Northwestern Hawaiian Islands.

During the waning months of the Bush Administration in spring 2008, approximately 60 email questionnaires were sent to individuals involved in the Monument's creation from the following organizations. Most, but not all, were identified through media reporting:

1. White House and Council on Environmental Quality (CEQ)
2. NOAA National Marine Sanctuary Program

3. NOAA Pacific Regional Offices, including Papahānaumokuākea Marine National Monument
4. National Marine Fisheries Pacific Islands Regional Office
5. United States Fish and Wildlife Service (USFWS)
6. University of Hawaii Sea Grant College Program
7. U.S. Congressional representatives (current and former)
8. State of Hawaii (Governor's Office and the Board of Land and Natural Resources)
9. Public Broadcasting Service (PBS) Hawaii
10. KQED Public Media for Northern California
11. Ocean Conservancy
12. Marine Conservation Biology Institute
13. Ocean Futures Society

Appendix B contains the full text of the solicitation and survey questions.

The number and type of survey questions represented a compromise. The questions are rather open-ended for an email solicitation, but few in number. The concern was that a greater number of more specific questions might lead respondents in a certain direction. Although more challenging to code and interpret, including a few open-ended questions in survey design often yields unexpected and valuable insights. Oppenheim (1992)

characterizes open format questions as ‘easy to ask, difficult to answer, and still more difficult to analyse.’

Time and cost constraints dictated the choice of email questionnaires as a data collection method. Personal interviews with respondents spread from Washington D.C., Hawaii, and California, and within Monument boundaries simply were not feasible. Email also made sense because the medium is rapidly becoming the preferred method of communication. The most serious drawback of an email solicitation proved to be the paltry number of responses—a baker’s dozen. This is a 21 percent response rate. All were quite lengthy, detailed and arguably sincere. Nevertheless, many potential respondents likely balked at committing their memories and opinions to such a reproducible and unwieldy medium. Opportunity remains for follow-up questions and additional solicitations as further research objectives present.

Potential respondents were asked in the text of the email to self-complete the questionnaire and to forward the questions to others with a role in the Monument’s creation. When anonymity proved a concern, some requested a telephone interview. Telephone interviewing proved an excellent compromise between email/postal and interviewer-administered questionnaires (Parfitt 2005).

Surveys or questionnaires pose identical, formally-structured questions to a group of people, presumed to be a representative sample of a broader population. Surveys provide insights into individual interpretations and processes that may indicated broader social trends. Survey

research is cost-effective and flexible, complements quantitative data, and used most effectively when combined with more intense qualitative techniques, such as in-depth interviews (McGuirk and O'Neill 2005). Qualitative researchers should remain open-minded about the quality of email responses; in some cases people are less cautious and more honest via email than in person. Post and email surveys also suffer from an inability to check non-response biases (Flowerdew and Martin 2005).

Qualitative Case Study Approach

This dissertation's research goals demand both qualitative and case study methods. The merits and limitations of each are discussed below.

For multiple reasons, *qualitative research* is the most appropriate way to get at the insider perspectives and ground level processes that matter in practical political life. All scientific research tries to systematically answer problems or uncover truths by collecting evidence using a predefined set of procedures. The goal is to produce findings that were not determined in advance and that find applicability beyond the immediate study.

According to Denzin and Lincoln (1998), qualitative research is multi-method in focus, deploying a wide range of interconnected analytical methods, hoping always to get an ever more accurate fix on the subject matter at hand. Qualitative research involves the studied collection and use of a variety of materials—introspection, personal experiences and life stories, case studies, observation notes, interviews and surveys, as well as historical texts and visual images—

that describe routine and problematic moments and meanings in individuals' lives. Additional characteristics of qualitative research include the following:

- Qualitative researchers study things in their natural setting; reconstructing the Monument's creation in a laboratory is not possible.
- A priori hypotheses are not required. This allows alternative explanations and causal paths to emerge more readily.
- Qualitative approaches capture the particular, revealing specific functions and routes of communication within social and cultural settings.
- Qualitative research makes sense of phenomena in terms of the processes and meanings people bring to them.
- Qualitative research exposes the complexity of reality, aiding implementation studies by assessing the implications of broadly-applied public policies on specific populations or individuals.

Qualitative research seeks to understand a topic from the perspective of a local population, trading off some ability to generalize for culturally or geographically-specific information—opinions, contradictory values, behaviors, and surrounding social context. In-depth, single-case studies are entirely appropriate and valid discourse analyses relative to their claims and

objectives. Discourse analyses usually intend to build rich interpretations of local discourse events and to map meaning-making processes (Jaworski and Coupland 1999).

All research—qualitative or quantitative—is guided by the topics, schedule, protocols or constructs identified by the researcher as important. Qualitative research perhaps stresses greater reflexivity because it is more naturalistic and interpretive than experiment-driven and thus less portable. DA in particular suffers from several shortcomings and generalization should only occur after comparing multiple case studies. Because the research is context-dependent, selection of research materials must be justified and reproducibility of results is a problem. Human memories are flawed and explanations change with time and distance from an event.

Concerns about qualitative research limitations are resolved here through triangulation—in this study by comparing the content of media reports and policymaker interpretations collected via survey methods, alongside the researcher’s insight from past federal employment. Media reports are institutionally constrained, but assembling multiple articles should convey some truth. And, surveys allow researchers to address a range of themes with different participants in a standard, controlled fashion.

The *case study design* reflects a research philosophy that recognizes context-dependent knowledge and situational interpretations. Of Aristotle’s three intellectual virtues—*episteme*, *techne*, and *phronesis*—*phronesis*, or the pragmatic analysis of values, is the most appropriate for studying human behavior as it relates to the natural world. People do not operate according to static, universal principles of action. Instead, we seem devoted to balanced views and the

‘ethically practical’ (Flyvbjerg 2001). Social science pursuits, therefore, should be flexible, occasionally involving stakeholders, always considering praxis.

Case studies are valuable academic instruments for several reasons. Case studies best capture real-life situations and showcase social science’s most potent strength—common sense, naturalistic observation. By revealing subtle details and multiple perspectives, case studies enable researchers to envision the full complexity of a problem and set priorities for subsequent research. Case studies develop the theory and methods needed to do targeted *larger-N* research because most employ a mixture of methods that allows for constant feedback and refinement.

- As an approach to qualitative research, according to Rossman and Rallis (1998), case studies “seek to understand a larger phenomenon through intensive study of one specific instance” of activity (68).

As teaching and persuasive tools, case studies are superlative (Barnes et al. 1994). Witness the success of geographer Jared Diamond’s 2005 book *Collapse: How Societies Choose to Fail or Succeed*. The bestseller is a collection of case studies, telling the stories of past regional civilizations—Anasazi, Mayan, Viking, Haitian and others—that squandered resources, inappropriately met environmental challenges because of cultural biases, and ultimately failed.

This case study, with its focus on language and human behavior, is purposefully inductive, intended as a pilot study to consider how information related to coasts and oceans is conveyed and used persuasively today. Ideally, common principles or a paradigm will emerge from the

collected data and comparisons, inspired by Glaser and Strauss's grounded theory (1967). At a minimum, the case study offers a 'thick description' of a particular social activity along the lines of Gilbert Ryle's (1968) explanation of a wink in his essay *The Thinking of Thoughts* or Clifford Geertz's description of a Balinese cockfight in *The Interpretation of Cultures*.

- A thick description explains the difference between merely the *observed* versus an interpretation of the full *experience*. Ryle's example is of two boys rapidly contracting the eyelids of their right eyes. For one, this is an involuntary twitch. The other is winking—a conspiratorial signal to a friend.
- Geertz describes the brutal details of a Balinese cockfight and the complicated gambling rules and then goes further, interpreting the activity as a sociological event. The men relate to each through the birds, settling disputes, reinforcing kinship, and establishing status within the village leadership hierarchy.

In their best analyses, ethnographers, sociologists, anthropologists, and cultural geographers sort through human codes and signification, recognizing that “small facts speak to large issues,” and that diagnosis or generality is achieved by “plung[ing] more deeply into the same things,” and through the “delicacy of its distinctions, not the sweep of its distractions” (Geertz 1973).

The intent of much research is to generalize from the particular, but case study methods are often criticized because sampling sizes are small and results tied to specific temporal and spatial contexts. The overarching goal of this dissertation, however, is to generate necessary particulars.

Case studies about coastal and ocean policymaking are few and far between. Those that discuss communication processes are even rarer. The ability of coastal managers and related academics to generalize and build grand theory will improve as more case studies are investigated, documented, and compiled.

Discourse Analysis (DA)

Professional communication researchers who use qualitative methods study the real, everyday discourse practices that go on in organizational and institutional settings, gathering examples of text and talk as data. Researchers use these data to draw conclusions in order to build theories, enhance teaching methods, and/or improve awareness about professional communication practices. Discourse analysis is a more recent, cross-disciplinary qualitative analytic method used to analyze all data collected. Discourse analysis focuses on the situational and contextual nature of communication as it happens in the environments that shape it and are shaped by it. Formalist linguistic approaches to language focus on grammatical constructions from decontextualized examples, (Brown and Yule, 1982; Gumperz, 1982; Schlegloff 1992; Schiffrin 2003).

According to Catherine Smith (1996, 205), the focus of discourse analysis as a method “is to understand how our subjects’ interactions relate to their settings and situations” and “to recognize how we are approaching the analysis.”

A *discourse* is “a specific series of representations, practices and performances through which meanings are produced, connected into networks and legitimized,” according to the *Dictionary of Human Geography* (Johnston 2000). It is easy to see how the concept emerged out of poststructuralist thought and why various disciplines refine the definition of discourse to suit scholarly purposes.

- Mainstream linguists use the concept of discourse to *analyze language in use*. Discourse is any extended piece of text or conversation beyond an utterance or sentence, for example, the “discourse of religion,” “racist discourse,” or “political discourse” (Mills, 1997, 8). The analytic level of generality differs depending on the research topic. Conversation analysts, for example, might examine syntax, while literary scholars analyze rhetoric.
- Critical human geographers on the other hand read texts and analyze discourses to *explain social relations*—especially those of dominance and resistance—relative to cultural, economic, environmental, or political space. Feminist geographers challenge positivist notions of scientific objectivity and patriarchal interpretations of history. *Situated knowledges* are the result of geographical discourse analyses—Haraway’s (1991) metaphor for a modern concept of objectivity that makes the knower, researcher, or author accountable to their position.

Sara Mills (1997) suggests that the term ‘discourse’ has a wider range of possible interpretations than almost any other term in literary and cultural theory and discursive analytical strategies

abound. Van Dijk's 1997 two-volume collection of articles on various subfields of discourse analysis, *Discourse Studies: A Multidisciplinary Introduction*, is comprehensive. According to Van Dijk, discourse is both structure (Vol. 1) and social action (Vol. 2):

- General *structural* elements of discourse might include rhetoric, argumentation or narrative.
- *Social action* characteristics of discourse include practice, goals, functions, claims of knowledge or legitimacy and control or power.

Several other intellectually challenging compilations exist (Anderson, 2003; Chilton and Schaffner, 2002; Jaworski and Coupland, 2002; and Schiffrin et al. 2003), but focus varies.

In this dissertation, discourses are simply frameworks for communication and understanding social interaction—a group of statements or writings enacted within a social context, in part determined by that social context, but also contributing to practice and the way that social context continues in its existence. For example, science is the preeminent discourse within coastal management circles, considered the most reliable source of knowledge. Most coastal managers probably regard scientific information as the most appropriate means for resolving disputes between interested individuals and groups.

Discourse analysis encompasses many traditions (content analysis, narrative analysis, speech act theory, pragmatics, sociolinguistics, conversation analysis, ethnography of communication,

discursive psychology and so on) and is put to use by an ever-increasing variety of disciplines (linguists, communication scientists, geographers, philosophers, sociologists, political scientists and others) (Jaworski and Coupland 1999). Because discourse analysts and their work do not fall neatly into types, this dissertation adopts an inclusive and overlapping view of the field in order to begin answering the broad research question, “How is language used within coastal management communities and how can we wield language more vigorously as a coastal stewardship tool in the future?” Theories and techniques from several types of discourse analysis are borrowed and applied to this case study, including social discourse analysis (Van Dijk 1997b), Fairclough’s (2001) critical discourse analysis, and Scollon’s (2008) mediated discourse analysis.

Social discourse analysis is an appropriate method for a coastal management dissertation and policy analysis because the techniques work at various scales and target interactions, the more general ‘discourse-society interface.’ According to Van Dijk (1997b), discourse should be studied as action, showing the social, political and cultural functions of discourse within institutions, groups or society writ large. In social discourse analysis “we find that social reality may be constituted and analysed anywhere between a more micro and a more macro level of description, for instance as (details of) acts and interaction of social actors, and as what whole institutions or groups ‘do’, and how both thus contribute to the production and reproduction (or challenge) of social structure” (Van Dijk 1997b).

A particular methodological expression of social discourse analysis—Critical Discourse Analysis (CDA)—also is a helpful heuristic to code and analyze the articles, surveys and media in the case

study data set. Explicit in CDA's theoretical stance is the idea that language is "a mode of action" that is "always socially and historically situated" and "in a dialectical relationship with other facets of 'the social'" (Fairclough, 1995, 131). CDA views discourse as text, interaction, and context and represents the standard way to study media texts within European discourse studies and linguistics. Van Leeuwen (1993, 193) wrote, "Critical discourse analysis is, or should be, concerned with...discourse as the instrument of the social construction of reality." In this case study, social actors employ institutional and emotional discourses to construct a new reality for a particular place. CDA practitioners share an assumption that language and power, in this case political outcomes, are inextricably linked. *Critical* refers to the aim of revealing the less obvious, hidden connections.

Some CDA analysts desire to bear witness to unequal power relationships and the ways that discourse either reproduces or challenges dominant social or political paradigms. This dissertation critically examines media influence on political and policymaking processes. Outside the scope of this case study, but appropriate for a different case study might be a critical examination of the response of Hawaii's many publics to the creation of the monument. "The media are a particular subject of CDA analysis because of their manifestly pivotal role as discourse-bearing institutions." (Bell and Garrett 1998, 6). Not surprisingly, some CDA practitioners are politically engaged, and like much of social science, involved to some degree in public policy formulations (Fairclough and Wodak 1997). In addition to comparative studies, allowing for multiple interpretations and reflections on bias overcome most critiques of CDA 'action research' methods. Doing discourse analysis always demands reflexivity (Waitt 2005, 188).

Scollon's Mediated Discourse Analysis (MDA) also pertains to this dissertation because MDA examines actions and the cyclical nature of discourses. The central question for analysis considers "what action is being taken by what social actors in a concrete material place in the world at a specific time and how is the document or text (or any other mediational means) used by the social actor as a tool for taking that action?" The framework "seeks to examine the cycles of discourses as they move through changes and transformations from actions to language, to documents or objects, and back into language and further actions" (Scollon 2008, 15). This case study reveals the practices of key policy entrepreneurs "who are adept at using and interpreting language [and] are at an advantage whenever language is the means of setting, consolidating or undermining sociopolitical positions" (Scollon 2008, 2).

Scollon examines publicly available sources of information, including transcripts from Congressional hearings and findings from public consultations required by federal agencies. This dissertation applies questions similar to Scollon's in its consideration of publicly available journalism and more private policymaker narratives.

According to Fairclough (2001, 91), DA occurs in three stages; "*description* of text, *interpretation* of the relationship between text and interaction, and *explanation* of the relationship between interaction and social context." Interpretation through discourse analysis is a complicated and intuitive process. Underlying relationships, institutional characteristics and key ideas only emerge when the researcher becomes absorbed in the 'texts' fully, and then reviews the material several times over with fresh eyes and ears.

Below are fundamental discourse analysis considerations used to approach this case study's data set, organized according to Fairclough's three stages, and derived from Chilton and Schaffner (2002), Fairclough, (2001), Foucault (1980), Scollon (2008), Van Dijk (1997a) and others:

Stage 1: Description of Text

Contents: activity, purpose, units of analysis

Subjects: Who are the actors, stakeholders, voices, or identities?

Role of Language: audience, communicative function, media

Frames, Metaphors, and Representations

Discourses Present

Genealogy: How did this discourse come about, institutionally or culturally?

Stage 2: Interpretation of Interactions

Interests of Participants: agendas and perceptions

Networks

Argumentation or Persuasive Methods

Institutional Constraints

Routines and Rituals

Triggering Events or Critical Incidents

Dominant Discourses

Mechanisms that Silence

Validity and Knowledge Claims

Regimes of Truth

Reproductive Effects

Tactics and Strategies

Stage 3: Explanation and Effects

Social Context

Action-Forcing Devices

Relationships: between texts and actions taken by social actors

Episteme or Paradigm

Beliefs, Values or Underlying Ideologies

Policy Outcomes

Unintended Consequences

The stages correspond loosely to the division of the data set in this dissertation into three parts—media reporting, policymaker surveys, and the documentary video text *Voyage to Kure*—and the three primary research questions. Although some overlap exists:

- Chapter 5 analyzes the media texts using considerations and questions from Stage 1 to answer the research question: What explanations did the media generate for the creation of the Monument in 2006 and how accurately did the media cover the monument designation process?

- Stage 2 questions are most relevant to the policymaker surveys, so Chapter 6 aims to answer the research question: How do policy entrepreneurs both inside and out of government explain the Monument's creation?
- Elements from Stage 3 are apparent in *Voyage to Kure*, especially in the ways that the video was employed by policy entrepreneurs toward a policy goal. Thus Chapter 7 explores research question number three: What was the relative importance of the media and policy entrepreneurs in this policy-making process?

Chapter 5: Media in the Monument's Creation

Media reporting and content analysis proved the starting point for this research. Media reporting afforded a sense of historical perspective, initially helping to create a chronological timeline, or in Stage 1 discourse analysis terms, a 'genealogy' of the Monument's creation. Content analysis of media reports suggested major actors and stakeholders, providing names and parent agencies of potential respondents for the policy entrepreneur surveys. Media reporting also revealed justifications for the Monument's creation that hint at subsequent discourses employed by policy entrepreneurs. Journalists suggested possible explanations for the timing of the Monument's creation that improved email survey questions. Future research analyzing content of the same media database could help determine what scientific reports were used to identify threats to the NWHI and outline their transformation into persuasive arguments for their protection.

The media's story of the Monument's creation tells a more thorough and nuanced story than expected considering the production constraints identified by Bell (1991)—deadlines, audience, and space limitations—but only when laboriously assembled and considered as a group. The timeline once compiled from all the reports is very detailed, but an analytical reader would be left wanting, if limited to reading any single article or media source.

Database and Coding

This study investigates media coverage about the creation of the Papahānaumokuākea Marine National Monument by collecting reporting from 2001 through 2009, focusing most intently on materials generated just prior to designation in 2005 and 2006. The sample consists of newspaper articles, magazine articles, editorials, press releases, television transcripts, gray literature, and online-only services. Fifty-six texts were compiled using the search terms ‘Northwestern Hawaiian Islands’ and ‘Papahānaumokuākea’ in the Lexis-Nexus academic search engine. Employing these search terms also captured articles about the Hawaiian Islands Coral Reef Ecosystem Reserve and Pacific marine protected areas; these reports were excluded unless explanations for the creation of the Monument or other details were mentioned.

Thirty six newspapers and media outlets are represented in the database. See Table 1 below.

Table 1: Media Outlets Represented in the Database

<i>Associated Press</i> (State and Local Wire, Worldstream, Financial Wire, Online)	<i>National Public Radio</i> (<i>All Things Considered</i>)
<i>BBC News</i>	<i>National Science Foundation</i>
<i>The Christian Science Monitor</i>	<i>New Scientist</i>
<i>Conservation International</i>	<i>New Internationalist</i>
<i>Congressional Information Service, Inc.</i>	<i>The New York Times</i>
<i>Congressional Quarterly</i>	<i>NOAA Magazine</i>
<i>CNN</i>	<i>Pacific Shipper</i>
<i>The Ecologist</i>	<i>Pew Trust Magazine</i>
<i>Geographical</i> (United Kingdom)	<i>Progressive</i>
<i>Grand Rapids Press</i> (Michigan)	<i>The Providence Journal</i> (Rhode Island)
<i>Herald Tribune</i> (Sarasota, FL)	<i>Public Broadcasting Service</i>
<i>Honolulu Advertiser</i>	<i>Science News</i>
<i>Horizon Solutions</i> (United Nations)	<i>Star Bulletin</i> (Hawaii)
<i>The Houston Chronicle</i>	<i>Sydney Morning Herald</i> (Australia)
<i>HT Media Limited</i> (India)	<i>USA Today</i>
<i>Ka Leo O Hawaii</i> (University of Hawaii)	<i>Washington Post</i>
<i>National Geographic Magazine</i>	<i>Wildlife Conservation</i>
<i>National Geographic News</i>	<i>The White House, Office of the Press</i>

Media Timetable

Below is a timeline of the Monument's creation, assembled using reporting solely from the media database. Quite a bit of detail is present, although distributed between more than 50 articles and transcripts.

1898 – Hawaii became a territory of the United States.

1900 – The U.S. Navy Commander of the Pacific Reserve Squadron reports on the “devastation wrought on the bird life of these (Midway) islands by Japanese.”

1903 – President Theodore Roosevelt signs an executive order (E.O. 1019) creating the Midway Islands Naval Reservation. The crew of U.S. Navy ship *Iroquois* evicts Japanese poachers and squatters. The superintendent of the Commercial Pacific Cable Company is appointed custodian and justice of the peace to ‘protect the birds.’

1909 – President Theodore Roosevelt issues another executive order creating the Hawaiian Islands Bird Reservation around the islands from Nihoa to Kure Atoll. The intent was to stop the slaughter of resident seabirds by Japanese plume hunters.

1940 – President Franklin Roosevelt upgraded the reservation to the Hawaiian Islands National Wildlife Refuge (NWR), broadening refuge purposes to protect all wildlife.

1967 – The USFWS during the Johnson Administration designates many of the NWHI surrounding submerged lands within the Hawaiian Islands National Wildlife Refuge as ‘Research Natural Areas.’

1978 – National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Hawai’i Department of Land and Natural Resources sign a cooperative agreement – *Survey and Assessment of the Living Resources on the Northwestern Hawaiian Islands*. Field research lasts until 1982.

1980’s and 1990’s – Overfishing threatens monk seal populations prompting repeated collapses and closures of the spiny lobster fishery.

1983 – The U.S. Exclusive Economic Zone, established by President Ronald Reagan in 1983, allowed U.S. jurisdiction over all resources between 3 and 200 nautical miles from any U.S. shoreline.

1988 – President Ronald Reagan signs legislation establishing Midway Atoll NWR.

1991 – The Western Pacific Regional Fishery Management Council develops a Protected Species Zone. Long-line fishing is banned within 50 nautical miles of the NWHI to reduce interactions with monk seals, turtles, and seabirds.

1993 – Kure Atoll State Wildlife Sanctuary created.

1996 – President Clinton transfers full jurisdiction of Midway Atoll and its reefs from the Navy to the USFWS.

1998 – President William J. Clinton established the U.S. Coral Reef Task Force via Executive Order 13089—intended to lead, coordinate and strengthen government protection of coral reef ecosystems. The task force includes heads of 11 federal agencies and 7 state governors.

- NOAA officials and members of other federal agencies begin considering NWHI waters as a possible 14th National Marine Sanctuary.
- The State of Hawaii considers designating its NWHI waters as a reserve.

2000 and 2001 – Year 2000 amendments to the National Marine Sanctuaries Act authorize creation of a NWHI Reserve. The outgoing Clinton Administration creates the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve using two executive orders (E.O. # 13178, December 4, 2000 and E.O. #13196, January 18, 2001). Christened “Ocean Yellowstone” by the press, the orders offer some form of protection to 70% of U.S. coral reefs. Fishing, coral collection and setting anchor are banned in only 5% of the NWHI’s 15 preservation areas.

- Interior Secretary Bruce Babbitt proposed the idea of a NWHI national monument to Hawaii’s senior senator, Daniel Inouye in 2000. Inouye responded with a strongly worded letter, summarized by Mr. Babbitt as saying, “Don’t you dare.”

- In 2001, James Connaughton, President Bush's chairman of the Council on Environmental Quality (CEQ) picked up where the Clinton Administration left off. Pew Charitable Trust representative and others claim that the process of creating a marine sanctuary dragged on for years because of NOAA and Senator Inouye's unwillingness to curb fishing.

Many expected the Reserve to be redesignated as a national marine sanctuary. NOAA staffers start developing management rules.

2002 – Public comment period begins on the creation of a national marine sanctuary under the reauthorized National Marine Sanctuaries Act of 2000 signed by President Clinton (Public Law 106-513).

July and August 2003 – Jean Michel Cousteau begins a 5-week expedition to film *Voyage to Kure* expected to air in fall 2004. Members of the expedition portray the large amount of marine debris, especially lost fishing nets and plastics, as unexpected.

2004 – NOAA releases draft objectives and purpose for the proposed NWHI sanctuary—“long-term protection of the marine ecosystems in their natural character.”

May 2005 – Ed Case (D, HI) introduces legislation to create the NWHI National Marine Sanctuary (#14)—*A Bill to Designation the Northwestern Hawai’ian Islands National Marine Refuge and for Other Purposes*, 109th Congress, 1st Session.

July 2005 – NOAA marine debris removal vessel runs aground at Hermes and Pearl Atoll.

September 2005 – Hawaii’s governor, Linda Lingle, and the State of Hawaii set aside all state waters in the NWHI as a marine refuge, creating the Northwestern Hawaiian Islands State Marine Reserve extending three miles offshore (1200 total miles). Public access is limited, but traditional cultural practices are allowed. All extractive uses are prohibited up to three miles offshore. The State of Hawaii asks federal agencies to ban fishing in areas extending 50 miles from shore in either direction. Midway Atoll remains federally managed.

October 2005 – The Ocean Conservancy and the Marine Conservation Biology Institute release a private study that says commercial fishing threatens red snapper, opakapaka, and bottomfish populations.

- The study is disputed by Western Pacific Fishery Management Council; they argue that simple proxies and lack of peer review invalidate the findings.
- NOAA rejects Western Pacific Fishery Management Council’s plan to manage fishing off the NWHI, arguing that the plan fails to set aside ecological reserves, allows for only short-term moratoriums, and lacks long term vision.

December 2005 – Hawaii Governor Lingle and 13 state and federal officials visit Midway Atoll in an effort to encourage federal protection. Also in attendance: White House Council on Environmental Quality Chairman, Jim Connaughton, Hawaii State Senator Fred Hemmings (his district), Peter Young, head of Hawaii’s Board of Lands and Natural Resources (Young claims that a 2003 Tern Island trip influenced his decision to enact state restrictions.), and Dan Basta, Director of NOAA’s Office of National Marine Sanctuaries.

Early 2006 – NOAA continues developing rules to manage NWHI waters as nation’s largest no-take national marine sanctuary and holds public hearings in Hawaii and Washington D.C.

February 2006 – Former House Speaker Newt Gingrich (R, Georgia) sends the White House a letter hailing the sanctuary plan as “a marvelous opportunity to leave a historic mark on U.S. and world conservation history.”

March 2006 – HI Governor Lingle hosts the first screening of Cousteau’s *Voyage to Kure* in the historic former home of Hawaii’s last reigning monarch, Queen Lili’uokalani, to demonstrate support for federal marine sanctuary status. Also in attendance: White House Council on Environmental Quality Chair Jim Connaughton, Director of the NOAA’s Office of National Marine Sanctuaries, Dan Basta, Hawaii Senator Fred Hemmings, and head of Hawaii’s Board of Land and Natural Resources, Paul Young. Sponsors include the National Marine Sanctuary Foundation, Keith Campbell Foundation for the Environment, and Cousteau’s Ocean Futures Society. The by-invitation-only advance screening was sponsored by the National Marine

Sanctuary Foundation, the Keith Campbell Foundation for the Environment, and PBS Hawaii, in partnership with the National Marine Sanctuary Program, the NWHI Coral Reef Ecosystem Reserve, Ocean Futures Society and the State of Hawaii Department of Land and Natural Resources.

PBS Hawaii devotes an episode of its weekly public affairs program, "Island Insights," to NWHI issues.

April 5, 2006 – White House screening of *Voyage to Kure*. In attendance: President Bush and First Lady Laura Bush. Jean-Michel Cousteau, John Boland, Chief Content Officer for PBS/KQED, Julie Holder of series sponsor Dow Chemical Company, Jim Connaughton and CEQ staff, Hawaii Governor Linda Lingle and unnamed others.

May 2006 – State of Hawaii (Department of Land and Natural Resources) and federal officials (U.S. Fish and Wildlife Service, National Marine Sanctuary Program and National Marine Fisheries Service) sign a joint memorandum on NWHI management.

The American Fisheries and Marine Life Enhancement Act (H.R. 5018) exempts Hawaii reserves and all national marine sanctuaries from the authority of regional fishery councils. U.S. Representative Neil Abercrombie (D, HI) is credited. Press reports suggest that the regional fishery councils are controlled by commercial fishing interests.

June 2006 – NOAA releases rules intended to manage the proposed sanctuary. (The regulations are used by the Office of National Marine Sanctuaries to implement the National Marine Sanctuaries Act and national marine sanctuary management plans. Each sanctuary has its own set of regulations.)

Hawaii-based scientists writing in *Endangered Species Research* calculate that two-thirds of NWHI lands could be submerged by 2100 because of global warming and expected sea level rise, threatening 75% of wildlife habitats, including those for Trig Island monk seals, Hawaii green sea turtles, nesting sea birds, three land snails, 12 plants and 60 invertebrates.

June 15, 2006 – Presidential Proclamation 8031, issued by President George Bush creates the Northwestern Hawaiian Islands Marine National Monument under the authority of the 100-year-old 1906 Antiquities Act that allows for the setting aside of historic and scientifically significant lands.

A management plan for the Monument is expected to take 18 months to develop. Although the area is remote (two to three days by boat from the main Hawaiian Islands) a World War II Midway Atoll Visitor Center will be created. Traditional native Hawaiian activities are permitted. Coral, mineral, and wildlife takings are prohibited and commercial and sportfishing will be phased out over five years. (Regulations implementing the Papahānaumokuākea Marine National Monument are codified at Title 40 of the Code of Federal Regulations (CFR), Part 404. Title 40 is the section of the CFR that deals with protecting human health and the environment.)

March 2, 2007 – First Lady Laura Bush speaks as Northwestern Hawaiian Islands Marine National Monument is renamed the Papahānaumokuākea Marine National Monument.

Pronunciation: PA-pa-ha-NOW-mo-KUH-ah-KAY-uh.

Media Explanations and Critique

Some of the ecological and geopolitical argumentation for protecting the area is apparent in the media reporting.

Justifications offered for creating a sanctuary or monument included:

1. Protecting resources (bird life), early 1900s.
2. Securing geographic territory (Cable Company and EEZ).
3. Sustaining fisheries, especially lobster important to adolescent monk seal.
4. Ensuring survival of endangered species

Reporters also captured some of the *contributing factors* that built support for protection, including:

1. Scientific surveys outlining the unique ecosystems present around the NWHI
2. Closures of the lobster fishery and fishery council ban on longline fishing.
2. President Clinton's coral reef protection efforts via several executive orders.

3. Continued interest by the Bush Administration in the region.
4. State efforts, including those by Governor Lingle and Congressional representatives
5. Screenings of Voyage to Kure in Hawaii and at the White House

My research considered several other questions beyond documenting media explanations for the Monument's creation:

Who did the media identify as policy entrepreneurs supporting the Monument's Creation?

Clinton Administration

Several journalists claim that President Clinton launched the marine sanctuary process by creating the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve. According to Pam TenBruggencate (*Honolulu Observer*), Interior Secretary Bruce Babbitt and Bill Brown, his science advisor, argued for a Monument, but the President received legal advice recommending against it.

President Clinton's Interior Secretary Bruce Babbitt hired William Brown, former chairman of the Ocean Conservancy, to help expand the department's role in ocean protection.

Hawaii Politicians

Hawaii Governor Linda Lingle and Department of Land and Natural Resources director Peter Young created the NWHI State Marine Refuge; state officials then asked the federal government to ban fishing in a broader area extending 50 miles in every direction from the island chain.

Hawaii's Fred Hemmings is identified as the state senator "...whose district encompasses the remote islands and who has been an advocate of their strict protection." (Godvin AP 15.12.05)

U.S. Representative Neil Abercrombie (D, Hawaii) is credited in a May HT Media Limited report with persuading the chairman of the House Resources Committee and H.R. 5018 sponsor Representative Richard Pombo (D, CA) to exempt Hawaii and all national marine sanctuaries from the bill. The bill reportedly would transfer authority over fishing decisions to regional fishery councils.

Hawaii Congressman Ed Case (D, HI) introduced marine sanctuary legislation in 2005. Juliet Eilperin in the Washington Post (1.15.06) also credits Case with lobbying for the designation since his election in 2002 and First Lady Laura Bush for taking "a personal interest in the island chain."

Bush Administration

In a *National Geographic News* article on the day the Monument was announced, Ocean Conservancy President Roger Rufe is quoted, "Teddy Roosevelt is largely considered the father of our national park system. President Bush may be securing a similar legacy in our oceans."

A 22 July 2006 editorial in *The Providence Journal* qualifies praise for President Bush. “This fine act does not, however, cancel the Bush Administration’s record on the environment. Elsewhere, protections have been routinely compromised for the benefit of corporate interests. (We note that the Hawaiian national monument is inconveniencing very few businesses—a handful of fishing boats.)”

James Connaughton, President Bush’s chairman of the Council on Environmental Quality, represented “a pivotal player in the fate of the reefs” (Godvin *Associated Press*, 15.12.05) who “picked up where the Clinton Administration left off.” (Pala *New York Times* 2006)

The late journalist and political commentator Molly Ivins also reluctantly praised President Bush writing in September 2006, “Way to go! That’s a good thing. Is there an election any time soon?” She added, “Word is the President decided to declare the area a marine sanctuary after watching a documentary by Jean-Michel Cousteau. Someone show him *An Inconvenient Truth*.”

Voyage to Kure

TenBruggencate of the *Honolulu Advertiser* credited the April 5 meeting between President Bush and Jean-Michel Cousteau and the screening of Cousteau’s documentary *Voyage to Kure*. She also quoted Cha Smith from the Hawaiian environmental alliance, Kahea. The group long backed a national monument rather than a sanctuary, because it resembles the Hawaiian concept of a pu’uhonua—a pure refuge.

Ten reports credit the Cousteau PBS video – only Susan Scott from Star Bulletin (3.31.06) mentions David Liittschwager and Susan Middleton’s book of NWHI photographs *Archipelago: Portraits of Life in the World’s Most Remote Island Sanctuary* (2005).

“Roosevelt and Clinton’s actions set the stage for President Bush to make this area into a marine sanctuary,” writes Janet Raloff in *Science News* (8.5.2006).

Environmental Groups

Environmental organizations and nonprofits mentioned in media reports include: Environmental Defense, Ocean Conservancy, Marine Conservation Biology Institute, Ocean Futures Society, National Marine Sanctuary Foundation, PBS Hawaii, Hawaii Sierra Club, and Oceana.

Jay Nelson, NWHI project director of the Pew Charitable Trusts, led a coalition of environmental groups offering to buy out eight NWHI commercial fishing permit holders. One permit holder—Zenon Ozoa—lobbied to close the fishery arguing that it was too environmentally destructive, writes Eilperin in the Washington Post (6.14.06).

Who did the media identify as opponents of the Monument’s Creation?

Fishing Interests

Some media reporting suggested that placating resource stakeholders was not a large part of creating the Monument, unlike many other environmental protection battles. The commercial fishery near the islands and atolls was characterized as small, employing eight (or nine depending on the report) fishermen targeting lobsters and bottomfish (snappers, groupers and jacks). Together they divided a fishery worth about \$300,000 a season.

Other reports included debate over fishing rights. Several reports claim that both NOAA and U.S. Senator Daniel Inouye (D, HI), ranking Democrat on the Commerce Committee and senior member of the Senate Appropriations Committee, opposed sanctuary or monument designation because it would harm commercial fishing interests.

- CNN (6.17.2006) quoted permit-holder Timm Timoney. “We never anchor on live coral, actually we are usually miles away from a reef...The National Marine Fisheries Service should be holding this fishery up as the poster child of sustainable fisheries.”
- The Western Pacific Regional Fishery Management Council advises NOAA on fishing policy and reportedly claimed that bottomfish in the NWHI remained plentiful and their numbers compatible with a healthy fishery. Sharing this view—the Marine Conservation Alliance, a commercial fishing advocacy group.

The Pew Charitable Trusts, a private Philadelphia-based group, met with eight commercial fishing permit holders ahead of Monument designation, offering to buy out their permits for five

times their average annual income to speed up the conservation process. Efforts went nowhere and were abandoned once the Monument was designated (Godvin, *Associated Press*, 4.3.07).

Locals

Some ‘local groups’ (unnamed) opposed Monument designation, reportedly fearing that the rise in public attention would bring visitors, some illegally, to the islands. A native Polynesian voyaging society also worried about their future ability to sail traditional canoes to the islands.

Which, if any, scientific reports were cited?

Most of the science mentioned in media reporting concerned populations of NWHI bottomfish. Also present in the reporting—journal articles on marine reserves, climate change and sea-level rise and maritime archaeology.

Numerous journalists attempted to ‘balance’ their coverage by quoting fishery council representatives defending fishing rights against similar representatives from environmental groups demanding greater protection. For example, Ocean Conservancy senior scientist Dennis Heineman led an oft-quoted 2005 study assessing the population of commercial species of bottom fish in the NWHI. The study found a drop by roughly half in 15 years; pink snapper numbers fell by 84 percent in 10 years. Heineman is quoted in an *Associated Press* report (McAvoy 10.25.05) saying, “Bottomfish populations in the NWHI are in trouble...neither healthy nor are they being fished sustainably.” But, senior scientist for the Western Pacific Fishery

Council claimed, “It is not a peer-reviewed scientific publication,” and “used simple proxies rather than true estimates of fish populations.”

- A December 12th, 2006 report in the *New York Times* refers to a 2004 study commissioned by NOAA by Sara Iverson from Dalhousie University in Nova Scotia. The scientists studied bottom fish, focusing particularly on the main prey of adult monk seals, snapper and boarfish, not lobsters or shallow-water reef fish. The journalist noted that the academic article was undergoing peer-review.

Selkoe, Halpern and Toonen (2008) studied 14 threats specific to NWHI – invasive species, bottom fishing, lobster fishing, ship-based pollution, ship strike risks, marine debris, research diving, research equipment installation, and wildlife sacrifice for research. The authors were associated with the National Center for Ecological Analysis and synthesis at UC-Santa Barbara and the Hawai’i Institute of Marine Biology at the University of Hawaii.

The January/February 2007 edition of the *New Internationalist* mentions the NWHI Monument within a broader discussion of a network of marine reserves around the globe. The article refers to a 2006 report by Roberts, Mason and Hawkins titled *Roadmap to Recovery: A global network of marine reserves*, released by the Environment Department at the University of York and Greenpeace.

Just days before Monument designation, *National Geographic News* ran a story about the impact of sea level rise on the NWHI. The most prominent report was: Baker, J. Littnan, C. and D.

Johnston. 2006. *Potential effects of sea level rise on the terrestrial habitats of endangered and endemic megafauna in the Northwestern Hawaiian Islands*. 2: 21-30. The article also mentions surveys by Greta Aeby of the Hawaii Institute of Marine Biology that revealed recent coral bleaching.

A 2005 NOAA maritime heritage and high resolution mapping mission found new shipwrecks and possibly a trail of coal from the 1886 Australian ship *Dunnotar Castle* near the NWHI. NOAA officials were said to hope that wildlife and coral bleaching revealed would promote legislation to designate the area as the nation's 14th National Marine Sanctuary.

What mnemonic devices and metaphors were employed?

Reporters and policymakers referred to the archipelago as “Ocean Yellowstone” or “America’s Galapagos.”

The ‘Second Battle of Midway’ reportedly was used by insiders in the Clinton Administration when referring to Interior Department efforts to protect the NWHI.

Chapter 6: As Told by Policy Entrepreneurs

In order to understand the timing of Monument designation, it is important to render what the late journalist Paul Harvey would call “the rest of the story”—the untold account that only policy insiders can relate. How do policy entrepreneurs both inside and out of government explain the Monument’s creation? Expanding on the media’s narrative gets closer to the truth about how policy windows are opened. Results from email surveys and telephone interviews suggest complicated and deftly orchestrated communication and persuasive efforts by NOAA’s Office of National Marine Sanctuaries and the Council on Environmental Quality (CEQ) in the executive branch.

Interpreting survey results using Stage 2 discourse analysis considerations proved fruitful. Discourse analysis identified the institutional interests and perspectives of the participants. National Oceanic and Atmospheric Administration (NOAA) officials, for example, hoped to create a national marine sanctuary, while politicians opted for a faster, less bureaucratic path through monument designation. DA revealed which actors possessed the most influence and knowledge claims, including CEQ’s Jim Connaughton. Previously veiled communication networks between NOAA, advocacy groups, and executive branch offices are made plain.

More about what was left out of the media story will be discussed in this dissertation’s conclusions. Survey results indicated that the media identified many of the important individual

players in the monument designation process. The media failed to capture the crucial behind-the-scene role of the NMSF and the State of Hawaii. But, perhaps the most glaring omission concerns details of the mechanism used by policy entrepreneurs to achieve Monument designation—the 1906 Antiquities Act. This case study and others (Ranchod 2001) demonstrate how the Antiquities Act has become an important conservation tool. Yet the discourse structure of news reports proved ill-equipped to explain the arcane nuances of the Act thoroughly, if at all.

Antiquities Act

Under the Antiquities Act, the president may designate national monuments without congressional approval by proclamation. The original purpose of the Act was to protect ‘objects of antiquity’ on federal lands, such as archaeological sites, pottery, or petroglyphs. President Clinton’s aggressive designations broadened the purpose of national monuments beyond protecting “curiosities” to protecting entire ecosystems. Arguably, the act also can be read to authorize protection of the water column above submerged ‘lands’ as well (Ranchod 2001).

- President Carter’s creation of 15 national monuments and the resulting Alaska National Interest Lands Act (ANILCA) generated so much controversy that the Antiquities Act lay dormant through the Reagan, and Bush years until the Clinton Administration.
- President Clinton created 19 of the 123 national monuments designated by the end of his presidency, including the largest national monument in the continental United States—

Grand Staircase-Escalante. As a first step toward creating a new national marine sanctuary, Clinton issued several executive orders to create the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve in 2000 (Ranchod 2001).

National monument designation is preferable to administrative designation of a national marine sanctuary for several reasons. Monument designation allows a president to forge an environmental legacy quickly and offer more meaningful protections for the site and ecosystem(s).

- The Antiquities Act does not require congressional approval and includes fewer procedural requirements, such as a notice of intent in the Federal Register. The authorizing statute for marine sanctuaries demands public notice, intragovernmental consultation, congressional oversight, and quite simply a lot more time-consuming paperwork.
- National marine sanctuaries are managed much like national forests, permitting public use and extraction of some resources. Commercial fishing may be permitted for example, much as commercial logging is allowed in national forests (Ranchod 2001).⁵ Presidential proclamation determines monument protections and management parameters. Although Congress may reverse a president's national monument decision or change its size, use, or management, it hardly ever does so. Most presidents probably

⁵ See Ranchod (2001) for discernments between presidential proclamations and executive orders, legislative and administrative designations, and specific protections afforded by monument and sanctuary designations.

would veto legislation that weakens a national monument designation, reluctant to diminish executive power (Ranchod 2001).

Kingdon's Policy Window Model

After nearly 100 years under various forms of protection, why and how did the Northwestern Hawaiian Islands make it to the top of the Bush Administration's agenda in early 2006? John Kingdon's *Agendas, Alternatives, and Public Policies* (2003) provides a dynamic model for studying agenda setting and policy formation, as well as a means to frame and interpret survey results.

Kingdon's (2003) work is one of the most influential examples of the 'incrementalist paradigm' in political science. Most of the time, stable institutional structures, shared understandings of policy goals and a balance of power among interests prevent dramatic shifts away from the status quo (Baumgartner 2009). According to the paradigm, policy shifts occur gradually over time, punctuated by periods of frenzied activity—a kind of 'organized anarchy.' Organized anarchy public policy explanations are very satisfying because they are fluid, nonlinear and "tease out the process's messiness, disjointedness, and luck (Henry 2007).

- Kingdon's (2003) field work added to theoretical foundations built by other political scientists, namely Cohen, March, and Olsen (1972). Their "garbage can model" of policy-making contradicts the rational approach to decision-making, claiming that

policies are not the product of rational actions. In their view, policy actors rarely evaluate many alternatives for action and do not compare them systematically.

Kingdon envisions the policymaking process as three independent, complementary and occasionally converging streams—of problems, policies, and politics:

- In the *Problem Stream*, problems are recognized by policymakers and the public because of indicators or focusing events. Most public policy challenges are defined in terms of values (conservative or liberal), comparisons (between countries), or categories, such as a “health care,” “civil rights,” or “energy” problems.
- Alternative solutions are formulated in the *Policy Stream*. Disparate policy communities termed ‘hidden clusters’ produce alternatives and proposals and move forward incrementally. Scientific information most often finds its place here because the major forces involved are intellectual and personal. Policy entrepreneurs swimming in this stream—career public administrators, congressional staffers and interest groups—hold deep and long abiding commitments to particular or ‘pet’ policy solutions (Henry 2007).

Feldman (1989) provided many examples of government analysts ‘banking’ inventories of solutions, drafting reports and estimates long before problems achieved public visibility in anticipation of time constraints once reports or regulations are requested by higher-level political appointees.

- The governmental agenda is formed in the *Political Stream*. ‘Visible clusters’ of policy actors—high-level political appointees, presidential staff, media, and some interest groups—create the list of problems or issues to be resolved during their political tenure. Consensus is achieved through bargaining between participants. Shifts in administrations, public opinion or interest group efforts affect decision-maker receptivity, including their willingness to be “dealt in” to the policy resolution.

The streams all flow independently until coupled by *policy entrepreneurs* at critical points in time, known as *policy windows*. Without this coupling by enterprising political operatives, a problem and accompanying policy solution will not end up on the decision agenda and solved.

- ‘Policy windows’ are short-lived opportunities to change policy direction, open to any group able to mobilize support for a particular set of policies. Triggers include focusing events, such as disasters or accidents, shifts in public opinion, charismatic figures, and elections or other changes in government. “But what makes an idea’s time come?” (Kingdon 2003, 1).
- Policy entrepreneurs are not found in any one location within the policy community; they reside in and out of government, elected or unelected, in interest groups or in research institutions. Their defining characteristic is a willingness to invest time, energy, reputation and money for future returns. They generally have some claim to a hearing,

are known for political connections or negotiating skills, and, most importantly, are persistent.

Prior planning is a must and a ‘bandwagon’ or ‘tilt effect’ occurs when problems can be paired with alternatives not perceived as too new or radical (Henry 2007). Policy entrepreneurs try to make linkages early by ‘prepackaging’ a problem with a preferred solution, while building political momentum. They push and push for their conception of the problem and solution while lying in wait for a policy window to open. Any crisis is seized as an opportunity; the policy entrepreneur “rides whatever comes along” (Kingdon 2003, 182). They also attempt to ‘soften up’ resistant policy communities and the public, getting them used to new ideas and building familiarity with and acceptance of their proposed solutions. A considered, detailed solution to an acute policy problem, even one sprung at a propitious time, likely will fall on deaf ears without this preliminary work.

Much like water in a stream, communication is simply treated as the inert medium in which all reactions are played out. Only a few paragraphs in Kingdon’s book *Agendas, Alternatives, and Public Policies* (2003) mention communication explicitly: “The communication channels between those inside and outside of government are extraordinarily open, the ideas and information float about through these channels in the whole issue network of involved people, somewhat independent of their formal positions” (2003, 45). Kingdon’s (2003) standard indicators of mass media impact on setting governmental health care and transportation agendas proved disappointing—deemed important in only 26 percent of his interviews. Media influence was correlated with the public’s attention to issues. Kingdon suggested that mass media might

magnify movements started elsewhere and that its influence may vary from one type of participant to another.

Kingdon's original research was completed by 1979, and he could not have anticipated how much greater the media's intrusion into public and private lives is now. Policy window media triggers abound beyond the now even greater volume of mainstream documentary video and photography exhibits—in the blog-o-sphere, Twitter, viral YouTube videos, and ever more sophisticated orchestrated efforts. For example, FreedomWorks, an organization run by Dick Armey, the former House majority leader, coordinated 'tea party' protests. The agitation was meant to represent grass roots public sentiment against Democratic health care reform; instead they began as contrived grassroots or 'AstroTurf' events, heavily promoted by Fox News (Krugman 2009).

Communication is an obvious undercurrent in an organized anarchy, incrementalist model of public policy. Policymaking often appears to outsiders as arbitrary and chaotic. Kingdon's model explains well where scientific research and policy entrepreneurs enter into and influence most the policymaking process. Investigating discourse communities and communication practices reveals otherwise veiled institutional strategies, micro-political contexts, and rational decision processes. Further research and comparative case studies are necessary to refine understandings of the role of communication in spreading ideas, creating cohesion within policy communities, and as part of any policy entrepreneur's set of skills.⁶ See *Appendix C: Adding*

⁶ A distinct body of literature concerning communication in policy studies exists, including Carpenter, Esterling and Lazer's (2004) article about networking between lobbyists, congressional staff and government agencies.

Communication to Kingdon's Policy Window Model for two graphics that illustrate how communication can be integrated into Kingdon's 2003 model.

Results

Thirteen men and women from the U.S. Fish and Wildlife Service, NOAA, U.S. Congress and private professionals responded to the 2008 email survey. Their responses are summarized in Table 2 and quoted individually in the bullets that follow. Several requested telephone interviews, either because they were reluctant to commit their answers in writing or because of the length of response. Several reiterated the need for anonymity and most requested copies of the final product in exchange for participation. One limitation of the survey—no question asked respondents, “How much media did you consume prior to answering these questions.” Although most respondents provided very specific and detailed reasoning, their explanations for the Monument's creation may have been influenced somewhat by late 2006 and 2007 reporting.

Respondents were asked to rate each of 11 factors identified by the previously-compiled media reports as involved in the Monument's creation. Respondents used a scale from one to ten (1 = not important; 10 = extremely important⁷). Question number 21 'Other' invited respondents to suggest additional important factors. Results are displayed in the table below; higher numbers indicate greater importance in the policymaking process:

⁷ Please see Appendix B: Email Solicitation and Survey Questions.

Table 2: Policymaker Survey Results

Question (Text and Number)	Total Score from Respondents
<i>White House screening of Voyage to Kure on April 5, 2006 (2i).</i>	76
<i>Creation of the Northwestern Hawaiian Islands Ecosystem Reserve by the Clinton Administration in 2001 (2c).</i>	60
<i>National Oceanic and Atmospheric Administration (NOAA) efforts to declare the region a national marine sanctuary, including public hearings and proposed regulations (2k).</i>	56
<i>Creation of the Northwestern Hawaiian Islands <u>State</u> Marine Reserve in Sept. 2005 (2e).</i>	56
<i>Repeated collapses and closure of the spiny lobster fishery in the 1980s and 1990s and threats to monk seal, turtles and seabirds (2a).</i>	43
<i>Publicity surrounding a December 2005 visit by HI Governor Lingle and 13 state and federal officials to Midway Atoll (2g).</i>	41
<i>President Clinton's 1998 Executive Order #13089 on Coral Reef Protection (2b).</i>	40
<i>A 2005 study citing commercial fishing threats to red snapper, opakapaka, and bottom fish by the Ocean Conservancy and Marine Conservation Biology Institute (2f)</i>	36
Other (2l)	35

<i>Hawaii screening of Jean-Michel Cousteau’s documentary film, Voyage to Kure in March 200) (2h).</i>	34
<i>Legislation introduced in the 109th Congress to create a national marine sanctuary by U.S. Representative Ed Case (D, HI) (2d).</i>	29
<i>May 2006 American Fisheries and Marine Enhancement Act (H.R. 5018) exempting HI reserves and all national marine sanctuaries from the authority of regional fishing councils (2j).</i>	22

The White House screening of Cousteau’s PBS documentary *Voyage to Kure* garnered 76 points, representing the most important factor in the Monument’s creation—16 points higher than the next. The second, third, and fourth highest responses are remarkably close in point values—60, 56 and 56 respectively. These efforts by non-political government employees in the Clinton Administration, NOAA, and Hawaii state agencies are what Kingdon’s model would characterize as the “softening up” or incremental “preliminary work” necessary while waiting for political opportunity. “Luck is what happens when preparation meets opportunity,” claimed the Roman philosopher Seneca in the first century.

The thrust of qualitative research is best served by sorting data gained from a questionnaire reflexively to identify key themes, dimensions and the broader concepts and assumptions that might underlie them (Cope 2005). Kingdon’s (2003) converging stream model provides the framework for analysis.

Problem Stream

Albeit once removed, science played an important role in identifying problems in the Problem Stream. Language in some media reports appears lifted from NOAA's NWHI Web page, in turn informed by several scientific reports.

- Scientific surveys, such as NOAA's Reef Assessment and Monitoring Expeditions (RAMP) and USFWS-veteran Rauzon's 2001 book *Isles of Refuge: Wildlife and History of the Northwestern Hawaiian Islands* "educated all involved years earlier, especially about the area's unique ecosystems and fragility."
- A respondent cites Maragos and Gulko's 2002 gray literature, educational publication titled *Coral Reef Ecosystems of the Northwestern Hawaiian Islands* prepared by the USFWS and Hawaii's Department of Land and Natural Resources.
- Commercial fishing was identified as a problem by Heinemann et al. (2005). Several respondents conveyed an urgent need to bring it to an end: "The need to better regulate commercial fishing in the NWHI...and the resulting public outrage of not doing so adequately." Some debate occurred in media reports about whether or not this Ocean Conservancy publication qualified as peer-reviewed science. Controversy was not present in the policy entrepreneur narratives.

Permitting artists to accompany NOAA voyages and involving scientists in artistic pursuits, including the making of *Voyage to Kure*, recalls landscape painter Thomas Moran and photographer William Henry Jackson's participation in the first surveys of the Yellowstone region.

- Jean Michel-Cousteau “read the educational publication” authored by Maragos and Gulko (2002) and involved Maragos in the making of the film. Maragos’ participation in the voyage provided a unique opportunity to continue to educate Ocean Futures staff about the unique habitats and ecosystem threats in the NWHI.
- *Archipelago: Portraits of Life in the World’s Most Remote Island Sanctuary* authors Liitschwager and Middleton accompanied NOAA surveyors whenever feasible, carefully capturing portraits of specimens along the way. “A campaign was underfoot that predated our project...we needed to be opportunistic, taking advantage of NOAA and USFWS vessels and flights.” The book proposal was prepared in 2002 with most of the fieldwork conducted in 2003 and 2004. NOAA subsequently obtained permission and incorporated more than half of dozen of the images into *Northwestern Hawaiian Islands Marine National Monument: A Citizen’s Guide*, available in portable document format through the Office of National Marine Sanctuary Web site.
- “The place itself was special: its isolation, significance to native Hawaiian culture, and the presence of ‘charismatic,’ endemic and endangered species and habitats...allowed the

public—including some fishermen—to attach romantic, cultural, or ideological value to its protection.”

Policy Stream

Kingdon’s (2003) ‘hidden clusters’ include, of course, the geologists, biologists and archaeologists who worked for years on research and publications in peer-reviewed journals and under contract to NOAA and the USFWS. Their efforts are featured prominently in *Voyage to Kure* and mentioned in several media reports.

Of course, legislators at both state and federal levels played roles in creating the Monument, but were only rarely mentioned in media reports.

- Senator Daniel Inouye, second most senior senator (after Senator Robert Byrd), chairs the Senate Committee on Science, Commerce, and Transportation, which provides funding and oversight for NOAA, as well as the Senate Committee on Appropriations. Inouye’s committee funds NOAA-sponsored research expeditions, but the senator opposed a fishing ban within the sanctuary. One respondent said that invoking the Antiquities Act, “sidestepped NOAA and the Hawaii Congressional delegation, especially Daniel K. Inouye, a long-time opponent of a fishing ban. In contrast, approximately eight fishers opposed the ban, a few of whom may be Inouye's fishing buddies.”

- Representative Ed Case (D, HI) introduced the Northwestern Hawaiian Islands National Marine Refuge Act (H.R. 2376) in the 109th Congress; the bill would have protected the Northwestern Hawaiian Islands with designation as a national marine refuge. According to one respondent, “[Ed Case’s bill] departed from the NOAA “sanctuary” proposal in offering full protection to the NWHI. I think this ultimately contributed to his ouster from Congress and lack of support by the rest of the Hawaii delegation during his later attempt to run for Senator.”
- The NWHI rest in State Senator Fred Hemmings 25th senatorial district. Hemmings suggested that “the Lingle Administration...partner with the Feds to “create the world’s largest marine sanctuary and went to DC to help implement.”

Perhaps the most important hidden actor in this process proved to be the National Marine Sanctuary Foundation. The National Marine Sanctuary Foundation is a private, non-profit, 501(c)(3) tax-exempt organization, created to assist NOAA’s National Marine Sanctuary Program with education and outreach programs. NOAA’s Office of National Marine Sanctuaries legislation allows private funding for public agencies and the foundation can mobilize support in ways off limits to federal employees. Respondent’s comments included:

- “National Marine Sanctuary Foundation was a big help, sponsored Capital Oceans Week. Dan Basta [Director, NOAA’s Office of National Marine Sanctuaries] meets with Foundation staff weekly.”

- “Find partners and get them to do what you can’t. NOAA can educate only, but other agencies can do more direct championing.”

Survey respondents mentioned the Foundation often. Media reporting missed the Foundation’s critical role in the advocacy process.

The National Marine Sanctuary Foundation worked to advance NOAA officers’ ‘banked solution’ to the ‘problem’ of how to best protect the NWHI. Answer: Create another national marine sanctuary. National Marine Sanctuary staff and the Foundation hosted invitation-only book signings for Liitschwager and Middleton’s *Archipelago*. Through the Foundation, NOAA’s Office of National Marine Sanctuaries hosted receptions at the photography exhibitions. Respondents noted:

- “Secretaries of Commerce and Interior were in attendance. Seven-by-three and 4 x 4 photos and 8 x 10 foot murals gave a sense of the diversity of life in the NWHI, illustrated for people who couldn’t travel there—monumental images and a sense of place from the landscapes.”
- “The photos and exhibits were utilized as political tools in addition to Cousteau’s film. Each media had its own advantages—the book is portable; the film very personal and compelling; the exhibition provides for discussion and reflection in a social place.”

The National Geographic Society published *Archipelago* in 2005, the result of two years of catch-as-catch-can photography trips to the NWHI. The Society promoted the book's release with a feature story in *National Geographic* magazine and with exhibitions in Washington, D.C., Honolulu, Hawaii, and across the U.S. over two years. The collaborators shot portraits of endangered species, diffusely lit against black and white backgrounds. Unlike typical nature photography, habitats and context are absent; the technique showcases the creatures themselves. The stark backgrounds reveal details and subtle coloration.

The 2008 *Archipelago* photo exhibition in the Mariner's Museum at Newport News, Virginia, featured NWHI species in the large format murals and photos mentioned above (Ward 2008). However, visitors appeared most taken by a smaller, eye-level "Shed Bird" story board that followed the fate of an albatross chick from egg to its death when nearly fledged. Middleton's last photograph in the series is a circular assemblage of all the small plastics ingested by the bird that resulted in its early death. One typical personal observation involved a middle-aged woman. She said, as she hustled to gather her companions and return to the board, "Oh, my. Did you see this?"

Political Stream

Surveys of those involved in the Monument's creation suggest that the final executive order required orchestrated communication efforts from NOAA staffers, influential Bush policy advisors, and state and federal elected officials—all referred to by political scientist John Kingdon (2003) as 'policy entrepreneurs.' Nearly all of the respondents identified 'policy

entrepreneurs' navigating the Political Stream—Jean Michel Cousteau, Jim Connaughton, Dan Basta, Linda Lingle, First Lady Laura Bush, and, of course, President Bush. (Media reporting identified most of the same important players.)

- “NOAA is particularly adept at the game now because of Dan Basta’s leadership...[he] believes we must get people excited about sanctuaries, regardless of Administration.” Again, Basta is the Director of NOAA’s Office of National Marine Sanctuaries and well-regarded for his political and negotiating skills.

According to one respondent, Basta cultivated a relationship with James Connaughton, chairman of President Bush’s Council on Environmental Quality (CEQ), hired his son as an intern, and took both scuba-diving in the Florida Keys. “NOAA built the coalition and Dan Basta had access to Connaughton.” Robert Smith, former Deputy Secretary of Commerce, also “was involved early on.”

- By virtue of position, CEQ Director Jim Connaughton possessed what Kingdon’s model would term a ‘claim to hearing,’ presumably welcome anywhere in D.C. Respondents wrote, “Seemed that Connaughton led the charge.” Or, “The head of CEQ looked at what could be accomplished in this Administration. Couldn’t achieve ANWR [referring to the Arctic National Wildlife Sanctuary]...less political cost in NWHI...other areas more difficult.”

Several respondents mention Connaughton arranging the *Voyage to Kure* White House screening. Another said he presented Laura Bush with a signed copy of *Archipelago* that “she took with her on an official trip to Africa. She really does read.” Or, “Connaughton arranged briefings about the region for the First Lady before her departure to Midway to speak at the Monument naming ceremony.”

One respondent credits Laura Bush with arranging the White House screening adding, “My thought is that Laura Bush played the role of ‘gentle persuader’ in the Monument designation.” “The *Archipelago* Shed Bird story and images affected the First Lady in particular...Laura Bush was very sharp and caring, seeming familiar with environmental issues.”

President Bush it seems was concerned about ending commercial fishing, reportedly asking, “How can there be fishing?” A respondent commented, “He didn’t have to make it a ‘no-take. There would have been compromises with a national marine sanctuary designation.”

Hawaii Governor Linda Lingle could lay claim to a ‘stealth’ entrepreneurial role. (The implications of Hawaii state actions were not detailed at all in media reporting.) Connaughton lobbied Linda Lingle early and knew local support would be necessary to drive support for protection within the Beltline, said one respondent. Several other respondents credit Governor Lingle and the State of Hawaii:

- “Linda Lingle, a Republican, created a ‘no-take-area’ in Hawaii waters before Monument designation. And really, the state maintains jurisdiction over the most valuable coral reef

habitat. I was so excited about that! And surprised...really raised the bar beyond the goals of the national marine sanctuary proposal. A sanctuary is mixed-use and must do more to accommodate the public in the management plan.”

- “Once the State of Hawaii made the commitment to take responsibility for their part in the Northwestern Hawaiian Islands,...it just didn’t matter anymore.
- “It wasn’t the publicity, it was the insight gained by Governor Lingle that fostered her love for the NWHI, which I would rate an 8 as a factor.”

NOAA as an institution seems to be internalizing entrepreneurial tendencies into their bureaucratic structure.

- “Every NOAA has a junior policy officer who works downtown representing their office...be willing to sacrifice a good employee downtown.” “[We sent] a detail to CEQ—NOAA guy drafted the executive orders, then came back to NOAA to administer the program.”

Survey question #1 asked respondents to identify ‘triggering events.’ All save one answered this question. *Voyage to Kure*, is mentioned by five respondents:

- “...people knew about the place. *Voyage to Kure* and the book *Archipelago* brought the heft of Cousteau and National Geographic names respectively to the cause and thus raised the profile of the NWHI in the public consciousness....”
- “His [Cousteau’s] reports about the marine debris and plastics killing birds, etc. was a message that reached a lot of people, including the First Lady.”
- One respondent tells of a remark made by Jim Connaughton heard third-hand. “Connaughton said, “The President told me to fast-track this thing after seeing the video.””

Several mention as a triggering event President Clinton’s 2000 and 2001 executive orders creating the Hawaiian Coral Reef Ecosystem Reserve:

- “...that led to the idea in the Bush Administration that the area would become a national marine sanctuary.”
- “NOAA built the coalition...process started as [an] executive order under Clinton.”
- “There already existed some protections and direction to establish more protections....”

Several respondents credit NOAA for developing in advance a management framework for the proposed sanctuary. They also suggest that infighting within NOAA about whether or not to

allow commercial fishing delayed sanctuary designation and facilitated 2006 Monument designation instead:

- “When a marine monument was considered in 2000, it was shot down by significant and unresolved legal issues.”
- “...unwavering insistence of NOAA to establish a National Marine “Sanctuary” that would have continued commercial fishing, despite scientific evidence to the contrary....”
- “NOAA was not going forward with the Sanctuary proposal without commercial fishing continued, despite more than 24,000 public expressions, and 400 scientists all advocating full protection of the NWHI.”

Another respondent lauded the Department of Interior’s U.S. Fish and Wildlife Service for helping keep the NWHI in good enough shape to merit protection. “The decades-long protection provided by the U.S. Fish and Wildlife Service and State of Hawaii made these lands and waters suitable for recognition as a National Monument.”

November 2006 midterm Congressional elections perhaps also influenced timing: “The head of CEQ looked at what could be done in this administration [for] little political cost.”

- “In the end, a monument designation was chosen as it was the fastest way to get conservation measures in place...”

- “Why do I think the President did this? I think he wanted to do the more decisive thing, make it a bigger political deal. Had he merely announced the ‘14th proposed marine national sanctuary,’ it wouldn’t have had the impact.”

When considered together, survey results suggest that advanced preparation by federal and state agencies met opportunity facilitated by several forms of media. The policy window was pried open over a long time period and after much sustained effort, but, according to respondents, not without luck and uncanny synchronicity.

- “We hoped that timing of all efforts would ‘play off the other.’ Kept asking, “How is it looking?”
- “Too many people take credit for the Monument, but it simply was just the right time.”
- “At the end of the day, the timing was nearly perfect, as though the universe intended for this to happen.”

Chapter 7: The Persuasive Power of Documentary Film

“I’m interested in supporting public policy by evoking an emotional response...[the NWHI] are not a visitor destination, so it’s a special challenge to rally support—done through virtual visitation, photos, stories.” Survey Respondent

Both the media and policy entrepreneur narratives credit *Voyage to Kure* as perhaps the most important factor in the Monument’s creation, meriting an investigation into the persuasive power of documentary film. Ten of 56 media reports mention the video and five of 13 survey respondents credit the film. In some ways, crediting Cousteau’s PBS video as a triggering event in the Monument’s creation is a straightforward and convenient explanation for a complicated and nuanced communication process. Nevertheless, screenings of the film in Hawaii and Washington D.C. provided opportunities for scientists and NOAA administrators to educate policymakers about ecosystem threats, as well as semi-private spaces to gather and consider solutions. One challenge for media geographers and discourse analysts involves deconstructing the voice and vision of documentary films and then connecting film portrayals to effects on real locations. This case study is a rare opportunity to examine the relationships between media texts, actions taken by social actors, and the intentional and unintentional policy outcomes.

This chapter deconstructs Cousteau’s documentary video *Voyage to Kure* using considerations from Stage 3 discourse analysis. Many policy entrepreneurs in this process had no prior direct experience with the Northwestern Hawaiian Islands. *Voyage to Kure* came to embody the social and environmental context of the place and helped delineate future Monument boundaries. The

filmmaker's belief in environmental justice and ocean stewardship matched those of officials in executive branch institutions, facilitating a governing episteme (a group of discourses that serve as the ground of thought at a particular time).

Documentary filmmakers generate valuable insights and particular knowledge about aspects of the world that we occupy, but might not have seen first hand. Documentaries explicitly aim beyond entertainment toward overlapping purposes—to record and preserve history, to analyze, to teach, and to promote or persuade (Renov 1993). Documentaries do not share a single style and there is no limit to the issues they may address (Nichols 2001).

Objectivity, however, is as elusive in documentaries as it is in other cinema genres.

Documentaries share common techniques that allow their footage to seem like the absolute truth or inevitable conclusion about an issue. It is important to keep in mind that documentary films are *representations* of reality, not reproductions. Kennedy and Luckinbeal (1997, 41) note in their review article about geographical research on film that numerous geographers challenge the idea that reality can be portrayed accurately in film; biases are incorporated into documentaries through the production process.

Voyage to Kure is the first in a series of Public Broadcasting Service (PBS) documentaries titled *Jean-Michel Cousteau: Ocean Adventures*. The series is produced by member station KQED in San Francisco and Cousteau's Ocean Futures Society. Funding for the series is provided by Dow Chemical Company. The *Ocean Adventures* associated Web site includes previews of episodes, interactive maps, profiles of Cousteau's expedition team and associated research scientists, pod

casts, educator resources with links to ocean science articles, games, and desktop wallpapers and screensavers (Cousteau 2010).

All the episodes in the series and their release dates are listed below:

Voyage to Kure (April 5, 2005)

Sharks at Risk (July 12, 2006)

The Gray Whale Obstacle Course (July 19, 2006)

America's Underwater Treasures (September 20, 2006). In this episode, Cousteau's divers investigate the PMNM Monument and all 13 National Marine Sanctuaries.

Return to the Amazon (April 2, 2008)

Sea Ghosts: Belugas (April 8, 2009)

PBS stations aired *Jean-Michel Cousteau Ocean Adventures: Voyage to Kure* in two hour-long episodes spread over several weeks. Digital video scene selection options include:

Part I

Introduction: Preparing for the Journey

Mokumanamana: The First Dives

French Frigate Shoals: Rapture and Serendipity Reefs

Tern Island: Life with Birds and Turtles

Monk Seals: Reuniting a Pup with Her Mother

La Perouse Pinnacle: Rich Coral Systems

Raita Bank: Open Sea Deep Dive

Maro Reef: Dangerous and Little-Studied

Part II

Laysan Island: Vulnerable Ecosystem

Pearl and Hermes Atoll: Strong Currents

Testing Underwater Communications

Midway Island: Refueling for Man and Bird

Form and Qualities of Voice

Nichols classifies documentaries into six forms or modes that represent facts in different ways—poetic, expository, observational, participatory, reflexive, and performative. *Voyage to Kure* exhibits elements of both expository and participatory documentary filmmaking.

- Expository documentaries offer an authoritative commentary, generally speaking directly to the viewer. Voiceovers—often using rich sonorous voices—are used rhetorically to persuade. Sometimes the filmmaker employs omniscient ‘voice of god’ commentary; quotes from a prominent figure and facts or statistics may appear as words onscreen, intended to help the viewer remember seminal points. Pierce Brosnan of James Bond fame narrates *Voyage to Kure*. The late French explorer, filmmaker and marine conservationist Jacques Cousteau’s hopes for Earth’s oceans are invoked several times.
- Participatory documentaries adopt an anthropological approach—participant observation. The viewer sees that the filmmaker is part of the film and understands that situations in the film are affected by that presence. According to Nichols, “The filmmaker steps out from behind the cloak of voice-over commentary, steps away from poetic meditation, steps down from a fly-on-the-wall perch, and becomes a social actor (almost) like any other. (Almost like any other because the filmmaker retains the camera, and with it, a certain degree of potential power and control over events.)” Jean-Michel Cousteau (Jacques Cousteau’s son) appears often in the film, as diver, interviewer of

scientists, and environmental crusader. Punctuated, poignant, poetic statements speak directly to the viewer.

Prior to leaving port, Jean-Michel Cousteau gives an emotional speech, invoking the spirit of his ancestor much as the Polynesians respect their heritage, telling the audience that his father would have been proud of “each and every one of them.” He continues, “We are doing justice to the oceans...Perhaps with this expedition we can highlight to the world the fact that it’s not too late, the fact that it’s time to recognize that our life support system has problems and thus so do we.”

Voyage to Kure fulfills its documentary role by bringing an otherwise inaccessible place to the public’s eye. The film’s plot takes the viewer on a geographical journey from southeast to northwest along the 1200-mile chain of 10 islands or coral atolls, beginning with Mokumanamana and ending at Kure Atoll. Along the way, the name of each island is linked to its geology, resident wildlife, past indigenous uses, man-made threats, and contemporary environmental stewards.

‘Voice’ in a documentary is the specific way that an argument or perspective is expressed, by any and all means in the film. That sense of perspective or point of view distinguishes documentaries somewhat from still photographs and ‘natural’ video or audio footage that are comparatively value-free. Much of the appeal and power of a documentary rests on its ability to couple evidence and emotion thereby establishing a distinct voice. Nichols (2001) discusses six ‘qualities of voice’ that can be used to interpret *Voyage to Kure*—informed logic, arrangement, invention, style, memory, and delivery:

‘*Informed logic*’ conveyed by a distinct voice organizes a documentary much as a compelling storyline organizes a work of fiction (Nichols 2001).

Science constitutes the informed logic in this documentary. Scientific information is ever-present, but it is not particularly technical or overtly emphasized. Government scientists though are ubiquitous in the film, as expedition members and refuge researchers, and managers. Their presence provides implicit credibility. For example:

- One introductory scene features the accompanying NOAA research catamaran and dive platform, *Manacat*. NOAA and National Marine Sanctuary Program signage on the vessel is clearly visible.
- Cousteau’s video ‘humanizes’ science and scientists. Jim Maragos, a prominent coral reef biologist is shown playing a guitar and singing sea shanties near the forecastle of the vessel *Searcher* against a setting sun—science delivered in a deliberately accessible style.

‘*Arrangement*’ refers to the usual order of parts in rhetoric or, in this case, film. A classic arrangement includes the following parts in order:

1. catchy opening
2. clarification (of what is already agreed upon as factual)
3. direct argument

4. refutation
5. summation (that stirs and predisposes the audience to a particular action)

The film's 'catchy opening' strives to link Cousteau's modern voyage in the modern vessel *Searcher* to those of Polynesians in double-hulled sailing canoes. Opening scenes reveal critical and frenetic preparations that also include a traditional Hawaiian send-off, complete with colorful leis.

A team dive in much-degraded reefs off Waikiki with a representative of the NWHI Coral Reef Ecosystem Reserve sets up a comparison between near-pristine NWHI reefs to those off the main Hawaiian Islands. The scene clarifies what is known—that human occupation and activity near coral reefs results in their ecological destruction.

The direct argument in *Voyage to Kure* is overwhelmingly geographic. Cousteau, his team and the audience explore the NWHI together and arrive at conclusions together. Observations of nearly-pristine habitats seemingly occur in real time; evidence of man-made threats to the islands—in the form of marine debris and pollution—is found all along the way.

A refutation of sorts (against despair) occurs in the film's footage of Midway Island. Lead-poisoned, 'droop-winged' albatross fledglings and desiccated carcasses are apparent, but atonement and stewardship are the overarching themes in the segment. Tan and earnest U.S. Fish and Wildlife Service biologists are featured alongside twenty-something volunteers—laboriously identifying, cutting and hauling abandoned fishing gear off fragile reefs. On

Midway, the audience finds a younger generation willing to take on Cousteau's ocean stewardship vision.

Arrangement also involves alternating appeals—to evidence and then audience, factual, then emotional (Nichols 2001). In the film's last moments, on-screen images of expedition divers, reefs, sea life, tons of discarded nets and so on serve as an evidentiary appeal. A final voice-over by Cousteau delivers the film's emotional summation and plea for protection:

“By journey's end, we had completed nearly 300 dives across 1200 miles of islands and reefs. What we found in one of the most remote island chains on the planet is a rare example of the sea's richness and beauty when undisturbed by human intrusions—a place where the ancient ocean lives on, where great hunters still roam wild reefs, where great ocean travelers settle to raise their young. We must restore much of Earth from our impact, but these far-away jewels of the sea still thrive with life. We need only protect them from human harm and let them be.”

'*Invention*' refers to the discovery of evidence or 'proofs' that support the film's perspective. Aristotle identified three types of artistic proofs in *Rhetoric*—ethical, emotional, and demonstrative. Ethical arguments generate an impression of good moral character; an emotional argument puts the audience in a sympathetic frame of mind; and a demonstrative proof uses reasoning or a demonstration to 'prove' the case.

Converging ocean currents conspire to concentrate small plastic debris in the middle of the Pacific. Seabirds, such as the Laysan albatross and blue-footed booby, that travel long distances

and are accustomed to eating squid frequent these ocean gyres. Floating in the water, the small plastic items resemble squid, and when ingested choke and kill turtles and seabirds, including small fledging chicks.

- As ‘demonstrative proof,’ one member of Cousteau’s team picks up a bird carcass for inspection, dramatically dumping a large handful of plastic from its desiccated stomach onto the sand. Another particularly effective scene shows a near still-life shot of a monk seal basking on the beach, juxtaposed against a debris field in the foreground and a current-driven athletic shoe.

Documentary filmmakers apply Aristotle’s rhetorical engagement in the form of the ‘three C’s,’ aiming to be *credible, convincing, and compelling*. In *Voyage to Kure*:

- A plethora of scientists and technicians lend *credibility* to the film’s argument that NWHI reefs are both rare and threatened by man.
- Evidence of marine debris, trash, persistent pollutants, and dead birds on so many islands is *convincing*. Otherwise pristine beaches are littered with discarded cigarette lighters, small plastic toys, bottle caps, and even plastic tampon applicators.
- Cousteau’s speeches and the words of the ocean stewards met on the islands make *compelling emotional arguments*—that something can and should be done to protect such a special place. An appealing, somewhat eccentric biologist on Kure Atoll speaks

eloquently about prospects for monk seal populations and tears up as she sends an injured bird to the MHI with the departing *Searcher*.

Documentary ‘*style*’ concerns choices that select and arrange images and sounds to help embody the filmmaker’s voice or perspective for the audience. Stylistic choices might include:

- Mix of spoken and written words. Explicit “see it this way” commentary or implicit “see for yourself” images.
- Camera and lighting choices. How to compose or frame a shot. (close-up or long shot, artificial or natural lighting, pan or zoom, low or high angle and so on.)
- When and how often to cut and edit.
- Recording synchronous sound at the time of shooting or adding additional sounds, such as voice-over commentary or translation, music, and sound effects later.
- Using only those images shot by the filmmaker on location or incorporating archival photographs and footage?

According to Marshall (2010), *Voyage to Kure* is exceptionally verbal. Brosnan’s commentary is nearly constant, providing continuity between islands and dives. Cousteau’s commentary is

that of authoritative opinion—his credibility in part a legacy from his father—an unabashed call for ocean stewardship.

Viewers are permitted to ‘see’ on their own without commentary only rarely, and those moments tell much about the director’s vision. Commentary is often absent during dive scenes. Shots of divers swimming in natural rhythm with currents, schools of fish, or dolphins offer a peaceful interlude from the film’s more serious themes and perhaps a subtle representation of the filmmaker’s vision for harmony and interdependence between man and nature.

Voyage to Kure is shot in ‘montage’ sequence—as a series of brief episodes, mostly chronological and highly edited with unimportant details and character ‘dead-time’ excised. This montage style compresses time while also conveying a sense of fragmented human intrusion in the continuity of Nature (Marshall 2010). Cousteau makes several references to time (“time to act;” “time is running out”) and the disjointed montage style adds to this sense of urgency. Emphasis is on the present exploration of the islands; archival footage is rare, limited to World War II footage of Midway and still photographs of past resource exploitation by guano miners and plume hunters and military occupation.

Music includes Polynesian flutes, drumbeats, chanting, and environmental sounds (surf, wind, birds, and boat engines). Identifiable scores distinguish movement from island to island, soft, peaceful music accompanies daytime dives, while slightly more sinister tempos and tones accompany night dives among moray eels and white-tipped reef sharks.

Cinema narratives ease the burden required to commit details and sequences of events to ‘memory’ (Nichols 2001). As a consequence, films become a source of popular memory and culture (Godfrey 1993), albeit one that reflects the values held by the film director and sponsoring organization, in this case Cousteau’s Ocean Futures Society.

Retrospection in *Voyage to Kure* serves as additional evidence that without protection, the NWHI inevitably will be exploited and ecologically compromised. The film recounts President Theodore Roosevelt’s 1909 executive order necessary to protect some of the Northwestern Hawaiian Islands from Japanese plume hunters, ongoing contamination of Midway Island from the use of lead paint in the 1940s, and monk seal mothers and pups displaced inadvertently by contemporary researchers on Kure Atoll.

Unlike many nature documentaries, *Voyage to Kure* is more about defining the place than describing the plants and animals within it. Maps and charts displayed on marine navigation electronics are employed early and often in the film as mnemonic devices. Animations that plot the expedition’s route give structure to the progression from island to island and fly-over’s add to the perception that the area and ecosystems are isolated and relatively unknown. Boundaries around the Hawaiian Islands Wildlife Refuge are highlighted, defining current geographic space and imagining hoped-for sanctuary and ultimately Monument boundaries.

Repetition and narrative also enhance memory. The values promoted repeatedly in *Voyage to Kure* are ecological stewardship and wilderness protection. Minimizing human disturbance is a recurring theme supporting the larger stewardship message:

- Much is made about changing clothes and shoes before stepping on each island to avoid spreading seeds or spores of invasive plant species. Cousteau and U.S. Fish and Wildlife Service biologists discuss the floating booms that surround *The Searcher* while refueling, as a precaution against oil spills.
- Narratives-within-the-narrative abound. Most concern past human impacts on the islands or modern day efforts to protect them. Cousteau's team, for example, tests a new breathing apparatus, designed to minimize bubbles that frighten sea life. Many short stories are told about individual animals threatened by human activity.

Marshall (2010) assigns opposing frameworks to the film's mnemonic themes – pristine nature versus despoiled nature or natural rhythms versus truncated human intrusions. In the film, nature is portrayed in calm, measured, cyclical patterns—dawn and dusk shots, movement of animals according to tides and seasons. In contrast, the journey of the humans is fragmented into short island stops and sporadic dives.

Stylistically, human presence and impacts are pervasive. Team members, researchers, or divers appear in nearly every shot. Nature's fate is inescapably tied to human intent and agency—historically through Polynesian exploration and worship and in modern times through poaching, destructive fishing practices, inadvertent human contamination and even impacts resulting from scientific exploration and research.

In documentary film, ‘*delivery*’ is the clarity of the argument, potency of the emotional appeal and their combined effectiveness on a specific audience. Documentary films engage with the social order and historical world, expressing values and beliefs more explicitly than other genres through their delivery.

Clarity of argument is achieved through the expedition itself, filmed as though the audience is along for the ride. ‘See for yourself’ images of anthropogenic damage to marine environments are inescapable, apparent on every island visited. On Mokumanamana—the first island visited—we find 33 sacred religious sites even as Cousteau fills a see-through plastic bag with plastic debris.

As to potency of emotional appeal...*Voyage to Kure* does not aim for subtlety in expressing its ecological perspective. The narration allows little room for doubt in the audience’s imagination. Brosnan’s and Cousteau’s diegetic voiceovers carry the main story and are explicit calls for action. Cousteau rejects the Biblical paradigm of man’s dominion over Nature in favor of Lovelock’s Gaia concept of Earth as an organism. The voiceover describes a school of small fish that “moves as a single organism” (Marshall 2010).

- Cousteau’s role in the film contrasts with nearly all the other human characters. He is not limited to the perspective of the scientific mind, but further poses the film’s more philosophical questions, intellectualizing in the tradition of French rationalism (Marshall 2010).

Surprisingly, the wildlife footage, although beautiful, is not the film's strongest persuasive component; instead fear—a perennially effective communication technique—is employed. Threats—natural and manmade—exist all along the journey in the form of dangerous reefs and currents, unpredictable apex predators, even an encounter with another vessel illegally fishing in the wildlife refuge. Ecosystem *threats are identified, and then combatted* by isolated island stewards whose affinity for the place and its creatures is nearly palpable. Scenes that juxtapose a single researcher or young volunteer in front of imposing piles of marine debris manipulated by vessel cranes make a rare subtle argument for additional resources and manpower.

Political Impact

Voyage to Kure and the Papahānaumokuākea Marine National Monument exemplify the potential for political impact that is part of the history of documentary filmmaking in the United States (Whiteman 2004). Whiteman lists a number of social-issue documentaries used intentionally to intervene in the political process, including *The Plow that Broke the Plains* (socio-economic effects of the Dust Bowl), *Not in Our Town* (racism), *Panama Deception* (1989 U.S. Invasion of Panama), and *From the Ground Up* (mining impacts). More recent examples of political documentaries include Eugene Jarecki's *Why We Fight*, Robert Kenner's *Food, Inc.*, and Michael Moore's *Sicko*.

Whiteman suggests a “coalition model” of filmmaking that involves nonprofit groups from the beginning of the production process to the end. Nonprofit groups then put documentaries “to work” by (1) sponsoring local screenings that educate the public and mobilize members; (2)

becoming involved in the production and distribution processes; and (3) showing the film to targeted activist groups and key decision makers—experts in executive agencies at all levels of government, members of legislative bodies, and other interest groups. All these activities attract further attention from local, national, Internet and international media outlets.

Whiteman argues that wise nonprofit groups can and should reach out to production companies that distribute documentaries related to their interests. Film production companies then benefit from the nonprofit's more sophisticated understanding of relevant policy actors and their means of influence.

Chapter 8: Conclusions

The rise of the Northwestern Hawaiian Islands to the top of a full 2006 political agenda resulted from a combination of factors and complicated interactions—all achieved through considered language. Charismatic, evocative media appears to be playing an ever greater role in constructing scientific knowledge and influencing the policymaking process. Screenings of the PBS documentary *Voyage to Kure* may have put protection efforts for the Northwestern Hawaiian Islands over the top, but media made possible only the final act in this government drama.

Creation of the Papahānaumokuākea Marine National Monument in 2006 is a story of effective government that can be explained as a thoughtfully conceived and serendipitous, communication-driven confluence of Kingdon's (2003) problem, policy, and political streams. Filtering the data using Discourse Analysis (DA) techniques uncovered communication techniques instrumental in the Monument designation process, validating this qualitative research and analytical approach.

Reflecting on the Method

Visualizing geographic space is a communicative process. A creator (or creators) through discourse constructs a representation that is read, seen, or experienced in some way by a viewer. Discourse analysis allows us to deconstruct that representation of place. Poststructuralist theories, especially those of Foucault and Derrida (genealogy and deconstruction) are put into practice by discourse analysis models (Mills 2004). Fairclough argues that two main insights of Foucault's work are useful in DA: 1) the constitutive nature of discourse in social and political relations; and 2) intertextuality, meaning that discursive practices mingle and draw upon one another in complicated ways (Mills 2004).

Revisit the DA considerations listed at the end of Chapter 4: Methods. Together they help describe the Monument designation process, interpret interactions, and explain the outcome:

The role of language in creating the Monument cannot be overstated. Scientific texts engaged policymaker's rational capacity; photographs and video further engaged their brain's limbic, emotional system. All involved *represented* the Northwestern Hawaiian Islands as 'untouched' or 'pristine.' Preserving remote, embattled 'wilderness' proved the *dominant discourse*.

The media timeline demonstrated how the *discursive structures* or *institutional constraints* of print journalism created a *genealogy* of Monument designation. The communication practices of writers and newspapers favors the more dramatic, quickly-told side of the story; facts and meanings are chosen that *frame* a particular subjectivity.

A relatively small, elite *network* of like-minded coastal and ocean advocates within and outside of government shared a *paradigm*. Scientists, the National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service staff, and Cousteau's Ocean Futures Society all implicitly agreed on *what should count as knowledge*. In this case, all three groups visualized the world and assigned institutional priorities from a *scientific-ecological perspective*. All three groups assumed that peer-reviewed science should take precedence in evaluating policy alternatives. That shared worldview greatly facilitated the process, but is not a given in future coastal and ocean conservation efforts.

Discourse analysis of media texts and policymaker surveys suggest diffuse *power relationships* between state and federal governments and interested groups inside and outside of government. NOAA's Office of National Marine Sanctuaries perhaps exercised the most control because its director understood the power of persuasive media and managed communication between interested parties.

The surrounding *social context* proved favorable as well. Monument designation did not economically harm an important constituency. The Bush Administration desired a *policy outcome* that would be considered an environmental achievement ahead of midterm Congressional elections with minimal risk of *unintended consequences*.

Ocean Conservation Success

Within less than a decade, the Northwestern Hawaiian Islands went from unknown, remote, low-lying atolls and guano-splattered basalt rocks to distinct, if fragile, geographic space inscribed with particular characteristics and meanings worthy of territorial boundaries, policy protections, and national monument status. Public policy materializes out of discourse, a way of seeing and talking about a place that transforms imagined, symbolic geography into concrete form.

First, scientists began researching and outlining ecosystem interactions and the scale of man-made threats, moving information about the fragile flora and fauna of the remote archipelago into the *problem stream* beginning in the late 1970s.

Second, proactive federal officials working in the *policy stream* (most from NOAA and the USFWS) drafted solutions and regulations that fit within institutional interests and jurisdictions and not without some bureaucratic infighting—between the fisheries and marine sanctuary officials in NOAA and between federal agencies. Established regulatory public comment processes began and no initiative proceeded without buy-in from Hawaii’s state government and most of its Congressional delegation.

Third, within the *political stream*, savvy policy entrepreneurs at NOAA’s upper-management levels with help from similar individuals in two White Houses (Clinton (1993 -2001) and George W. Bush (2001 – 2009) administrations) organized a sophisticated multi-year educational campaign. NOAA staffers found partners to do what they could not, using funding resources from The National Marine Sanctuary Foundation and a readily-available, private-sector National

Geographic publication and on-going exhibition around the photographs in the book *Archipelago: Portraits of Life in the World's Most Remote Island Sanctuary* (2005).

Finally, once media in the form of filmmakers and photographers grasped this fragile and threatened ecosystem vision of place, artistic aesthetics—narrative, meaning, and emotion—enhanced scientific evidence—creating a more pleasing and compelling concoction familiar to most when employed in product marketing.

All involved demonstrated a willingness to work outside of their comfort zones—scientists willing to become involved in ‘artistic’ endeavors, including filmmaking and writing for gray literature. Artists worked toward imperfect policy solutions with presidential administrations outside their usual predilections. Cousteau, Liittschwager, and Middleton pushed scientific information out of Kingdon’s problem stream and into the *mainstream*.

The convoluted communication challenges and compromises faced by NOAA marine sanctuary staff are common among coastal and ocean advocates because Congress and the President have not created one, authoritative ocean agency. U.S. ocean interests and management are negotiated by some 11 agencies and several offices within the executive branch. Political scientists refer to this as stovepipe management. To accomplish any initiative, NOAA managers, policy advisors and public relations representatives must draft in advance executive orders and regulations that they continually revise while waiting for a policy window of opportunity to open. They repackage unresolved objectives, so that they resemble the priorities of each new incoming administration. In the meantime, policy entrepreneurs maintain ‘issue networks’ with the many

ocean-related committees and subcommittees in Congress and get to know executive branch staffers, Administration political appointees, and interest groups.

Comparing Stories

Comparing the media and policy entrepreneur narratives of the Monument's creation answers questions about how well academic and public understandings are served by the media and justifies mixed-method research. Neither the media nor policy entrepreneur narratives render a complete picture of the processes behind the Monument's creation on its own.

Media tell a more thorough and nuanced story of the Monument's creation than expected considering the production constraints identified by Bell in 1991—deadlines combined with audience and space limitations—but again only when assembled and considered as a group. A thoughtful reader would be left wanting thorough explanations if limited to reading any single article. Colin Woodard's Fall 2006 *Pew Trust Magazine* article "Faraway, Natural and Beautiful—And It will Stay That Way" or Christopher Pala's half page article titled "A long struggle to preserve a Hawaiian archipelago and its wildlife" in the *Herald-Tribune* were the most comprehensive articles within the database. Even then, the importance of President Bush's landmark decision is diminished by timing; Pala's article received a full half-page, but in Section F (Environment) of the Christmas Eve 2006 edition—not in print until more than six months after Monument designation. Woodard's audience is limited to *Pew Trust Magazine* and associated Web site readers.

The treatments cited above still leave out crucial components in the Monument's creation. Government communicators at all levels understand that newspapers and magazines are ill-suited institutionally to cover stories about effective government (Branston and Stafford, 2003; Bell 1991; Carvalho 2005; Carvalho 2007; Corbett 2006. Corbett and Durfee 2004). Because of knowledge, print space or time limitations, most journalists prefer to write a story from one particular 'angle.' Columnists represent an editorial 'line' not overtly apparent to all readers. These institutional constraints are accentuated when the story is overtly political, bureaucratically-involved, or technical. Most importantly, journalists and editors research and print stories only during periods of frenzied activity, during the final stages of a bill's passage for example. This minimizes by default years of prior planning and incremental work by line officers in federal and state agencies.

- The carefully-cultivated personal relationships between NOAA's National Marine Sanctuaries director and staff with policymakers, including Jim Connaughton at the White House Council on Environmental Quality, are not highlighted.
- NOAA's orchestrated communicative efforts through the National Marine Sanctuary Foundation and purposeful receptions around the *Archipelago* photography exhibitions are largely absent from media narratives. Like the *Voyage to Kure* screenings, these receptions provided opportunities to gather and educate policymakers about the NWHI and consider protection alternatives.

- Missing from all save one of the reports—specific justifications for employing the 1906 Antiquities Act rather than the National Marine Sanctuary process. Only one article considers political fallout, in this case the political fortunes (or not) of Representative Ed Case (D, HI) resulting from his 2005 bill calling for full protection of the NWHI.

If the media story is institutionally limited, the policy entrepreneur narrative suffers from provincial, stovepipe perceptions. Explanations and meanings behind the Monument's creation are colored by the partisan interests of the respondent's employer or professional affiliation. U.S. Fish and Wildlife Service respondents were more likely to blame NOAA infighting over commercial fishing access as an impediment to protection, while NOAA personnel tended to credit their agency's marine sanctuary efforts for Monument creation. Respondents from the artistic community attributed Monument designation just a bit more enthusiastically to fate and good luck.

Geography and Communication

Place is arguably the richest and most powerful concept within the discipline of geography. Place—shaped by verbal, written and visual languages—is bound by, and in the case of the Northwestern Hawaiian Islands, enhanced and preserved through representation, first in scientific discourse and then through photographs and film. Creation of the Papahānaumokuākea Marine National Monument probably would not have occurred in the absence of the socially-constructed, mediated experiences offered by *Voyage to Kure* and *Archipelago*. The location

was simply too isolated and remote for most to visit and form intimate ‘experiential’ attachments. The documentary and photographic images are reminiscent of NASA’s ‘One-world’ and ‘Whole-earth’ images, recognized and interpreted by geographer Denis Cosgrove in the 1990s.

Research building on this dissertation will delve more deeply into the effectiveness of *Archipelago*’s portraits of the plants and animals in the NWHI and the subsequent invited-guests-only and public displays. Images, be they landscape paintings, modern photographs, or videos, are not disinterested; they possess agency and geographers need to interpret them more often because they constitute place and are an important part of social practices (Rose 2001). Haraway (1991) and Stafford (1991) noted the increasingly widespread use of visualizing technologies to convey scientific information and construct scientific knowledge about the world.

Much like the Apollo 17 pictures, Cousteau, Liitschwager and Middleton’s images created a sense of place greater than the sum of its parts (environment, inhabitants, relationships and identities). They are simply carrying on an artistic advocacy tradition begun with William Henry Jackson, Thomas Moran and others in the 19th century. Rose (2001) and Whiteman (2003) ask important questions in a media-saturated society: How is information encoded for presentation? How does the way an image is circulated and displayed alter its effects? How is the audience interpreting images at particular times and places?

All of the above furthers Hay and Israel's (2001) call for 'newsmaking geography.' Geography is an integrating science, capable of fully articulating the significance of places and environmental representation. Geographers need to understand media institutions and processes, position themselves as authorized knowers or claimsmakers and develop effective strategies for delivering geographic information to the public. Hay and Israel believe that connecting people more knowledgeably and spiritually with their places will inspire a great deal of environmental conservation as well as interest in and respect for a field now absent from most secondary schools and many college campuses.

Research building on this dissertation also will examine the role of science in the policymaking process more deeply. What scientific studies, if any, proved influential as the monument designation process progressed? How did findings from biological and geological surveys of the Northwestern Hawaiian Islands make their way (or not) into gray literature, policy documents, and the popular press?

Expanding the media database and conducting more policy entrepreneur surveys or in-depth interviews will help trace scientific communication from initial journal articles describing vulnerable coral reefs and island ecosystems into secondary and tertiary sources—the policy papers, films, or talking points of resource managers, advocacy groups and the popular press—interpretations of science that occur before the information reaches the hands of policymakers, here all the way to the President of the United States. Some journals, notably *Science Communication* and the *Public Understanding of Science*, explore public and policy perceptions of science. However, articles offering specific, real-world techniques for communicating

scientific information to policymakers or the public proved few and far between, especially in academic journals with other foci such as *BioScience*, *Journal of Substance Abuse Treatment*, *Journal of Communication*, *Media, Culture and Society*, *Ocean and Coastal Management*, *Political Communication*, *Public Opinion Quarterly*, *Stanford Social Innovation Review*. None of the journals devoted much space to the topic, so this is a research area with great potential.

Wielding Language as a Coastal Management Tool

Communication is a form of action, and interest groups at all levels seek to establish a version of events that will support their political objectives. Coastal and ocean scientists must recognize that the language from their peer-reviewed reports will change as their information moves into and through the policymaking process. Science creates a credible foundation, but packaging matters. Science inevitably becomes part of persuasive discourses. Researchers should become good writers or collaborate with science writers, engaging with the narrative and different vocabulary in gray literature to retain the integrity of their findings. Scientific knowledge informs gray literature. Ideas and phrases from gray literature are lifted and incorporated into the public relations pages of government agency Web sites...softly-packaged and oft-repeated until quietly accepted as common knowledge.

This case study bears out Whiteman's (2003) coalition model for activist documentary. The involvement of scientists in the production process of *Voyage to Kure* proved effective, as did NOAA's well-timed and targeted screenings to policymakers. Much like Martin Luther King's *I have a dream* speech, influence extended well beyond content and creation. Martin Luther

King's vision need not improve with time, but the effect of King's speech—barely audible at the time it was given—improved in effectiveness and influence because of improvements in technology and wider distribution. Peer-reviewed scientific articles may find it difficult to 'go viral,' but YouTube videos of ongoing research enhanced with some artistry can. YouTube and Wikipedia are not rigorous to say the least, but they occasionally lead viewers to more credible analyses.

What is certain—the influence of charismatic media continues to grow. One final example: A *New York Times* article from January 13th, 2009, reported that the National Geographic book *Ocean: An Illustrated Atlas* by Sylvia Earle and Linda Glover “had a hand in President Bush's designation of vast parts of the American-controlled Pacific Ocean as marine monuments. The new protected areas—including the ocean's deepest spot, down nearly seven miles—are bigger than California.”

Coastal and ocean scientists, managers and conservation advocates need training in communications and public relations to deftly insert more scientific information into public policy decision processes. Coastal and ocean stewardship success stories should be studied extensively, so that researchers can outline formulas for continued progress. Public policy models, including Kingdon's (2003) policy window concept, must consider how best to capture communication and media influences in their research models. Scholars underestimate the incursion of media and the importance of communicating effectively, if this case study is any guide.

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Appendix A: Glossary

Communication: the dynamic exchanges between sender(s) and receiver(s) of thoughts, feelings, or information through speech, gestures, behavior and writing.

Critical Discourse Analysis (CDA): a type of social discourse analysis that views language as a form of social practice and focuses on the ways social and political relationships are reproduced by text and talk. CDA practitioners share an assumption that language and power are inextricably linked. *Critical* refers to the aim of revealing less obvious, hidden connections.

Discourse: a group of statements or writing enacted within a social context, in part determined by that social context and that contribute to the way that social context continues in its existence; frameworks for understanding and communication.

Discursive Practices: the ways meanings are connected through representations, texts, and behaviors.

Episteme: a group of discourses that serve as the ground of thought at a particular time in history, defining which statements—and not others—count as knowledge.

Grounded Theory: research methods that develop theory from data, rather than the other way around. Grounded theory is an inductive approach, moving from specific observations to general conclusions.

Language: Communication of thoughts and feelings through a system of arbitrary signals, such as voice sounds, gestures, or written symbols. Scientific, professional or other groups may adopt special vocabulary and usage. The term ‘language’ in this dissertation also is used in the broadest sense, encompassing the language of one speaker, communication between senders and receivers, orchestrated discourses and communication via any media.

Landscape: A polysemic term referring to the appearance of an area, the assemblage of objects used to produce that appearance, and the area itself. Carl Sauer first used the term in geography in 1925, stressing the concept of the landscape as the expression of interaction between humans and their environment. (polysemic = multiple meanings, signs, or interpretations)

Media: communication means and devices, such as radio, television, and film or newspapers and magazines, which reach or influence people widely.

Media Discourse: communication designed for mass audiences that address not an individual viewer, but an ideal subject. Actual viewers, listeners, or readers must negotiate a relationship with the ideal subject.

Mediated Discourse Analysis (MDA): a theoretical position within critical discourse analysis grounded in the analysis of actions taken by specific social actors.

Place: Places are bounded settings in which social relations and identity are constituted.

Poststructuralism: a subset of postmodern thinking that views truth as subjective, knowledge situated and constituted by culture, and language as a valid means of understanding individual experiences and social relations.

Social Discourse Analysis: analyses that consider the interconnections between discourse, knowledge production, ideology, and power; the process of reading and interpreting texts that unpacks in detail the cultural context in which they are embedded, noting in particular those voices and views that are excluded. Fairclough (2001) refers to this as *critical language study* (CLS).

Text: refers to the outward manifestation of a communicative event and includes anything collected in the research process that can be 'read' or interpreted, including participant observation notes, interview and survey responses, photographs, brochures, film, media reporting and so on.

Appendix B: Email Solicitation and Survey Questions

(IRB approval obtained in October 2007; Supervising Faculty: Dr. Lauriston King.)

Researchers from the Coastal Resources Management Department at East Carolina University are conducting a policy study and want to ask you four questions about your role in creating the Papahānaumokuākea Marine National Monument. Our goal is to understand the relative importance of the media, executive orders, and efforts by government officials in the policymaking process. Simply reply to this email (include the message) and type your answers under or next to the question. Please don't hesitate to forward this email to anyone who played a role in the Monument's creation.

All your answers will remain confidential. Please skip any question that makes you uncomfortable. If you have any concerns about this research or questionnaire, you may contact the principal investigator Heather Ward, at 252 904-1641 or East Carolina's University and Medical Center Institutional Review Board at 252 744-2914. Thank you for searching your memory and sharing your experiences.

1. Is there a particular event or set of circumstances that you feel facilitated the creation of the monument in early 2006? (Why now? President Theodore Roosevelt first named the islands a wildlife refuge nearly 100 years ago.)

2. How important was each of the following factors in creating the Monument? Use a scale from 1 to 10.

(1 = not important and 10 = extremely important in the policymaking process.)

- a. Repeated collapses and closure of the spiny lobster fishery in the 1980s and 1990s and threats to monk seal, turtles and seabirds. _____*
- b. President Clinton's 1998 Executive Order #13089 on Coral Reef Protection. _____*
- c. Creation of the Northwestern Hawaiian Islands Ecosystem Reserve by the Clinton Administration in 2001. _____*
- d. Legislation introduced in the 109th Congress to create a national marine sanctuary by U.S. Representative Ed Case (D, HI). _____*
- e. Creation of the Northwestern Hawaiian Islands State Marine Reserve in Sept. 2005. _____*

- f. *A 2005 study citing commercial fishing threats to red snapper, opakapaka, and bottom fish by the Ocean Conservancy and Marine Conservation Biology Institute.* _____
- g. *Publicity surrounding a December 2005 visit by HI Governor Lingle and 13 state and federal officials to Midway Atoll.* _____
- h. *Hawaii screening of Jean-Michel Cousteau's documentary film, Voyage to Kure in March 2006.* _____
- i. *White House screening of Voyage to Kure on April 5, 2006.* _____
- j. *May 2006 American Fisheries and Marine Enhancement Act (H.R. 5018) exempting HI reserves and all national marine sanctuaries from the authority of regional fishing councils.* _____
- k. *National Oceanic and Atmospheric Administration (NOAA) efforts to declare the region a national marine sanctuary, including public hearings and proposed regulations.*

- l. *Other?* _____

3. *What role did you play in the creation of the Northwestern Hawaiian Islands Marine National Monument?*

4. *Describe your professional duties. (Your answers will remain confidential, but skip this question if you feel uncomfortable.)*

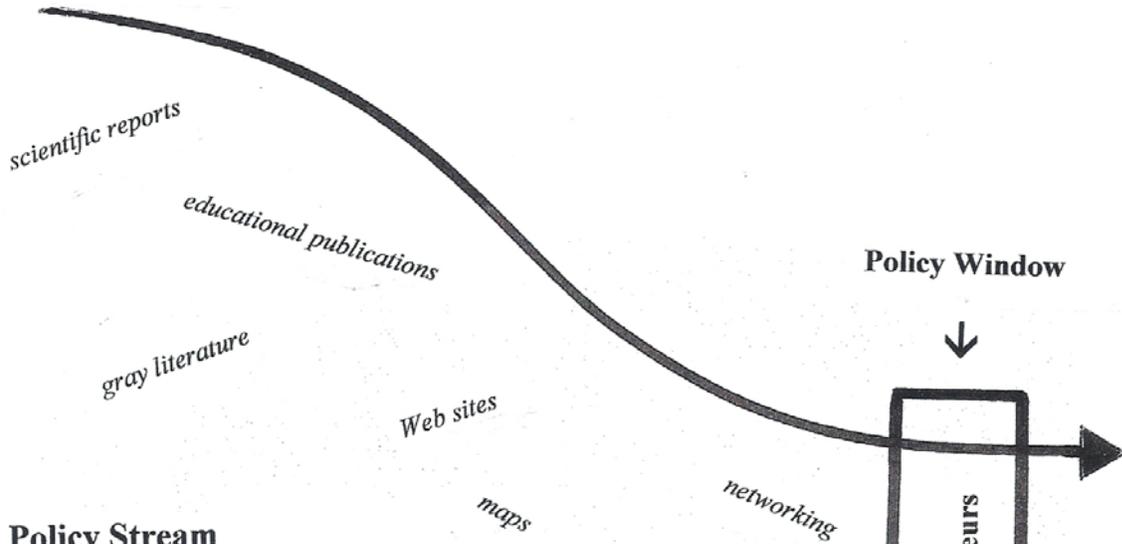
Appendix C: Adding Communication to Kingdon's Policy Window Model

Policy Window Concept and Monument Communication

(Ward, after Kingdon, J. 2003. *Agendas, Alternatives, and Public Policies*)

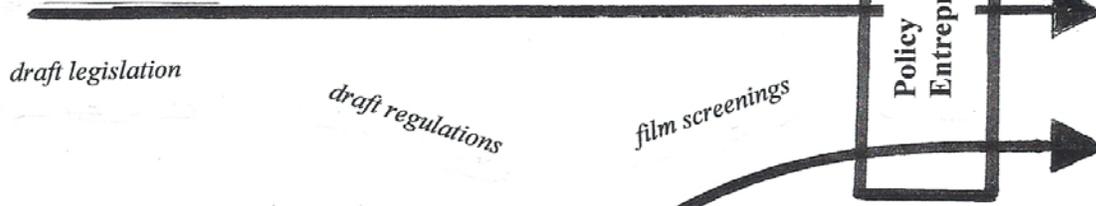
Problem Stream

(Scientists)



Policy Stream

(Civil Servants)



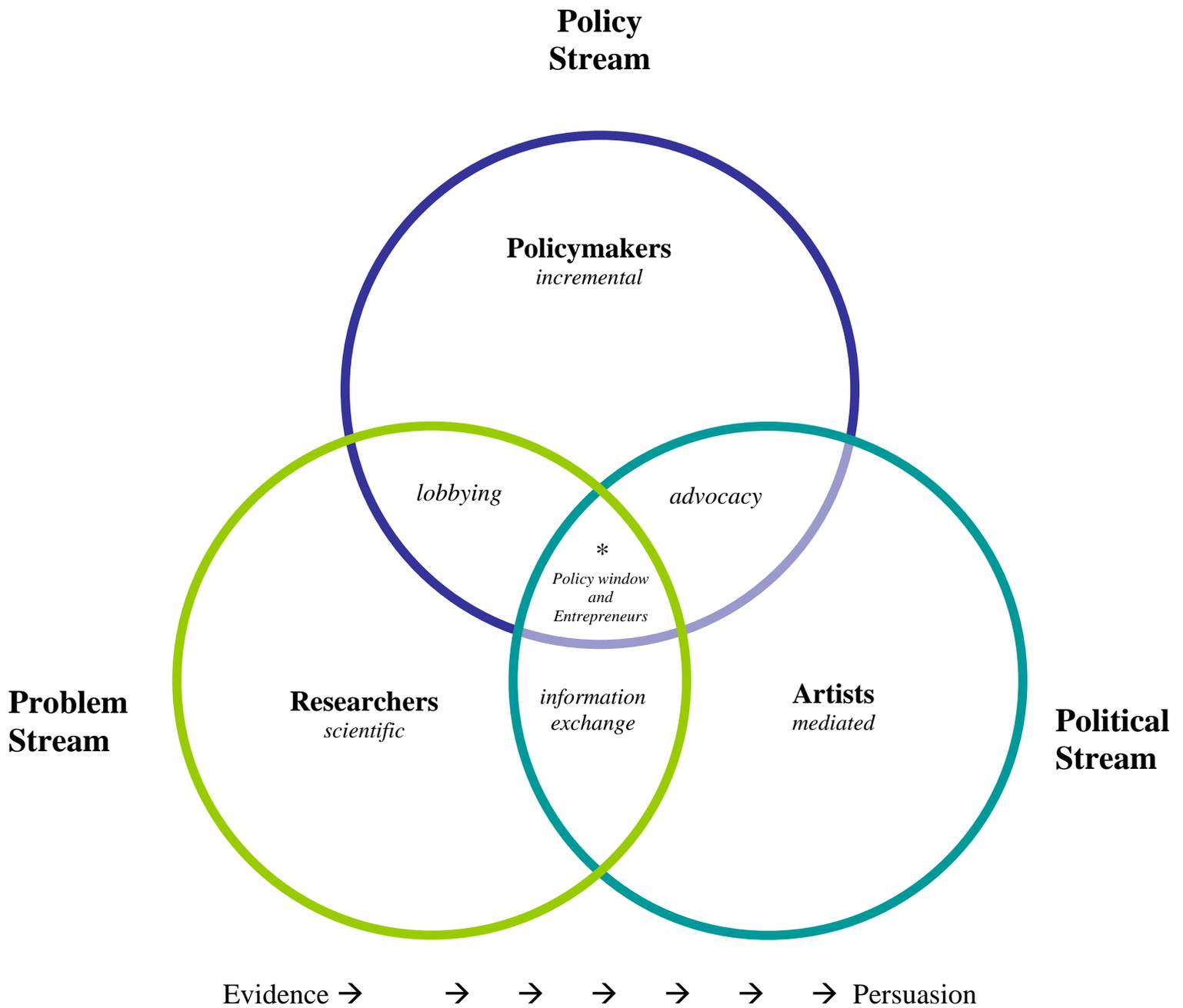
Political Stream

(Elected Officials and Political Appointees)

Note: Communication techniques and products are italicized.

Merging the Three Streams

(Ward, after Kingdon, J. 2003. *Agendas, Alternatives, and Public Policy*)



* Policy entrepreneurs operate in and between all three streams, comfortable using many communication techniques and working in the 'gray areas' between evidence, persuasion, advocacy and lobbying.

Note: Communication types are italicized



Appendix D: Institutional Review Board Approval Letter

University and Medical Center Institutional Review Board

East Carolina University

Ed Warren Life Sciences Building • 600 Moye Boulevard • LSB 104 • Greenville, NC 27834

Office 252-744-2914 • Fax 252-744-2284 • www.ecu.edu/irb

Chair and Director of Biomedical IRB: Charles W. Daeschner, III, MD

Chair and Director of Behavioral and Social Science IRB: Susan L. McCammon, PhD

TO: Heather Ward, PhD Candidate, Coastal Resource Management, 379 Flanagan Building, ECU

FROM: UMCIRB

DATE: November 2, 2007

RE: Exempt Category Research Study

TITLE: "Northwestern Hawaiian Island Marine National Monument: An Ocean Policy Case Study"

UMCIRB # 07-0695

This research study has undergone expedited review on 11.1.07. This research study meets the criteria for an exempt status because it is a research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects and any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Dr. S. McCammon deemed this **unfunded** study **no more than minimal risk**. This research study does not require any additional interaction with the UMCIRB unless there are changes in this study because the changes may impact the level of review required.

The following items were reviewed:

- Internal Processing Form (dated 10.17.07)
- Questionnaire

Dr. S. McCammon does not have a potential for conflict of interest on this study.

The UMCIRB applies 45 CFR 46, Subparts A-D, to all research reviewed by the UMCIRB regardless of the funding source. 21 CFR 50 and 21 CFR 56 are applied to all research studies under the Food and Drug Administration regulation. The UMCIRB follows applicable International Conference on Harmonisation Good Clinical Practice guidelines.

