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## Moby-Dick and Nineteenth-Century Natural History

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*Moby-Dick*; or, *The Whale* has long impressed readers with its generically hybrid construction, with the allegorical revenge drama of Ahab's quest to kill the White Whale bracketing Ishmael's picaresque and discursive account of whales and whaling. Critics have documented the contemporary sources for the portion of the novel devoted to its cetacean subject matter in whaling narratives by Thomas Beale, Frederick Bennett, William Scoresby, Jr., J. Ross Browne, and others (Vincent, Olsen-Smith). But if the whaling sources of Melville's epic novel are now fully recognized, significantly less is known about Ishmael's cetological lore in relation to contemporary Anglo-American traditions of natural history. For *Moby-Dick* is, in fact, deeply enmeshed in the remarkable popularity of natural history at a time when amateur naturalists, like Melville's alter ego Ishmael, were active in the task of collecting, classifying, describing, and publishing their findings before formal professionalization of the field took place later in the century. By examining Ishmael's cetological lore in the context of this remarkable efflorescence of interest in the natural world, we can better appreciate the cultural and scientific contexts out of which *Moby-Dick* emerged.

The study of natural history in America was coterminous with the European discovery and exploration of the North American continent, with the recognition of distinct new flora and fauna in the New World. In the eighteenth and early nineteenth centuries, a gifted group of amateur naturalists—notably Mark Catesby, John and William Bartram, Thomas Jefferson, Alexander Wilson, John Bachman, John James Audubon, and Thomas Nuttall—had identified and catalogued the varied natural history of the colonies and then the new nation, whose unprecedented fertility and grandeur created a mythic aura around the phenomena of nature. At the start

of the Jacksonian era, the study of natural history had become an increasingly popular pursuit among all classes of the public, with a host of publications for both adults and children; museums with displays of natural history, such as those pioneered by Charles Willson Peale in Philadelphia and Phineas T. Barnum in New York; new botanical gardens in New York and Philadelphia; regional natural history academies and societies, such as the Lyceum of Natural History in New York City (1817) and the Boston Society of Natural History (1830), as well as a number of college natural history societies. During the first half of the nineteenth century, the federal government also sponsored several exploratory teams, the largest being the naval-sponsored Wilkes Expedition, designed to collect data on Antarctic and Pacific oceanography, geography, and natural history from 1838 to 1842. By the mid-nineteenth century, American naturalists had made important contributions to various specialized fields of knowledge, such as ornithology, ichthyology, botany, conchology, entomology, and geology (Hanley, Kastner, Welch, Philbrick, Judd, Lewis).

The rise of natural history in mid-nineteenth-century America was integrally related to larger cultural trends that imbued the natural world with special theological significance, as Margaret Welch notes:

The process of industrialization in Britain and the United States fostered a feeling of nostalgia for "Nature" as urbanization and settlement irrevocably changed it. Humans, disturbed by rapid changes in all spheres of life, sought the same psychic comfort and refreshment in "Nature" hitherto provided by traditional religion, and they reiterated with a fresh vigor the natural theology argument that Nature was God's handiwork. In this transatlantic cultural shift, most often defined as "Romanticism" . . . animals and plants, the quintessential creations of God, were especially deemed to hold spiritual meaning. Medieval bestiaries and the emblem books published until the early Republic had connected plants and animals to specific morals . . . [but] the newer attitude viewed animals as fuller role models, not one-dimensional synecdoches. Their actions,

especially those analogous to those of humans, like childrearing, could teach God's will or exemplify moral conduct (135).

An increased interest in natural history thus accompanied the rise and spread of evangelical Christianity in early national America, as "natural theology" and doctrine of "design," as famously promulgated by the English divine William Paley in his book on *Natural Theology* (1802), became the implicit standard for interpreting the natural world.

The study of American natural history in the first half of the nineteenth century, however, cannot be fully appreciated without mention of comparable developments in England, which saw the same dramatic rise of popularity and shared the same emphasis on natural theology (Allen, Barber, Merrill). In addition to possessing many of the leading scientists of the age, England also produced a host of natural history amateurs in the guise of leisured Anglican clergymen, members of regional collector clubs, and a growing middle-class public with time to dedicate to the subject. As in America, the pursuit of natural history in England was formally divided between "field" naturalists gathering samples and "closet" naturalists performing classifications, an important goal for both being the discovery and naming of new species. Veritable crazes for field clubs, fern-gathering, self-enclosed botanical glass cases (so-called "Wardian Cases"), and aquariums marked the 1840s and 1850s, while the nation saw a rise in popularity of the seaside holiday, aided by the vast increase in railway lines, during which a family could indulge in study and collection of species. One of the most prolific naturalists of the era, and a significant figure for our purposes, was Philip Henry Gosse, the era's leading popularizer of marine biology whose diverse output included *The Ocean* (1845), *A Naturalist's Sojourn in Jamaica* (1851), *A Naturalist's Rambles on the Devonshire Coast* (1853), *Seaside Pleasures* (1853), *The Aquarium: An Unveiling of the Wonders of the Deep Sea* (1854), *Tenby: A Sea-side Holiday* (1856), *Evenings at the Microscope* (1859), and *The Romance of Natural History* (1860).<sup>1</sup>

When we turn to a study of Melville's *Moby-Dick* in the context of Anglo-American natural history writing, we can perceive

that it shared many of the basic features of the age in its extensive representation of cetology, or the natural history of whales. Melville's inclusion of a large number of discursive chapters on whales—primarily on the sperm whale, but including other commercially hunted species, like the right whale—thus mirrored the era's widespread tendency toward the anthropomorphizing of species, as well as the pervasive influence of natural theology. Complementing Ahab's obsessive quest to discover the metaphysical identity of the White Whale is thus Ishmael's quest to understand the anatomy, physiology, ecology, and ethology of the sperm whale, a quest in which he succeeds in explaining, as both "field" and "closef" naturalist, a vast compendia of information, all based on Melville's self-education in science as a gifted amateur with several years' experience as a whaleman (Hillway, Smith, Horowitz).

In chapter thirty-two of *Moby-Dick*, which is dedicated to an exposition of "Cetology," we thus find Ishmael formally introducing the various kinds of whales to the reader in a manner in keeping with contemporary natural history descriptions of the species. Such descriptions would typically include an overview of classification or taxonomy; a discussion of "synonymy," or the various names given to a species by different sources; and a description of general species characteristics as they relate to anatomy, behavior, habitat, diet, and reproduction. Ishmael's discussion is a comparable description of some fifteen leading cetacean species, as directly known to the narrator in his capacity of field naturalist and whaleman. While some readers experience "Cetology" as an obstacle in their appreciation of the dramatic unfolding of the narrative, the chapter represents Ishmael's introduction to his own attempt to "know" the whale as a species, in keeping with the imperatives of contemporary natural history, as opposed to Ahab's mythical and symbolic projections of the underlying identity of Moby Dick (Ward).

Ishmael, accordingly, begins by citing the chief authorities for his discussion, which included Scoresby, Beale, and Bennett, as well as a host of other past and present writers on natural history and whaling. Cetacean classification was a matter of controversy in the first half of the nineteenth century, not only because of the difficulty

of studying every species in their vast oceanic domain, but also because the taxonomy of many species was still subject to dispute, as well as the very identity of whales as mammals—this despite the increasing authority of the Linnaean system of classification dating from the mid-eighteenth century, as augmented and corrected by the leading nineteenth-century French and English anatomists. For as Harriet Ritvo remarks,

even though, in the course of the nineteenth century, the anatomical methods of classification associated with George Cuvier and Richard Owen became increasingly authoritative, there was a protracted period during which individual naturalists felt free to exercise a great deal of systematic discretion. And this privilege of choice was not restricted to the zoological elite or to the heights of theory; even the humblest laborers in taxonomic vineyards could consult their own judgment on practical applications (28).

The most notable example of this taxonomic freedom in Melville's whaling novel is, of course, Ishmael's seemingly whimsical decision to classify the whale as a fish, not a mammal: "Be it known that, waiving all argument, I take the good old fashioned ground that the whale is a fish, and call upon holy Jonah to back me" (136). Ishmael's invocation of the Bible to support his decision here is symptomatic not only of the novel's saturation in biblical themes, language, and symbolism (Cook); but it is also in keeping with the long-standing popular tradition of seeing the natural world as permanently divided into air, land, and sea creatures according to the divine act of creation described in the first chapter of Genesis. In the year before Melville's birth, the issue of whether whales were fish or mammals was in dispute in a widely publicized New York commercial legal case, *Maurice v. Judd*, arising from a new law requiring inspection and tax on all fish oil; at issue was whether whale oil would be included in the new law. Despite expert testimony by one of the nation's leading ichthyologists, Samuel Latham Mitchell, the jury embraced the traditional, biblical view of whales as fish, and defendant Samuel Judd had to pay the city inspector of fish oils, James Maurice, his assessed tax (Burnett). By the middle of

the nineteenth century, most professional naturalists had recognized whales to be mammals, in keeping with the pioneering creation of the class "mammalia" (with whales included) in the tenth edition of Linnaeus' *Systema Naturae* (1758); but the general public throughout the century often still held to the outmoded biblical classification.

In "Cetology," Ishmael goes on to classify various species of whales by their size, using the convenient metaphor of three different standardized book dimensions, namely the folio (12" x 15"), the octavo (6" x 9"), and the duodecimo (5" x 7-3/8"), with each species representing an individual chapter within the book. Thus, the "folio" whales include "chapters" on the sperm, right, fin-back, humpback, razor-back, and sulfur bottom whales; the "octavo" book has chapters on the grampus, black fish, narwhale, killer, and thrasher; and the "duodecimo" book features chapters on the huzza, algerine, and mealy-mouthed porpoise. The idea of using a bibliographical method of categorizing cetacean species is based, no doubt, on the traditional metaphor, dating back to the Middle Ages, of nature as a divine "book" meant for human study. Scientifically incomplete though it is by today's standards, Melville's cetological classification has the merit of suggesting the basic features and relative size differences of various prominent whales and porpoises, while bringing each species alive with vivid characterizations that often evoke the anthropomorphizing of species found in contemporary natural history writing. Thus, among the folio whales, the fin-back "seems the banished and unconquerable Cain of his race, bearing for his mark that style [i.e., fin] upon his back" (Melville 139), while the humpback whale "has a great pack on him like a peddler" (Melville 140). Among octavo whales, the black fish "carries an everlasting Mephistophelean grin on his face" (Melville 141), while among duodecimo whales, the huzza porpoise swims in "hilarious shoals, which upon the broad sea keep tossing themselves to heaven like caps in a Fourth-of-July crowd" (Melville 143). Ishmael also performs the standard task of the natural historian of "synonymy," in other words, citing all the different common names under which a particular species has been known—without, of course, including the now standard Linnean Latin binomial of genus and species.

Another important manner in which Melville represents whales in *Moby-Dick* is in their visual appearance, as discussed in the three "pictorial" chapters of the novel drawing on a wide range of paintings and illustrations of whales over many centuries (Frank). Beginning with grossly deficient images of whales evoked in chapter fifty-five ("Of the Monstrous Pictures of Whales"), Ishmael goes on to find some examples of whale imagery more accurate in chapter fifty-six ("Of the Less Erroneous Pictures of Whales, and the True Pictures of Whaling Scenes") before turning to a host of vernacular images of the whale throughout the natural and built environment in chapter fifty-seven ("Of Whales in Paint; in Teeth; in Wood; in Sheet-Iron; in Stone; in Mountains; in Stars"). The initial inspiration for these chapters stems from Sir Thomas Browne's three-volume *Pseudodoxia Epidemica*, or *Vulgar Errors*, the fifth book of which is entitled "Of Many Things Questionable as They are Commonly Described in Pictures" and includes twenty-three chapters devoted to critiquing images of a large number of biblical and legendary Christian figures as well as a few animals, like pelicans and dolphins. Ishmael's method of exposing faulty images of whales by a host of artists and scientists is in keeping with the spirit of Browne's skeptical practice; yet the issue of properly illustrating books of natural history was an increasingly important subject in the first half of the nineteenth century, with the improvement in quality of illustrated volumes accompanying the dramatic advances in the technologies of book production—a phenomenon perhaps best known today in John James Audubon's stunning four volumes of *Birds of America* in their gigantic "double elephant" folio volumes (39" x 26"), which appeared in the 1830s.

Part of the problem of accurately portraying the whale came from the creature's long legendary history, which began in the book of Genesis on the fifth day of creation, when "God created great whales, and every living creature that moveth which the waters brought forth abundantly" (Gen. 1:21). As *the* archetypal sea creature in the creation, the whale in medieval and Renaissance art and culture was subject to a static allegorical identity because of its association with both the "great fish" that swallowed Jonah and

the insuperable "leviathan" that God evoked for a humbled Job, in order to make him aware of the divine power over the cosmos—twin monsters that potentially conflate the whale with imaginary sea serpents and marine dragons. Ishmael accordingly subverts the "monstrous" whale imagery in Western art and early natural history writing with comic élan, lampooning a tradition in which mythical ideas dominated over scientific facts, but he ends with the legitimate scientific point that the manifold mistakes in contemporary depictions of the whale stem from the fact that "scientific drawings have been taken from the stranded fish" (Melville 263), which is usually in a decayed condition. Showing his Romantic bias towards organicism in nature and against reductionism in science, Ishmael argues that the real living whale can't be known from its skeleton, contrary to the contemporary prestige of comparative anatomy pioneered by Georges Cuvier in France and carried forward by Richard Owen and others in England.

In her study of Victorian-era natural history, Lynn L. Merrill notes:

Verisimilitude—getting the facts right about an animal's appearance—counted heavily, for only if the animal or plant was correctly drawn could one experience appropriate wonder at its form. . . . By the nineteenth century, the demand for accuracy had grown so strident that naturalist-artists tried, whenever possible, to draw live animals, rather than dead ones (167).

The same demand for accuracy and preference for living models informs Ishmael's quest for an accurate visual representation of the whale. For as he claims, only in its oceanic element is the living whale to be studied, and the only way to "derive even a tolerable idea of his living contour, is by going a whaling yourself; but by doing so you run no small risk of being eternally stove and sunk by him" (Melville 264). Ishmael's conclusion that "the great Leviathan is that one creature in the world which must remain unpainted to the last" (Melville 264) hints at an insuperable mythical or even divine identity for the whale, even as it acknowledges the rising

tide of natural history illustration in America and England, with its increasingly precise zoological images.

Ishmael performs several careful evocations of the body of the sperm whale—and, to a more limited extent, the right whale—in roughly a dozen anatomical chapters in the third quarter of the novel, after a sperm whale is killed and then cut up to prepare for rendering the blubber; and in these rich anatomical descriptions, we find regular moral lessons for the reader. The chapters thus include careful examinations of the sperm whale's skin, head (including eyes and ears), case (containing the spermaceti), forehead, brain and spinal cord, spout, tail, excretions (ambergris), and penis, while other related chapters describe the familial and social groupings of sperm whales (including reproduction and parturition), the whale's skeletal structure, and the natural history of the whale in larger geological time. In all of these chapters, the whale inevitably becomes a medium for moral and religious reflection, in keeping with the contemporary tenets of anthropomorphic description and natural theology, but often with a comic or ironic twist showing Ishmael's strategic subversion of these traditions.

Thus, in chapter sixty-eight ("The Blanket"), dedicated to the whale's thick, fat-laden skin, which allows it to stay warm in Arctic seas and cool in southern waters, Ishmael ends with a seriocomic apostrophe to humanity: "Oh man! admire and model thyself after the whale! Do thou, too, remain warm among ice. Do thou, too, live in this world without being of it" (Melville 307). In this example, Ishmael's plea for spiritual equanimity, which was the ultimate goal of the ancient philosophical schools of Epicureans and Stoics, overlaps with the traditional Christian attitude of detachment from worldly concerns, as famously articulated by St. Paul (Romans 12:2). In chapter seventy-four, while describing the sperm whale's head, Ishmael again performs a close examination of its unique anatomical features, such as the placement of its small eyes on either side of its huge head, creating the equivalent of stereoscopic vision, as well as its minute ear holes, which have no external flap. The lesson here is that no magnification of the size of these organs would make them perform better, teaching human beings, in mock

Emersonian accents, that they should likewise refine, not expand, their cognitive capacities: "Why then do you try to 'enlarge' your mind? Subtilize it" (Melville 331).

In chapters seventy-seven and seventy-eight, we find Ishmael discussing the contents of the sperm whale's "case," from which the valuable spermaceti oil has to be carefully removed. In Philip Henry Gosse's discussion of the sperm whale case in *The Ocean*, he notes that, despite its enormous size, the whale's head is, in a deliberate act of divine design, still relatively light in weight, thus allowing it to keep its head high out of the water when swimming: "here we trace the beneficent hand of God in creation, the volume of the head being occupied not with dense bone, but, as we have seen, with an oil which is considerably lighter than water, and which renders this part the most buoyant of the body" (229). In Ishmael's comic evocation of the whale's case, by contrast, it is described as a famously oversized German wine barrel, the "Great Heidelberg Tun"; the allegedly providential design of the sperm whale's head is thus, in Ishmael's mundane view, comparable to a gigantic container for alcoholic spirits. In the ensuing chapter, the harpooner Tashtego accidentally falls into this intoxicating, but deadly, "sanctuary" (340) while bailing out the sperm, an emergency remedied when Queequeg cuts into the head after it unexpectedly falls into the ocean and removes the Gay Head Indian, in a process akin to birthing a baby. The pagan harpooner is thus comically "reborn" in a parody of the evangelical conversion experience, having escaped possible immortality in the holy, oil-filled temple of the sperm whale: "Now, had Tashtego perished in that head, it had been a very precious perishing; smothered in the very whitest and daintiest of fragrant spermaceti; confined, hearsed, and tombed in the secret inner chamber and sanctum sanctorum of the whale" (Melville 344). If, in Philip Henry Gosse's view, the whale's head is kept afloat through the providence of God, in Ishmael's account, it takes the heroic intervention of the pagan whaleman Queequeg to keep his fellow harpooner Tashtego from sinking to the bottom of the ocean in the sepulchral whale's case.

In other descriptions of the whale, Ishmael directly or indirectly invokes the tradition of natural theology, but with considerable flexibility in his affirmation of divine wisdom in the creator and creation. In his book on *The Ocean*, Philip Henry Gosse concluded, after discussing some aspects of whale anatomy: "These few particulars in the physiology of these vast creatures may serve to carry our minds up in adoring wonder to the mercy as well as wisdom of the Lord God Almighty, and may give us a glimpse of the meaning of that glorious truth, 'And God saw everything that He had made, and beheld it was VERY GOOD'" (140). In Melville's adaptation of this divine wisdom in the creator, the whale becomes as much a symbol of the deity's sublime amoral power as of His goodness. Thus, in chapter seventy-six, "The Battering Ram," Ishmael describes the sperm whale's head as a "dead, blind wall" of such toughness that a harpoon will bounce off it. From such an impenetrable head, backed by the power of its massive body, one can expect feats of extraordinary strength. And in a further elaboration of the whale's head in chapter seventy-nine ("The Prairie"), Ishmael examines the whale's "face" in accordance with the contemporary pseudoscience of "physiognomy," which interpreted human and animal facial expression according to ideas promoted by the eighteenth-century Swiss writer Johann Kaspar Lavater. Now the sperm whale conveys an impression of sublime divinity in its massively elevated "brow": "this high and mighty god-like dignity inherent in the brow is so immensely amplified, that gazing on it, in that full front view, you feel the Deity and the dread powers more forcibly than in beholding any other object in living nature" (Melville 346).

The whale's head is again given both human and divine characteristics in the ensuing chapter on "The Nut," dedicated to a review of its shape, now related to the contemporary pseudoscience of phrenology, which involves revealing the psychology of the human character based on head bulges that allegedly indicate mental function (Aspiz). The remoteness of the sperm whale's brain from its brow and skull, however, undermines the whole functional basis of phrenology in the creature, so Ishmael extrapolates its principles to an examination of the whale's massive vertebrae and

spinal cord, the hump of which is allegedly its "organ of firmness or indominableness" (Melville 350). As a lecture in natural history mixed with a contemporary pseudoscience, Ishmael's comments here push his recurrent anthropomorphism to a comic extreme, while parodying a contemporary fad that would capture the imagination of many of his contemporaries, notably Walt Whitman.

A similar mixture of ironic humor and sublime wonder is evident in the last two chapters examining the sperm whale's anatomy and physiology, "The Fountain," dedicated to the whale's organs of respiration, and "The Tail," dedicated to its chief means of locomotion. In "The Fountain," Ishmael presents an extended, scientifically detailed account of the whale's remarkable system of breathing that allows it to stay underwater for an hour or more, provided it has fully oxygenated its blood at the surface for enough time, a system that the naturalist Philip Henry Gosse attributed to "the wisdom of God" (135). Ishmael's subversively comic attribution of the "wisdom" of God in the whale has an unexpected conclusion within the traditions of natural theology. For in his discussion of the whale's spout, the watery "mist" produced by its breathing is comically associated with the "semi-visible steam" given off by "the heads of all ponderous profound beings," like "Plato, Pyrrho, the Devil, Jupiter, Dante" and even the author himself on a hot August day, when "in the act of thinking deep thoughts" (Melville 374). Both deifying and anthropomorphizing the whale's mysterious misty spoutings, Ishmael ends the chapter by paradoxically comparing it to both the rainbow (here recalling the rainbow as a sign of God's covenant with humanity following the Flood in Genesis 9:11-17) and to the "thick mists of dim doubts" in Ishmael's mind, which is also occasionally visited with "divine intuitions," leaving him poised between infidelity and belief: "Doubts of all things earthly, and intuitions of some things heavenly; this combination makes neither believer nor infidel, but makes a man who regards them both with equal eye" (Melville 374). Ishmael's paradoxical confession of skeptical faith is thus radically different from the unabashedly reverent attitude of most contemporary natural history writers.

In a subsequent review of the sperm whale's enormous tail, which is given a vivid, scientifically detailed description, we are again reminded of the sublime strength of this cetacean monster, for the tail unites power with graceful beauty in a combination suggestive of Michelangelo's *Sistine Ceiling* frescoes: "When Angelo paints even God the Father in human form, mark what robustness is there" (376). The whale's tail includes in its wondrous repertoire of movements the act of "peaking," which "is perhaps the grandest sight to be seen in all animated nature. Out of the bottomless profundities the gigantic tail seems spasmodically snatching at the highest heaven" (Melville 378). While such an action may suggest Satan "thrusting forth his tormented colossal claw from the flame Baltic of Hell" (as Ishmael claims to have seen in his dreams), the theological associations of the peaking of the whale's tail ultimately depend on the mood of the viewer, whether inclined to Dante's visions of hell or the prophet Isaiah's of heaven. Ishmael's final comment on the whale's tail is a confession of ignorance suitable for studying the whale as a whole, from faceless head to morally and theologically ambiguous tail. Confronted with the intractable mystery of many aspects of the whale's anatomy, Ishmael quotes the words of God to Moses on Mount Sinai when the biblical prophet demanded to see the deity: "Thou shalt see my back parts, my tail, he seems to say, but my face shall not be seen [Exodus 33: 21-23]. But I cannot completely make out his back parts; and hint what he will about his face, I say again he has no face" (Melville 379). In the end, Ishmael's natural history of the sperm whale shows the limits of anthropomorphizing nature and drawing easy theological lessons from its allegedly beneficent design.

Ishmael's evocation of the sperm whale as a species also extends to his astute observation of the social habits or ethology of these whales in chapters eighty-seven ("The Grand Armada") and eighty-eight ("Schools and Schoolmasters"). In "The Grand Armada," for example, Ishmael describes an encounter with an extensive population of sperm whales traveling through the Straits of Sunda; for in the midst of the hunt, his whaleboat is surrounded by vast circles of whales, "swiftly going round and round, like multiplied spans of

horses in a ring" (Melville 387). Such a social grouping forms a protective circle for the pregnant whales and nursing mothers, for in the water below his whaleboat, Ishmael sees a newborn whale suckling at its mother's underwater breast while staring upwards at the boat, "as human infants while suckling will calmly and fixedly gaze away from the breast, as if leading two different lives at the time" (Melville 388). Ishmael's privileged vision of the intimate details of sperm whale family life also includes the sight of "young Leviathan amours of the deep" (Melville 388)—a leading remark immediately followed by a discreet footnote describing the details of female sperm whale gestation and lactation, and the fact that mating whales "salute" each other, or copulate, "*more hominum*," in the manner of humans.

Ishmael's report of sperm whale procreation and maternal care is set amidst the perils of the hunt, but his ensuing digression on the social behavior of male sperm whales is a delightfully anthropomorphic survey of the life cycle of their behavior. Casting his brief treatise as a comic parody of Romantic Orientalism in the manner of Washington Irving's *Salmagundi* papers, Ishmael describes how the full-grown male will escort a school of females: "In truth, this gentleman is a luxurious Ottoman, swimming about over the watery world, surroundedly accompanied by all the solaces and endearments of the harem" (Melville 391). Like human "fashionables" seeking pleasure in various seasonal resorts, the whale schools of "lord" and "harem" travel the oceanic world at designated seasonal intervals; and like their human counterparts, the cetacean "Bashaw" will attack an interloping "Lothario" to keep him away from the females, "fencing" with their lower jaws, which often bear the signs of such violent duels. As the male "Ottoman" whale ages, it is likely to "enter upon the impotent, repentant, admonitory stage of life" and "disbands the harem" (Melville 393). The vigorous young males, by contrast, create their own large schools, which resemble the boisterous, adolescent college students of the age, like those who participated in the notorious Harvard College student rebellions of 1823 and 1834: "Like a mob of young collegians, they are full of fight, fun, and wickedness, tumbling round the world at

such a reckless, rollicking rate, that no prudent underwriter would insure them any more than he would a riotous lad at Yale or Harvard" (Melville 393).

A final example of a standard scientific procedure in nineteenth-century natural history is contained in chapter 103 on the "Measurement of the Whale's Skeleton," in which Ishmael examines the huge sperm whale skeleton making up a pagan temple on the island of Tranque and, in the manner of Owen and other comparative anatomists, provides exact measurements for the various bones and vertebrae. While he is dutifully compiling precise metrical data here, Ishmael's main point is to suggest how little the skeleton resembles the fully invested body of the living whale, with its substantially larger bulk. The ultimate lesson is one of human vanity when confronted with one of the wonders of the creation, for it is "vain and foolish" for man to "try to comprehend aright this wondrous whale, by merely poring over his dead attenuated skeleton" (Melville 453). For "only on the profound unbounded sea, can the fully invested whale be truly and livingly found out" (Melville 454). In keeping with the Romantic ethos of the amateur field naturalist, Melville insists that the mere skeleton cannot convey the sublime reality of the sperm whale, despite the growing prestige of scientific reductionism associated with the professional "closet" naturalist.

It is important to note that an awareness of the contemporary conventions of natural history writing adds a significant hidden dimension to Ishmael's examination not only of sperm whale anatomy, but also of the whole oceanic creation. The savagery of the sea is graphically illustrated by the action of the sharks that attack the carcass of the dead whale, as described in chapter sixty-six ("The Shark Massacre"). In his study of *The Ocean*, Philip Henry Gosse had acknowledged that of all the creatures in the world, the shark "has 'villain' written on its countenance" (187). But his ensuing excuse for the shark's voracity reveals the insuperable difficulties that writers of natural theology face when attempting to justify the existence of natural evil:



Yet this sanguinary voracity is but the result of an unerring instinct implanted in the animal by God, without the existence of which, its life could not be sustained: and therefore it seems not only foolish, but even sinful, to entertain feelings of personal revenge against it, as if it were endowed with human reason, "knowing good and evil" (Gosse 188).

In a direct contradiction of Gosse's final admonition, Queequeg in *Moby-Dick* is shown as harboring understandably vengeful feelings against a shark hoisted on the deck of the *Pequod* that, presumed dead, almost bites off his hand, at which point he makes a seemingly blasphemous remark about the deity responsible for the animal's creation: "Queequeg no care what god made him shark, ' wedder said the savage, agonizingly lifting his hand up and down; ' wedder Feejee god or Nantucket god; but de god wat made shark must be one dam Ingin'" (Melville 302). As an effective counter to the tenets of natural theology, Queequeg's attribution of evil to the god of creation, whether pagan or Christian, has the virtue of honesty that is often shirked by pious naturalists like Gosse.

We may conclude by acknowledging the ways that Melville creatively adapted many of the standard conventions of the era's pervasive natural history writing, including its emphasis on firsthand knowledge of a species' anatomy, habitat, and behavior; its heavily anthropomorphized descriptions allegedly teaching lessons to humanity; and its ubiquitous natural theology placing the creation under the wise governance of the creator. Lynn L. Merrill notes that "Victorian natural history writing, unlike scientific prose, was not goal oriented but rather discursive—a gathering up, or collection, of disparate observations acquired on rambles or jaunts" (260). It is on just such an oceanic "jaunt" that a buoyant and intellectually receptive Ishmael—in contradistinction to the destructively goal-oriented Ahab—has gathered his discursive collection of observations on the sperm whale and thus given the reader, amidst a narrative of multiple generic identities, a brilliant treatise on cetology.

## Note

1. For more in-depth detail about Gosse, see chapter eight of Merrill's *The Romance of Victorian Natural History*.

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## "We Account the Whale Immortal": Fantasies of Ecological Abundance and Discourses of Extinction in Herman Melville's *Moby-Dick*

Jennifer Schell

While some chapters of *Moby-Dick* describe the "aesthetically noble associations" of whaling, as well as its "honor and glory," others meditate on what twenty-first-century environmental advocates would call the ecological impact of the American and European whale fisheries (Melville 111, 112).<sup>1</sup> In these portions of the novel—"The Fossil Whale" and "Does the Whale's Magnitude Diminish?—Will He Perish?"—Ishmael poses the problem of extinction.<sup>2</sup> He wonders "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" (Melville 460). To answer these questions, Ishmael engages in a lengthy consideration of whale fossils, habitats, behaviors, and populations. He takes into account nineteenth-century whale-hunting practices. And he even goes so far as to compare the "humped herds of whales with the humped herds of buffalo," which, at the time he was writing, were rapidly disappearing from the Great Plains of the American West (Melville 460). After weighing all of these factors, Ishmael blithely concludes, "We account the whale immortal in his species, however, perishable in his individuality" (Melville 462). Despite significant empirical and experiential evidence to the contrary, he insists that whales will survive the nineteenth century.

With respect to his concerns about extinction, Ishmael was not alone, for, as the nineteenth century progressed, Americans, and some of their British counterparts, grew increasingly worried about the issue. By 1886, an anonymous author, writing for the periodical *Forest and Stream*, dubbed the era "A Century of Extermination" and lamented that, "It seems quite probable that this Nineteenth century may be unpleasantly memorable in centuries to come as that in which many species of animate and inanimate nature became