## The Whole Whale: Nature, Humans, Technology, History

In the title essay from his 1989 collection, *The Whale and the Reactor*, Langdon Winner recalls how he came to understand the importance of studying the relationships between societies and the technologies they create. On a trip to his hometown of San Luis Obispo, on the coast of California, he decided to take a tour of a nuclear reactor construction site, located near a beach he used to frequent as a boy. Winner describes how, from the window of the tour bus carrying him and other sightseers, he could see the reactor nestled in a cove along the Pacific Ocean. Out at sea, two large rocks echoed the reactors' domes, and, as Winner's bus came to the summit of a hill, affording him an optimal view of the surrounding landscape, a grey whale sounded far off the coast. For Winner, the juxtaposition was a powerful evocation of "technology and the modern predicament":

Here were two tangible symbols of the power of nature and of human artifice: one an enormous creature swimming gracefully in a timeless ecosystem, the other a gigantic piece of apparatus linked by sheer determination to the complicated mechanisms of the technological society. The first offered an image of things as they had always been, the other an image of things as they were rapidly coming to be (168).

On the one hand, the whale – eternal and unsullied tenant of the lachrymose sea; on the other, the nuclear reactor – avatar of humankind's bullheaded will to technoscientific power. And yet, it's strange to find such a fragmented opposition of natural and artificial in a collection of essays that again and again emphasizes the socially constructed character of notions such as "nature" and "technology." Certainly Winner has the right to frame his remembrance any way he sees fit; but at the same time, it seems a missed opportunity to simply accept the received wisdom of such suggestive symbols. After all, particularly with respect to American technology and society, the whale and the reactor – Moby Dick and the Manhattan Project; "save the whales" and nuclear freeze – are two particularly fertile ways of looking at changes in Americans' relationships to nature as a function of technology, rather than nature as opposed to technology.<sup>1</sup>

Moreover, with respect solely to whales this distinction between economy and ecology is not Winner's alone. The great mass of historiography relating to humans' dealings with whales tends to hew to this divide, comprising on the one hand regional or national histories of whaling before the twentieth century, and, on the other hand, more journalistic accounts of conservation movements arising after the mid-twentieth century. Certainly there is little discussion of the interim period – the time where, as economic historians Lance Davis, Robert Gallman and Karin Gleiter note, "natural history [...] turned from finding prey to publicizing marvels."<sup>2</sup> Nor is there much note of the agents (people, institutions) which made this turn, or the decisions and debates which surrounded America's transition from the premier whaling nation of the nineteenth century, to "the country most strongly in favor" of ending whaling entirely in the twentieth.<sup>3</sup> And yet, there was indeed a shift, as spermaceti burning in the headlamps of locomotives gave way to Greenpeace zodiacs hunting whalers on the high seas. As such, a survey of some of the recent historiography concerning whales in American history

<sup>&</sup>lt;sup>1</sup> Indeed, would it be too much of a stretch to point out that both whaling and nuclear physics in the twentieth century became preoccupied with probabilities – the latter with the probability of finding electrons at given locations within an atom; the former with predicting numbers cetaceans at given locations around the globe?

<sup>&</sup>lt;sup>2</sup> Davis, Gallman and Gleiter. In Search of Leviathan. Pg 3.

<sup>&</sup>lt;sup>3</sup> Tønnessen and Johnsen. The History of Modern Whaling. Pg 674.

reveals both an absence and an opportunity: a gap in the record, and a chance to make an important addition to the cultural history of nature *and* technology in the United States.

The bulk of writing on whales and humans deals with the subject of people hunting whales for commercial markets – spermaceti from sperm whales for lighting; baleen as a sort of natural plastic; whale oil first for lighting, industrial lubrication, and as a curing agent for leather and jute; and later, in the twentieth century, as a raw material for making margarine and soap.<sup>4</sup> Most historians make a distinction between old-style whaling, performed by men in sailing ships throwing harpoons, and modern whaling, conducted from steam-ships with bow-mounted harpoon guns. This latter technique allowed the hunting of rorquals – blue, fin, minke, sei, bryde's and humpback whales – whose size, speed, stamina and tendency to sink when dead previously earmarked them as a species best left alone.

Most histories of industrial whaling single out particular places and times for closer inspection. Not unexpectedly, the majority of works on U.S. whaling focus on the rise and fall of the industry during its heyday in the nineteenth century. Edouard Stackpole's *Whales and Destiny* (1972), for example, examines the struggle for supremacy between British, French and American whalers in the years following the war of 1812, while John Bockstoce's *Whales, Ice and Men* (1986) looks at American arctic whaling in the later nineteenth century. *Delaware Goes Whaling, 1833-1845* (1971), by

<sup>&</sup>lt;sup>4</sup> This list by no means covers all the uses of spermaceti and whale oil, and there were additionally small markets for ambergris – a waxy substance from sperm whale intestines used as a binder for perfumes; ivory from sperm whale teeth; ground whale bones as fertilizer; and whale meat both for human consumption in Japan, and processed as cattle feed elsewhere. Since 1983, the use of any whale products has been illegal in the United States, although tariffs and disincentives go back much further – see Brandt, 1940.

Kenneth R. Martin fleshes out Delaware's flirtation with the whale trade, and Barnard L. Colby's *For Oil and Buggy Whips* (1991) treats whaling captains in New London, Connecticut.

For the most part, these histories (and indeed, whaling histories in general) run long on whiggish discussions of the development of hardware, the bravery of great captains, and the gritty vagaries of whaling techniques. Whalers drift from hunting ground to hunting ground, slaying beasts and facing mortal danger, propelled by technological and market forces that have no wider significance than the wind itself. Bockstoce is perhaps more insightful than most when he notes, by way of introducing his topic, that arctic whaling had a profound impact both on American empire (as arctic whaling stations paved the way for the annexation of Hawaii and Alaska), and on Inuit society (his study began as an investigation of the hybrid technologies – traditional umiaks and harpoon guns – of twentieth century Inuit whaling; 26). Indeed, he notes, it was a whaleman who discovered petroleum in Prudhoe Bay, thus uniting the decline of one natural resource with the ascendancy of another. However, after this tantalizing lip service, Bockstoce never returns to these issues. Indeed, he cautions that his

is not an anthropological study of the changes that the whaling industry visited upon native peoples, not a social history of the men who sailed aboard the ships, not a biological history of the faunal populations that the industry exploited [...] this book is simply a history of the whaling industry in the Western Arctic (15).

Evidently, "a history of the whaling industry" means simply a play-by-play in which whales and humans alike are swept along in the current of time.

One notable exception to this trend is Lance E. Davis, Robert E. Gallman, and Karin Gleiter's *In Search of Leviathan: Technology, Institutions, Productivity and Profits in American Whaling, 1816 – 1906.* In essence, *In Search of Leviathan* is a technoeconomic history, depicting whaling as an interplay between people (laborers, investors, whaling agents, and consumers), nature (whales), and technology (investment technologies, navigation technologies, hunting technologies, production technologies). The authors bookend their study with two contrasting views of whales and whaling: whales as cultural materiel – from repulsive monsters to "environmentalist emblem[s] (3)" – and whales as a contested natural resource. Nestled between these two poles is an examination of the growth and decline of the whaling industry in New Bedford, Massachusetts, at the time when it was – in terms of practices, global reach, and sheer tonnage – representative of American whaling as a whole.

*Leviathan*'s authors structure their study primarily in terms of component parts such as "Labor," "Natural Resources," "Profits," "Technology," "Agents, Captains and Owners" and "Product Markets." This non-linear approach has the effect of emphasizing the push-and-pull of various technological and institutional forces, and produces a more intricate picture than the usual narrative. For example, the authors complicate the standard explanation that American whaling was doomed by industrial substitutes for whale products, demonstrating instead that investment opportunities inland at the end of the nineteenth century – railroads, textiles, petroleum refineries – were more attractive to wealthy whaling families than the prospect of updating New Bedford's whaling fleets with steamships and harpoon guns to keep them competitive.<sup>5</sup> Moreover, even when there was investment capital to be had, labor availability worked against an easy conversion to modern whaling. American whalers had limited knowledge of rorquals (unlike Norwegian seamen, who knew rorquals from encounters off their shores), and besides, the same shore-based industries that were luring investors also paid better wages than those at sea, stripping the labor pool of skilled sailors. The functioning of American whaling, in other words, was a complicated mix of social, technological, and economic considerations; not a market-determined march. Nevertheless, as the authors point out, theirs is not a social history and thus does not address, for instance, questions of how the emergence of technologies like explosive-tipped harpoons or steam-powered whale catchers influenced whalers' views of themselves or their prey, or how the slump in the market for whale products might have influenced consumer regard for the industry and its participants.

*In Search of Leviathan* leaves off at the end of the nineteenth century, with only a brief epilogue outlining developments in twentieth century whaling. J.N. Tønnessen and A.O. Johnsen's *History of Modern Whaling* (1982) picks up the thread, extending from roughly 1850 to the time of its publication. Still the decisive work on twentieth century whaling (and especially Norwegian whaling) Tønnessen and Johnsen's history comprises

<sup>&</sup>lt;sup>5</sup> To be more precise, the authors find that the managers in charge of outfitting ships undertook a certain amount of innovation – harpoon guns for grey whale hunting in the 1850s, for example, and limited steam power for raising and lowering sails – all along, which prolonged the industry's viability. Meanwhile, even if owners had wanted new ships, the U.S. shipbuilding industry wasn't up to the task of resupplying New Bedford's fleets, so owners would've had to turn to Britain or Norway (which may or may not have been a fatal deterrent). In general, however, wholesale switchover to modern whaling techniques was indeed less attractive than inland opportunities.

four volumes in its native Norwegian, and one very thick, unannotated volume in English translation. The authors describe the period of overlap between old-style and modern whaling in much the same terms as Davis, Gallman and Gleiter, if in somewhat more detail: in spite of some promising attempts between 1865 and 1872 by American entrepreneurs like Thomas Roys and Gustav Lilliendahl to hunt rorquals with steam ships and harpoon guns, capital flow and labor availability strongly favored Norway, with its vast stock of impoverished, undercapitalized, experienced marine hunters.<sup>6</sup> Thereafter, the United States mostly fades from Tønnessen and Johnsen's narrative, only to reemerge in the 1940s as a force for conservation, brandishing scientific credentials bolstered by military rectitude.<sup>7</sup>

Roughly half of *The History of Modern Whaling* is devoted to a discussion of attempts to regulate whale hunting – from conflicts between herring fisherman and whalers in the late nineteenth and early twentieth centuries (whales were thought to bring herring close to shore; fewer whales foretold smaller catches), to the emergence in 1949 of the International Whaling Commission (ICW), brokered by the U.S. as sort of a United Nations of whaling. For the most part, Tønnessen and Johnsen stick to the aforementioned divide between economy and ecology: theirs is a discussion about the whaling industry as a function of whaling corporations and whaling governments, not whaling vis-à-vis cetology or environmentalism. The authors briefly lament the quixotic

<sup>&</sup>lt;sup>6</sup> Roys and Lilliendahl were evidently poor businessmen as well, a deficiency which could not have helped the nascent American steam whaling industry.

<sup>&</sup>lt;sup>7</sup> American whaling wasn't totally gone in the interim. Tønnessen and Johnsen give kudos to a tiny, tenacious steam whaling industry centered in San Francisco roughly between 1880 and 1930, and mention a miniscule U.S. presence in pelagic, (factory-ship based) whaling in the Antarctic during the same period (387). But for practical purposes U.S. whaling was a dead letter.

private environmental groups which emerged in the 1960s and '70s to counteract what was seen as fecklessness and indifference on the part of the IWC; and they drop enticing hints about proto-environmentalism and marine biology in the mid nineteenth century (35, 70). But for the most part, the activist movements of the late twentieth century and the postwar change in U.S. attitude emerge as though from a vacuum.

For their part, chroniclers of "save the whales" movements tend to take a wider view of the affiliation between whales and people, seasoning their accounts with short histories of whaling (casting whales as protagonists and whalers as persecutors, usually) and metaphorical treatments of whales in different cultures, as well as larger discussions of modern cetacean conservancy. Most, however, are not histories per se, but rather journalistic, or non-fiction literary accounts. For example, David Day's *The Whale War* (1987) documents anti-whaling efforts conducted by Greenpeace and other more militant groups in the 1980s. While focusing largely on campaigns against unregulated, "pirate" whalers, *The Whale War* also touches on actions against Russian whaling fleets, argues that the IWC is irredeemably corrupt, and even – somewhat atypically – protests regulations allowing traditional Inuit bowhead hunting (36).

Day has a distinct literary flare, and in his (surprisingly supple) section on whales turning the tables on their pursuers, one could perhaps read an implied throughline between Mocha Dick – a wrathful, pale whale of the 1830s, which inspired Melville's homonymous antagonist – and the dealings of eco-activists (44). At the very least, the idea of whales striking back at whalers – from literal attacks by angry sperm whales, to a whaler which capsized under the weight of an oversized fin whale corpse – is an inversion of the usual interaction between people and their beleaguered aquatic relatives. Indeed, the white whale is a recurrent figure in *The Whale War*, from a discussion of an incident in 1977 in which an unnamed group blockaded a conference room at the IWC with an inflatable white whale sculpture (16); to Day's passing mention of another episode where a life-sized white whale prop for a movie of *Moby Dick* slipped its moorings and got loose in the English Channel (98). A different writer might have developed this motif into a structuring device for the book; Day, however, seems to prefer a more anarchic compositional approach, and leaves his allusions to lurk conspicuously in the background as an alternate way of seeing whale/human interactions.

Missing from *The Whale War* is a sense of where the committed, direct-action movements on which Day reports come from. He traces the Save the Whales movement back to the mid-1960s, and implies that Namu – a killer whale taken into captivity in 1965 – was a (if not *the*) catalyst for a refreshed public understanding of whales as other than gruesome man-killers (6). But past superficial explanations, he treats the emergence of militant environmentalism (i.e. practices like blowing up whale boats, not just aggressively handing out flyers) as something of a natural, unremarkable evolution away from brutality– a process guided by ingrained correctness as much as by human agency. Furthermore, while Day's is definitely not an academic text, it's not clear that Day even adheres to a journalistic standard; while good at setting a mood, his lack of sourcing can give his accounts the feel of creative non-fiction, as when accuses a nameless IWC bigwig of giving his girlfriend a miniskirt made from a whale's penis (29); or when he

dramatizes (again, without citation) the thoughts of a pirate whaling captain under surveillance from Greenpeace (55-56).

Kieran Mulvaney's *The Whaling Season*, another account of Greenpeace action, offers a somewhat closer look at the history of direct-action conservation movements, albeit again more in the fashion of a personal memoir than an academic history. Mulvaney's book concerns his travels aboard Greenpeace vessels in the Antarctic, and focuses mainly on the tactics used by Greenpeace activists to find and foil whaling fleets (as well as the counter-tactics deployed by whalers). Although the most action-packed portions of the narrative concern cat-and-mouse games with tiny zodiac craft and massive catcher ships amid Antarctic ice floes, as a journalist and founder of the Whale and Dolphin Conservation Society (WDCS), Mulvaney is keenly aware that publicity and positive media attention is as important as – if not more important than – direct action in saving whales; thus he tends to emphasize finer points like the advantages of friends in high places (explorer Robert F. Scott's influential grandson was an early WDCS member); and the value of getting good video when one's zodiac is being assaulted by fire hoses from a whale-processing ship.

This attention to the role of media, however, doesn't extend to his synopsis of Greenpeace's history. He gives a fair amount of space to outlining Greenpeace's origins as an anti-nuclear organization in 1971, and mentions that after its primary cause became whale protection, its membership roles swelled. But he doesn't say much about how Greenpeace got its message out in the interim years between its early start in Canada and its emergence as an international force, and he mentions, but largely glosses over, the

internal debate that accompanied the seemingly-idiosyncratic move to include saving whales along with protesting nukes on the Greenpeace agenda. Interestingly, unlike David Day, Mulvaney gives considerably more credit in his own brief overview of whale conservation history to whaling treaties of the kind that Tønnessen and Johnsen deal with (ICW and otherwise). Likewise, he devotes more attention to the way that research insights into whales' social behavior and songs influenced public favor towards saving them. However, as with *The Whale War, The Whaling Season* pegs conservation history as a late twentieth century affair, and tends to eschew deeper analysis in favor of polemics.

In contrast, Serge Dedina's *Saving the Grey Whale* (2000) provides relatively deep background to its topic. Dedina's book documents the politics of creating protected areas for the pacific grey whale in Mexico's Baja California Sur, focusing particularly on developments in the 1980s and 1990s, but also looking towards early twentieth century roots. Grey whales are a migratory species, and large numbers used to swim south from the area around Vancouver Island to breed in the southern Baja Peninsula's lagoons, until overfishing in the 1800s depleted their populations to near extinction. As Dedina describes it, attempts to rejuvenate the whale stocks from the 1930s onwards involved an ingrained link between conservation and Mexican nationalism. Grey whale protection, he writes, was "a postrevolutionary response to gain control over valuable resources previously exploited by foreigners;" the decision in 1971 to set aside a whale preserve in Scammon's Lagoon (ironically named after one of the earliest whalers to hunt in it) was inextricably tied with protecting a species considered "Mexican by birth" (5). Even

before then, however, Dedina points out that, though not specifically directed at whales, "early marine mammal laws encouraged policy makers to protect species considered uniquely Mexican an part of the national patrimony" (48).

This acknowledgement of earlier precedent takes Dedina further back than other accounts of cetacean protection, from an initial push to pass forestry legislation in early 1900s, to the passage of endangered species regulations in the 1920s (from which, for economic reasons, grey whales were excluded), to Mexican interest in the whaling treaties of the 1940s and beyond. A large part of Dedina's historical overview deals with the complicated relationship between research and politics, and particularly the sometimes-problematic role of U.S. participation in grey whale conservation efforts. On the one hand. American researchers could be useful lobbyists, as when a team from the California Academy of Sciences succeeded in securing an act for the protection of nearly extinct fur seals and sea lions on Guadalupe Island in the early 1920s (47). On the other hand, policies advocated from the United States could smack of paternalism and hypocrisy, as when senior American scientists advocated greater catch quotas for their own research programs than for Mexican ones. Indeed, Dedina reports a general sense among Mexican scientists before the mid 1980s that their counterparts across the border tended to marginalize them even when working in Baja's lagoons, a feeling which resulted in an embargo on research permits for American cetologists to the detriment of all concerned. At the same time, Dedina also discusses more unexpected actors (so to speak) in the post-war movement to save grey whales: wealthy industrialists such as Kenneth Bechtel, of the Bechtel corporation, subsidized research through his Belvedere

Scientific Fund (54), and Hollywood notables like Errol Flynn, whose father was a marine biologist, gave money, name, and logistical support to conservation researchers (55).<sup>8</sup> Interesting in and of themselves, these accounts also point to early overlaps between American popular culture and international efforts in conservation.

Throughout *Saving the Grey Whale*, Dedina insists that "conservation is more than a political process. It intersects with the way people live, perceive, and interact with the animals and landscapes around them" (39). As such, he treats grey whale conservation as a multifaceted undertaking, examining its implications both national and local, abstract, and literal. For example, in Mexico City, far from the lagoons, Dedina notes that grey whales existed by proxy, as "clients of the corporate state [...] with an entourage of managers, technicians and politicians to tend to their needs" (65). If, as Dedina notes, the whales don't actually participate in the political system, nevertheless they are an important facet – "symbols of the 'revolutionary and progressive' Mexican State" like peasants and laborers (66). Dedina also spends some time fleshing out the particulars of how conservation groups work within Mexican and international politics, as when negotiations over NAFTA in the 1990s spurred a move towards increased enforcement of extant environmental laws.

<sup>&</sup>lt;sup>8</sup> As an interesting aside, Dedina reports that Flynn and Carl Hubbs, a cetologist involved with promoting a grey whale sanctuary in San Ignacio Lagoon, planned to film a documentary about grey whales in the proposed protected area. One notable aspect of the documentary would be that it would represent the first use of a helicopter in a scientific expedition. As it turned out, the filming was something of a disaster: the helicopter frightened the whales into a sort of submarine stampede which resulted in a local fishing boat being rammed, and in an unrelated turn, high winds caused an expedition plane to crash into the lagoon (55).

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Closer to the water, Saving the Grey Whale also pays close attention to the changing relationships between whales and the people who live around – and often must make their living from – the whales' habitats. Part of this discussion includes a lengthy synopsis of the debates surrounding Mitsubishi corporation's proposal in the 1990s to construct a large salt works on one of the lagoons, with the attendant push and pull between job creation and environmental consequences. In this, Dedina pays attention to the actual mechanics of deploying environmental symbols, reprinting, for example, an ad placed in the New York Times by a the pro-whale "Group of 100" showing a mother grey whale and her calf (headline: "grey whales rock their newborns to sleep in this warm Mexican lagoon. Their only enemy? Mitsubishi [...]" (100)); in counterpoint, he includes a cartoon lambasting the Group of 100 for putting the well-being of whales before the economic needs of people (94). Salt-works aside, Saving the Grey Whale also fleshes out an interesting transition among California Baja Sur fishermen, from viewing the whales as frightening creatures best avoided, to actively seeking them out in the light of a burgeoning – and surprisingly controversial – whale watching industry. This section seems particularly fruitful, not only in fleshing out a changing sense of what constitutes a national resource (and indeed exploitation), but also in begging questions about author and audience. That is, although Dedina gives a great deal of credence to the view that too much whale watching is as much an eco-hazard as a salt works, he begins his book with an account of his own inspiring experiences whale watching from a kayak; what are we to make of this? Are journalists experts, and are experts exempt? Does writing a book in this sense constitute exploiting a natural resource? If so, with what implications? These

questions are aside from the main point of Dedina's book, but do fall under the general heading of queries about the technologies humans use for describing and interacting with nature.

Between conservation accounts and whaling histories, a smattering of other works interpret whales as dynamic substrates for social interactions. There is, of course, a universe of Melville commentary, which often uses *Moby Dick* as a stepping-off point from which to speak more generally – if creatively – about whales (e.g. Stefan Helmreich's "Cetology Now" in *the Melville Society Extracts*. 129: July 2005). Robert McNally's *So Remorseless a Havoc* (which takes its title from a prescient rumination in *Moby Dick* about the possible extinction of whales)<sup>9</sup> is a somewhat unsystematic compilation of musings on whaling history, the history of cetology, and the cultural history of humans and whales; McNally mainly focuses on Europeans and Americans, but also spends some time on whales in other traditions, such as Polynesian whale legends, and Japanese whale tales. On the subject solely of cetology, D. Graham Burnett, a historian of science, is, as of this writing, in the process of researching a history of whales as "'problems of knowledge,'" particularly for "natural historians, biologists, ecologists, fisheries scientists, and so on." As he remarked in an interview,

over the last two hundred years or so, these strange animals have followed a remarkable trajectory: from soulless, mindless "beasts," they have come to be

<sup>&</sup>lt;sup>9</sup> "But still another inquiry remains; one often agitated by the more recondite Nantucketers. Whether owing to the almost omniscient look-outs at the mast-heads of the whale-ships, now penetrating even through Behring's straits, and into the remotest secret drawers and lockers of the world; and the thousand harpoons and lances darted along all continental coasts; the moot point is, whether Leviathan can long endure so wide a chase, and so remorseless a havoc; whether he must not at last be exterminated from the waters, and the last whale, like the last man, smoke his last pipe, and then himself evaporate in the final puff." Herman Melville. *Moby Dick.* New York: Penguin Books. 1992 [1851]. Pg 501.

understood (at least by many in the rich world of Europe and the United States) as soulful, intelligent, and musical "friends of humanity" – as bellwethers of environmental irresponsibility, and even as totems of the counterculture. How did these big, furtive, bizarre animals come to be invested with such elaborate meanings?<sup>10</sup>

Meanwhile, although not concerned with the "how" of such "elaborate meanings," the one extant attempt to truly sculpt a techno-scientific-cultural synthesis of the many and varied whale/human interactions throughout history is Richard Ellis' *Men and Whales* (1991). This ambitious book tracks humans' consociations with their oceangoing cousins, starting with cetacean evolution and ending with moment-ofpublication conservation issues. Most of Ellis' book is given over to capsule histories of whaling at different times and places, a fact which would seem to put it squarely in the "economy" camp of writing about whales. At the same time, Ellis acknowledges the abiding historiographic disposition towards examining whales by way of whaling, explaining in a brief apologia, "I wanted to write about the intertwined destinies of whales and men, and since most of that story has concerned the ways in which men killed whales, I knew that the bulk of the book would be about whaling history" (vii).

This said, Ellis is clearly trying, if not to challenge, then certainly to supplement the usual history of global whaling. As a sometimes-illustrator of cetaceans for magazines and museums, Ellis is perhaps more inclined than most to pay attention to visual media – his book is overstuffed with all manner of illustrations, photographs, sketches, and woodcuts of whales throughout the world and across centuries. Structurally, *Men and Whales* is composed of short, chronologically arranged sections of about two

<sup>&</sup>lt;sup>10</sup> http://his.princeton.edu/people/e51/d\_graham\_burnett\_int.html. Cited Dec 22, 2005.

dozen pages each, roughly a quarter of which cover European and American industrial whaling of the eighteenth and nineteenth centuries (e.g. "the British Greenland Fishery," or "Sperm Whaling in Australian Waters," or "The American Bowhead Fishery"); and a quarter of which cover twentieth century issues ("Greenpeace," "Postwar Norway," "The Soviet Juggernaut"). Another quarter or so of the book is given to narratives outside of this tradition – from little-discussed items such as whaling traditions in China (A.D. 600 – 1844), to relatively well-exposed contemporary issues such as First Nation rights to hunt bowhead whales in North America. Sprinkled throughout the remaining pages of the book are so-called "interludes" – musings, for the most part, on more subtle interactions of whales and humans. For instance, "Interlude: The Sea-Unicorn" discusses the manifold human reactions to narwhals, from their appearance in European myth and science, to their place in "Canadian Eskimo" culture. Similarly "Interlude: The Exhibition of Whales" discusses efforts to display whales for the land-bound public.

Predictably, the biggest problem Ellis faces is one of scope. In setting his standard at nothing less than a history of humans and whales since one crawled out of the sea and the other crawled back in, he has an impossible amount of ground to cover. As a result, no one topic ever gets more than a brisk going-over. One could write (and many have written) full monographs on any of the episodes in his book, from the bowhead controversy, to the role of Greenpeace as an international moderating force, to the economics of whale oil in the nineteenth century, to traditional Basque whaling. By dint of physical space alone, Ellis can't give much more than cursory attention to any one region, fishery, or time period. Well-trod subjects – American sperm whaling, for

instance – tend to get better treatment than lesser-known ones (ancient Chinese whaling seemed particularly spare). Moreover, the immense glut of information cries out for a unifying thesis (or at least idea, theory, or proposition) to keep the disparate sections from reading as merely items in a cabinet of curiosities.

So where does this motley historiography leave our initial inquiry – the question seeing whales in light of the "natural" and the "technological," rather than simply as an overexposed symbol of the division between the two? Clearly there's much written about the conjoined histories of whales and whale hunters; there are some incomplete histories of whales and conservationists; and even a smattering of histories about the cultural importance of whales for various groups of humans. But amongst these different approaches there's not much synthesis, and certainly little discussion of the period in which – for the United States, anyway – a sea change eventually took place in the public understanding of whales. Did whales simply drop off the cultural map when whaling did? Was whale consumption a thing of the Gilded Age and whale conservation a tenor of the postwar era, while the years in between were fallow ground? Both common sense and available evidence dictate against this explanation - as Graham Burnett and Serge Dedina point out, there were many and various groups of scientists working on the subject of whales and conservation (and commerce, too) throughout the twentieth century. Moreover, available evidence from before the whaling conventions of the 1940s suggests both a far greater and more nuanced public interest in whales in the U.S., as well as an unlikely intermixing of business and proto-ecology.

For example, one deceptively rich document is the Redfern Corset Company's pamphlet, *A Woman Has an Awful Lot to Thank a Whale For* (1909). As one might expect, the ultimate punch-line of the treatise is that whalebone corsets are of vastly higher quality than those made from novel industrial substitutes (such as spring steel) – "no woman who knows the art of dressing will have anything but a whalebone corset," claim the authors (30). At the same time, however, the majority of the tract is spent in a lighthearted and surprisingly detailed account of the natural history of whales, and specifically right and bowhead whales, from which the highest quality whalebone was taken. The pamphlet's authors discuss whales' habits, anatomy, and evolution; tackle some of the less gory points of whaling technique; and dismiss the notion of supply side strain, arguing that "all the talk about the scarcity of whalebone and the ultimate extinction of whalebone is merely the singing of divine songs to whalebone substitutes" (29). As if to drive the point home, they subsequently assure their readers point-blank, "you will always be able to get whalebone" (30).

Note, of course, that the authors talk about the ultimate extinction of "whalebone" instead of "whales" – this can perhaps be seen either as a naïve slip, reinforcing the idea that whales were generally seen as homologous to the raw materials they yielded, or as an active attempt to divert discussion away from living creatures and towards resources; in any case, it is a firm acknowledgement that talk of at least "commercial" extinction was heavy in the air (and Bockstoce's look at arctic whaling makes it seem as though, by 1909, people who knew bowhead whales certainly did *not* feel like they'd be commercially viable forever). At the same time, the pamphlet challenges the notion that

whales were universally interpreted as scary beasts, or disgusting monsters. Amply illustrated in bright colors, the authors literally and figuratively paint whales in an appealing light, explaining that whales are known to have a sense of humor, and portraying them as silly and fun-loving: pulling steamships like giant horses, lounging in aquatic four-poster beds, going to the bank (to cash in on their tremendous commercial worth), and giggling good-naturedly at women who wear cheap corsets. It should furthermore be noted that the illustrations are surprisingly detailed from a naturalhistorical perspective – no stylized whales these, the authors make every effort to accurately depict just what kind of whales are going into their corsets, and lament that "there is no picture in existence of a Bow-Head" (18) with which they can enlighten their readers.<sup>11</sup> This could all, of course, simply be seen as the unfamiliar taste of turn-of-the century advertising. However, it seems just as profitable to suggest that the document represents graphical and metaphorical evidence of a complex negotiation taking place between fashion advertising, natural history and the nitty-gritty economics of raw materials.

Another such intersection of natural history, commerce, and popular culture is Roy Chapman Andrews' *Whale Hunting with Gun and Camera*. Part photo reportage and part adventure narrative (not unlike Day and Mulvaney's books), *Whale Hunting* is collection of photographs and reminiscences which Andrews, a exhibition specialist and sometimes-cetologist with the American Museum of Natural History (AMNH),

<sup>&</sup>lt;sup>11</sup> Contrast this with the whales depicted in political cartoons in *Saving the Grey Whale*, which are unmistakably stylized sperm whales – perhaps a strange choice considering Dedina's insistence that in Mexican politics the grey whale is seen as a distinctly Mexican species.

accumulated over eight years of studying whales from the decks of commercial whaling vessels. Andrews' narrative is one of a man of science accompanying men of industry in an effort to capture and conserve nature. While the whalers took their quarry with steam ships and exploding harpoons, Andrews took his with pictures. Neither method, it should be noted, was *morally* superior in Andrews' estimation. In fact, he seems to have had little problem seeing whaling and cetology as two sides of the same coin. As he somewhat nonchalantly observed, "it is deeply to be regretted that the wholesale slaughter of whales will inevitably result in their early commercial extinction, but meanwhile science is profiting by the golden opportunities given for the study of the strange and interesting animals" (20). As with the authors of the corset pamphlet, by "commercial extinction," Andrews meant "decrease in the number of whales to the point where their pursuit will no longer be profitable" (297). He dismissed the possibility that species of whale could forever disappear from the face of the earth, though he allowed that whale populations possibly wouldn't recover to their pre-whaling days.

Andrews and his camera made some exciting and often serendipitous discoveries during his travels with the whalers. He reported that he was able, for example, to put to rest longstanding rumors among whalers of "double-finned" whales (in reality, mothers and calves swimming side by side), and a lucky photograph revealed that humpback whales extend their blowholes several inches above the surface of the water as they inhale before sounding (62, 51). Floating just below the surface of these observations, meanwhile, is and abiding sense that Andrews was busy seizing something from the whalers. He repeatedly emphasized that, while whalers are adept at finding whales,

identifying species, and are well-schooled in whale behavior, his (Andrews') scientific knowledge, regardless of the fact that it derived from this very whaling, was nevertheless superior to whaling lore (his debunking of the "double-finned" whale is one example of this). One can thus read *Whale Hunting with Gun and Camera* as being as much about consolidating scientific authority on the high seas – indeed, national scientific authority – as educating the inquisitive masses about whales.

The deeper question, of course, is how to interpret both historiographic and primary accounts of whales and humans from this nebulous interim period. As previously noted, one way is simply to turn towards science and scientists – perhaps in conjunction with politicians, activists and (when possible) movie stars, perhaps not – and ask how cetology gained cultural authority (or indeed, if a gradually accrued body of knowledge of whales spawned whale protection). Another way, indicated by Donna Haraway, would be to look at the representational practices surrounding whales in this period. As she observes in her classic essay, *Teddy Bear Patriarchy* 

[Carl] Akeley [a collector and taxidermist for the AMNH in the 1900s] and his peers feared the disappearance of their world, of their social world in the new immigrations after 1890 and the resulting dissolution of the old imagined, hygienic, pre-industrial America. Civilization appeared to be a disease in the form of technological progress and the vast accumulation of wealth in the practice of monopoly capitalism by the very wealthy sportsmen who were trustees of the Museum...<sup>12</sup>

Collecting nature for display in urban museums was a means of reengaging with a vanished, ideal past (and, in Haraway's telling, a lost sense of manhood). And indeed,

<sup>&</sup>lt;sup>12</sup> Donna Haraway. Primate Visions: Gender, Race and Nature in the World of Modern Science. London: Routlage. 1989. Pg. 42.

Andrews was one of Akeley's peers, and in a manner not dissimilar to Andrews, Akeley was also vocal a proponent of shooting one's prey photographically as well as ballistically. Finally, in line with this view of nature as endangered, dissolving, disintegrating is a complaint by Robert McNally in *So Remorseless a Havoc*, that the authors of *Life History and Ecology of the Grey Whale* (1971), putatively a scientific text celebrating grey whales, included no full photographs of their subject, but in fact had authored a study of "parts, not whales" (203).

Here, finally, is a fertile, unified way of looking at the history of whales and humans, particularly in the period between whaling and whale conservation. Can one not begin to see the early twentieth century as a period of trying to see (to "capture" in the photographic sense) the whole whale – of trying to reconstruct nature (writ large) in the face of growing ecological and social uncertainty? *Moby Dick*, after all, is in large part about deconstructing whales, from its chapters on cetology, to its opening montage of fragmented whale quotes;<sup>13</sup> Ellis' *Men and Whales*, on the other hand, from 1991, is interested in the whole whale – philosophically, in the many relationships Ellis endeavors to explore, and physically, as his book's plentiful illustrations show. Trying to pin down the essence of whale-ness is a difficult but alluring task, as demonstrated by sources as diverse as fifteenth and sixteenth century Persian and Dutch illustrations showing whales as varying degrees of fish, mammal and fish-mammal (36,37, 39 42), and twentieth century reconstructions of life-sized blue whale models for display in urban museums (378, 379).

<sup>&</sup>lt;sup>13</sup> Thanks to Stephan Helmreich for pointing this out.

Andrews, too – whose book is filled with photographs of whale blow-holes, flukes, and dorsal fins rising up through inky water, and many barely-recognizable whale corpses lying on slipways at whaling stations – is of this lineage of holistic whalereconstruction, responsible as he was for constructing the AMNH's first life-sized blue whale sculpture in 1907. This feat (in contradistinction to his book of whale-part photographs) is one of the most rigorous sorts of rebuilding – an attempt to capture the whole whale for display in an urban center, isolated but complete in an environment where whales might previously have been better known as streetlights and corsets. Andrews' sculpture was inspired by an even more literal whale model constructed by the Smithsonian four years prior, in which a crew of men took a plaster cast of an entire seventy-eight foot-long blue whale that had been harpooned by whalers in Newfoundland. This whale was earmarked for the 1904 St. Louis Exhibition, and a reporter for the *Washington Post*, covering the Smithsonian's accumulated offerings, dutifully, if blithely, juxtaposed the Smithsonian's complete whale with

[an] Alaskan [*Inupiaq*] blanket, in which the weaver, having discovered that the outlines of the killer whale, which he wanted to weave into the blanket, would not in the proper and life like form, [sic] fit into the piece, cut the animal up into parts so that the lower jaw is in one corner, the upper in another, and the rest scattered about in like fashion.<sup>14</sup>

From here, it is possible to read sources which might otherwise seem contradictory or simply disinteresting (like corset advertisements and model whales) as representing an emulsion of "natural" and "technological," bound by production and

<sup>&</sup>lt;sup>14</sup> "Resembles Noah's Ark." The Washington Post. Jan 24, 1904. Pg E1.

reproduction. The importance of visual processes in understanding the natural world has been noted before (for instance, by Bruno Latour).<sup>15</sup> Perhaps less noted has been the importance of industrial processes in understanding nature (although William Cronon and Anne Whiston Spirn, for instance, write on nature in urban history). And yet the conceptual shift from seeing whales as resources to whales as icons of conservation wasn't the result of a great schism, as one would be forgiven for reading in current historiography. Rather, this interim period suggests a honeycomb of contrary, intersecting, constantly-recombining conceptions of the wonders of nature and the wonders of industry. The examination of cetology, technology and culture from 1900 to 1940 would begin to recast the whale and the reactor not as diametric opposites, but as produced by one in the same society – a view perhaps at odds with contemporary ecological pop-culture, but one that is, nevertheless, of the same whole.

<sup>&</sup>lt;sup>15</sup> And if Bruno Latour's "immutable and combinable mobiles" are one example of visual technology, could whale models not be considered "immutable *im*mobiles? That is, rather than, as Latour says of his immutable mobiles, "bring[ing] celestial bodies billions of tons heavy and hundreds of thousand miles away to the size of a point on a piece of paper" (227), model whales bring the whole beast, life-sized, unreduced, into the heart of the city, where citizens can survey the wonders of nature as wrought by human ingenuity. They bring the "distance" to the "center" – to invert Latour's explanation.

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