“DOES THE WHALE’S MAGNITUDE DIMINISH?”
MELVILLE’S USE OF THOMAS BEALE’S THE NATURAL HISTORY OF THE SPERM WHALE

A Thesis
by
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Submitted to the Graduate School
Appalachian State University
In partial fulfillment of the requirements for the degree of
MASTER OF ARTS

May 2012
Department of English
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ABSTRACT

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MELVILLE’S USE OF THOMAS BEALE’S THE NATURAL HISTORY OF THE SPERM WHALE. (May 2012)

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The cetology, or science of whales, in Herman Melville’s Moby Dick is often an impediment for readers. However, these chapters contribute greatly to the narrative elements of the novel. One source extensively used by Melville for this information was Thomas Beale’s The Natural History of the Sperm Whale.

The role of Beale’s work in Melville’s novel appears limited to scientific information, but Beale’s text was used to enhance thematic elements as well. By examining how Melville uses Beale’s information in specific sections, such as Chapter 32, “Cetology,” and in other areas focused on thematic metaphors such as Chapter 80, “The Nut,” it becomes clear Melville relied on Beale for more than scientific research. In addition to research, Melville also presented information structured in a way similar to Beale’s. Melville took information Beale identified as myth and used it to increase the physical, philosophical, and spiritual magnitude of whales and Moby Dick. However, he also used the scientific information to identify the limits of science. Through Ishmael, he portrays the preference of wondering about the unknown to the objective answers given by science.
Recognizing the importance of Melville’s use of Beale’s *Natural History* enhances the meaning of the frequently overlooked cetology chapters in *Moby Dick*. The information in these chapters adds to the thematic narrative Melville produces by providing a source he could elaborate on and craft the metaphysical image of Moby Dick from.
DEDICATION

This work is dedicated to Carol Cox who always encouraged me to keep writing.
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CHAPTER 1

Pursuing the Whale

Herman Melville’s *Moby Dick* is a compilation of numerous disciplines, culminating in a novel influenced by philosophy, religion, science and many other realms of knowledge. One particularly noticeable field of study included is cetology, the scientific study of whales. The extensive cetology information provided by Melville turns many readers away from the text. However, this information is not only an extraordinary resource and a testament to human knowledge regarding whales and whaling in the 19th century, it is information Melville makes critical to his novel’s thematic development. It represents a unique implementation of science in a literary work. Published over 150 years ago, Melville’s novel remains an important contribution to literature and a testament to the use of science in novels.

*Moby Dick* chronicles the journey of the Pequod in pursuit of the great white whale, Moby Dick. Captained by the monomaniacal Ahab, the narrator Ishmael is retelling the story having survived the eventual encounter with the whale. Although the narrative makes up a large portion of the novel, Ishmael injects the text with numerous chapters on cetology and scientific whale anatomy. Seemingly unimportant and at times excessive, Ishmael claims this information is provided to give a “thorough appreciative understanding of the more special leviathanic revelations and allusions of all sorts which are to follow” (Melville 116). The information often comes across as supplemental or unnecessary, but is important in the grand picture of the novel.
Due to Melville’s brief foray into whaling, he was able to speak partially from experience in *Moby Dick*. In *Herman Melville A Biography*, Hershel Parker says, “Melville could combine his previous reading with his own memories of whaling scenes and with oral tales he remembered, all without source books at hand” (695). However, a large portion of Melville’s information came from outside sources. Parker claims, “Melville’s reading of his whaling sources for *Moby Dick* may have dated from as early as 1839. On 27 May 1839, the Albany *Argus* had printed . . . the British surgeon Thomas Beale’s *The Natural History of the Sperm Whale to Which Is Added a Sketch of a South-Sea Whaling Voyage in Which the Author was Personally Engaged*” (695). This text was an important resource in the composition of *Moby Dick*, which is evident in Melville’s extensive use of Beale’s information.

Melville went to great lengths to obtain Beale’s text. Parker says, “Melville knew he could write the story of the white whale. . . [if he] could get a hold of Thomas Beale’s book and any other science books of whaling he learned of” (696). Melville’s personal experience with whaling informed the narrative but he needed additional resources to elaborate on the physiology of whales. Beale’s text was available through the British publisher Wiley and Putnam. Melville had access to books by this publisher, but he had to wait for it to arrive from London. The lack of Beale’s text stalled Melville’s writing in the summer of 1850: “He delayed a decision about a vacation from week to week until he reached a good stopping point on the book, which depended in part on his receiving the whaling books he had ordered. . . On 27 June he still did not have his copy of Thomas Beale’s *Natural History of the Sperm Whale*” (730). He obtained several other scientific sources, “but he needed more scientific ballast for his personal experience than he was
finding in the *Penny Encyclopedia* and Scoresby” (Parker 731). Almost a month and a half later, the text finally arrived: “At last on 10 July he picked up the copy of Beale that Putnam had imported from England for him. As he had known already from the many quotations from it he had seen in other books. . . Beale would be immensely useful for information that he could quote or otherwise assimilate into the manuscript” (731).

Beale’s text was important as an original work, but it also collected information from other authors that allowed Melville to spend less time researching and more time writing.

Beale’s text is first quoted in Melville’s introductory matter titled “Extracts” and is explicitly referenced several times throughout the novel. Most prominently, Melville cites Beale as well as another author, Frederick Debell Bennett, in his chapter “Cetology” as having composed the most reliable texts on the scientific topic of sperm whales. Melville says of these texts, “There are only two books in being which at all pretend to put the living sperm whale before you, and at the same time, in the remotest degree succeed in the attempt” (117). He goes on to say, “Those books are Beale’s and Bennett’s; both in their time surgeons to English South-Sea whale-ships, and both exact and reliable men” (117). In addition to credible information, Melville also notes the integrity of the artistic depictions of whales produced by Beale and is quite complimentary of Beale’s text. However, the direct references Melville makes to Beale’s work mask his frequent unreferenced use of information from *Natural History of the Sperm Whale*. Furthermore, his specific mirroring of Beale’s data organization is extensive and more central to the composition of *Moby Dick* than scholars have acknowledged.
Thomas Beale’s 1838 text was a prominent and very recent scientific text on the subject of sperm whales at the time of Melville’s writing. As author of a text organizing a vast amount of information on the sperm whale, Beale breaks down the research into categories, the most extensive being that of anatomy. Beale breaks his text into two major parts and then into chapters, indicated by roman numerals (part one consists of roman numerals I through XV and part two ranges from I to XII). An exception to this organization is chapter VIII, “Anatomy and Physiology of the Sperm Whale.” Included are titled sub categories, all starting with “Of the” and then the anatomical topic. The majority of these sub categories name a single part of sperm whale anatomy, such as “Of the Skeleton” or “Of the Skin,” but others include multiple parts, such as “Of the Esophagus, Stomach, and Intestines.” The anatomy is collected in this chapter; chapters prior to and beyond pertain to other aspects of the sperm whale, such as “Nature of the Sperm Whale’s Food” and “Of Ambergris.”

Beale’s chapters are not lengthy and there does not appear to be an overarching consistency to the placement of topics. His chapters contain information spanning different authors and historical perceptions or misperceptions concerning whales. For instances, Chapter VIII, “Anatomy and Physiology of the Sperm Whale,” contains a wealth of information from the British naturalist John Hunter, where Beale acknowledges his heavy use of “the inimitable paper, originally presented to the Royal Society by the great John Hunter” (Beale). At times Beale digresses from his main topic. For example, in Chapter VII, “Nature of the Sperm Whale’s Food,” Beale quotes “Dr. Roget” from his “Bridgewater Treatise under the head of Cephalopoda” at length concerning the squid, or main diet of the sperm whale. Melville structures his cetological information in a similar
fashion. With only a few exceptions, *Moby Dick* prominently displays topics about the sperm whale in its cetology chapter headings. He intersperses these chapters throughout the novel, trickling information to the reader, so that as the data about the whale’s physical magnitude increases, so does the reader’s perception of the whale’s metaphorical magnitude. Like Beale, Melville uses “Chapter” followed by a roman numeral designating the specific chapter. His chapter titles are very brief and relate to the main topic of the section, often being as direct as “The Tail” or “Ambergris.” However, chapter titles are not always literal descriptors as many refer to metaphors to describe aspects of whale anatomy. For example, the chapters “The Prairie” and “The Nut,” refer to the skin on the head of a whale and the whale’s brain, respectively.

Thematically, the chapters about the head allow Melville to metaphorically expand the physical and metaphysical magnitude of the whale. He does so by comparing features on the whale’s head- the eyes, brain, or brow, for instance- to large physical or even mystical entities. The chapters contain a number of elaborated metaphors. For example, Ishmael in “The Sperm Whale’s Head,” Chapter 74, calls attention to “the peculiar position of the whale’s eyes, effectually divided as they are by many cubic feet of solid head, which towers between them like a great mountain separating two valleys” (296). Pondering this image of the whale’s eyes being separated by a mountainous head leads Ishmael to conclude that the whale’s brain must be “much more comprehensive, combining, and subtle than man’s” to be able to “blend their visual power, so as to produce one picture and not two to the brain.” He ends the chapter admonishing readers to quit focusing on enlarging their minds and to work instead to “subtilize” them (297).
CHAPTER 2

Cetology

The first place where Beale’s influence on the content of Moby Dick is evident comes in Chapter 32, “Cetology.” ¹ A rather long chapter considering Melville’s normally concise packaging of information, Chapter 32 is not organized like any other chapter in Moby Dick. It closely resembles an explicitly scientific text with the breakdown of a larger subject, whales, into categories and subcategories. The narrator tells readers, “My object here is simply to project the draught of a systemization of cetology. I am the architect, not the builder” (117-118). The blueprint of this chapter remains unique in the context of the novel but not when considered against primarily scientific texts, such as Beale’s. Perhaps more than any other portion of Moby Dick, this chapter directly reflects the style and organization implemented by Beale. Melville sets up this chapter with an organization mirroring Beale’s to present known information regarding whales, a strategy that allows Melville to quickly and efficiently convey to readers a large amount of information about cetology and various, less important, whales to readers. Once he has conveyed the broader image, he focuses his discussion on sperm whales and Moby Dick. Ishmael says of the sperm whale: “Far above all other hunted whales, his is an unwritten life” (117).

¹ For other uses of cetology in Moby Dick see Elizabeth Duquette’s “Speculative Cetology: Figuring Philosophy in Moby Dick” or Robert Greenberg’s “Cetology: Center or Multiplicity and Discord in Moby-Dick”
Chapter 32 presents Ishmael’s systematic organization of research on whales. Although elsewhere in the novel Melville focuses primarily on the sperm whale, as it is in the species of Moby Dick, here he includes information regarding other whales too (unlike Beale, who writes exclusively about the sperm whale). More akin to a scientific text than fictional narrative, it represents a sharp break in chapter structure. The placement and inclusion of Chapter 32 is also important, as it falls prior to other chapters containing anatomical information and initiates the chapters digressing into physiological discussion. Regarding the organization, Ishmael says, “First: According to magnitude I divide the whales into three primary BOOKS (subdivisible into CHAPTERS), and these shall comprehend them all, both small and large” (119). The “type” of whale, established by “magnitude” is broken down into individual species then into subcategories. The information in the subcategories is slightly structured as well, dependent on how much information is available for each subcategory.

Melville uses roman numerals in this section to delineate between category and subcategories, which is also how Beale categorizes the information he provides. Beale organizes his entire text by “Parts,” identified by roman numerals, and breaks down subcategories by “Chapters,” also identified by roman numerals. His numerically determined chapters are content contingent based on the information available, with occasional need to subdivide further.

Beale’s form is mirrored in many ways throughout *Moby Dick* but in Chapter 32 Melville shows a greater influence from scientific texts than in other chapters perhaps because the information in this chapter is a precursor to the more extensive information he will provide in later chapters. His imitation of Beale’s structure here is integral to the
chapter being perceived as scientific by readers. In order for Melville to create the terrifying image of Moby Dick necessary to lift his whale hunt to epic heights, it is important for readers to accept the cetology information he is providing. The high structure and attention to organization creates a visage of a scientific work. Visually, this could be as important as the actual content. The average reader would not likely be familiar with the most current research regarding whale anatomy but may have been exposed to a scientific text using a similar category/subcategory/information structure. Therefore, seeing a text structured this way- even in a work of fiction- would give an aura of truth to information so organized.

Melville asserts the authority gained from this structure to capitalize “BOOK,” “CHAPTER,” and the category and subcategory, such as “FOLIO” and “RAZOR-BACK.” Again, this technique imitates Beale. The capitalization of the titles gives the perception of a credible backbone to Ishmael’s cetology schema, as if insinuating this information is pulled directly from a scientific text. To the average reader, this similarity in structure is far more important than the accuracy of information, for as Ishmael points out, this research gives readers a “thorough appreciative understanding” (116). The understanding is necessary for readers to have so Melville can fully elaborate on the magnitude of the sperm whale, which is directly related to his monstrous depiction of Moby Dick. Regardless of factual accuracy, the chapter is successfully disguised as an excerpt from a scientific volume.

Melville’s implementation of this structure allows him to inject the text with any information, scientific or otherwise, and instill a sense of credibility. The structure is a simple inclusion but blurs the line between fact and fiction. With the visage of a credible,
scientific source, Melville could have added, or ignored, research aiding or hindering the narrative. Extrapolating this concept to the structure beyond Chapter 32, a similar effect on readers is evident. Because the overall structure of *Moby Dick* bears greater resemblance to a scientific text than to a traditional novel, the cetology chapters weave a sense of authority throughout the text.

Chapter 32 is the first of the chapters on cetological information and occurs relatively early in the novel. Melville uses this chapter to gain the trust of readers, who would conclude from it that the narrator is an expert on cetology. Because of this trust, Melville can then more easily convince readers that the image he builds of the sperm whale- and finally of Moby Dick himself- is true. The “empirical” evidence offered by Melville throughout the novel, then, relies on the trust gained in Chapter 32.

The science functions to enhance the credibility of Ishmael as a knowledgeable and competent narrator. Although naturalists such as Beale and others are infrequently referenced, Ishmael mostly appears to provide the scientific research from his own experience and knowledge. Ishmael appears to be a marine biologist given his extensive knowledge of oceanic life and credits himself in many instances. In Chapter 32 he describes the preceding organization of whale classification as “*my* cetological System” (Melville 118). Giving Ishmael the extreme knowledge of this information enhances his credibility as a narrator to the readers he is “informing.” The actual validity of the information is less important than its presence. Being able to cite this information and reference naturalists, Ishmael begins to sound like a scientist himself, which enhances the believability of the information he is providing. Moreover, if it is assumed Ishmael is the author of the text, Melville is able to wash his hands of any responsibility regarding
accuracy of scientific information provided. Through Ishmael, Melville is able to twist information to better suit the narrative and uniquely bend the research provided by Beale. Ishmael’s rationale for including the information, as he mentions several times, is to inform the reader so they can better appreciate the narrative he is weaving.

Other elements contribute to the credibility of Ishmael, such as the scientific seeming organization of the text and Chapter 32. Not only the text is to be assumed as created by Ishmael, but also decisions about organization and structure in the novel. By allowing different areas of the novel to mirror the organization of naturalists, particularly Beale, Ishmael becomes a more believable narrator, as readers are likely to associate this type of organization with a scientific text. By making Ishmael sound and appear to write like a scientist, Melville is working to support the overall metaphor of the novel— the physically and metaphysically inflated image of Moby Dick.

Another strategy that Melville employs is to rely on information from Beale to show what a sperm whale looks like. Simultaneously, however, he uses descriptive information from *The Natural History* to ensure that these are descriptions Moby Dick exceeds, for Moby Dick is representative of a side of nature that is unable to be captured by science. To show this, Melville never allows Moby Dick to be fully constrained by scientific definitions; there is always an element of this whale that allows him to elude capture.

Melville’s organization of the whale’s anatomy in the text following Chapter 32 does not follow a specific structure, but neither does Beale’s. Beale appears to be starting with the innermost parts of the sperm whale, the skeleton and bone structure, and working his way out to the most external components, such as the sensory and sexual
organs. This is not wholly consistent as certain exceptions interrupt the overall construction. Melville’s organization is not as explicitly obvious as Beale’s, however his arrangement of cetological information makes thematic sense, with the most time spent on parts of the whale he especially feels are important for his character development of Moby Dick.

The content in the cetology chapters is frequently organized in a specific way. Ishmael presents scientific research regarding the region of anatomy he is discussing. He is often very detailed and cites measurements and exact dimensions. For example, early in “The Tail” he says, “The compact round body of its root expands into two broad, firm, flat palms or flukes, gradually shoaling away to less than an inch in thickness” (Melville 335). The scientific information takes up varying lengths in different chapters; it depends on the part of the anatomy he is describing. In “The Tail,” Ishmael describes the movement and shape of the tail for several pages. He maintains a factual attitude as he reports this information: “the whole bulk of the leviathan is knit over with a warp and woof of muscular fibres and filaments” (336). However, the science digresses into conversation about the greater meaning of the respective anatomy through metaphors. Ishmael tells readers, for instance, that “This peaking of the whale’s flukes is perhaps the grandest sight to be seen in all animated nature. Out of the bottomless profundities the gigantic tail seems. . . snatching at the highest heaven” (338). Comments like these support a grander image of the whale than science can convey. The large image Ishmael consistently provides includes and regularly exceeds physical magnitude and describes the size of the whale in philosophical terms. Ishmael says, “So in dreams, have I seen majestic Satan thrusting forth his tormented colossal claw from the flame Baltic of Hell”
Depicting the whale as Satan and the ocean as Hell elevates the perception of the whale to terrible, otherworldly magnitude, which cannot be accomplished with science.

The cetology chapters close with Ishmael speculating about the wonder inspired by the unknown. Ishmael lays out extensive information early in the chapters, but often closes by questioning how much is actually known about the piece of anatomy. For example, in “The Tail” he says, “The more I consider this mighty tail, the more do I deplore my inability to express it. At times there are gestures in it, which... remain wholly inexplicable” (Melville 339). The pattern of presenting science, digressing to metaphors, and closing with doubt and wonder permeates the cetology chapters. The wonder Ishmael experiences is a reflection of his attempts to comprehend the whale as a whole; whereas science wishes to understand the whale by breaking it down into parts. Ishmael wants to experience the awe that comes from considering the whale as a whole. The totality of the whale inspires Ishmael to wonder about the unknown, which leads him to ponder the spiritual and philosophical characteristics of it. For example, Ishmael fully realizes that understanding the physical side, embodied by science, of the whale is not representative of the whale’s entirety: “Dissect him how I may, then, I but go skin deep; I know him not, and never will” (339).

Dissection is a good place for Ishmael to begin his quest to understand the significance of the whale, however, the many chapters in the novel that focus on single parts of the whale functions to dissect the physical whale for readers. The specific anatomical structures mentioned by Melville are the head, skull, brain, skin, blowhole, tail, and overall body. Of these structures, he spends the most time discussing the head, encompassing nearly seven chapters if the skull and brain are included with the head. The
chapters concerning the head or front of the whale are loosely grouped together, compiled in chapters 74, 75, 76, 77, 79, and 80. Considering the 135 total chapters in *Moby Dick*, these chapters fall roughly after the middle of the book but do not conclude a discussion of whale anatomy.

Again, Melville relies on *The Natural History* for guidance. Of the head and its constituent parts, Beale dedicates the same number of chapters as Melville—six. Broken down into anatomical designations, they include “Of the Cranium, Of the Lower Jaw, Of the Teeth, Of the Brain, Of the Ear, and Of the Eye.” Beale’s text has a total of twenty-five chapters concerning the anatomy of the whale, and the information regarding the head is the largest collective component. Similar to Melville, he does not group the chapters about the head immediately following each other but spreads them out with other physiological information in between. The importance placed on the head by both authors does not appear coincidental, as it is a highly important element of the whale both physiologically and for narrative purposes.

To make understanding the whale entail more than scientific description, Melville also uses metaphors to describe different parts of the whale. The metaphors are often in the same chapters as scientific information. For instance, Melville starts Chapter 80, “The Nut,” with empirical information about the whale’s brain: “In the full-grown creature the skull will measure at least twenty feet in length. . . The brain. . . is hidden away behind its vast outworks” (312). He then switches to metaphorical language, saying that the brain is “like the innermost citadel within the amplified fortifications of Quebec” (312). The situation of the brain deep within the skull leads Melville to say, “As for his true brain, you can then see no indications of it… The whale, like all things that are mighty, wears a
false brow to the common world” (312). Here Melville takes physiological information and creates metaphors around aspects of it. The location of the brain in the whale’s skull and its being “mighty” are unrelated, but Melville uses this information to imaginatively aggrandize the magnitude of the whale by taking anatomical figures and creating larger images, as when he compares the protected placement of the brain to an “innermost citadel” with “amplified fortifications.” The metaphors work to increase the perceived size of the whale by associating anatomical structures of the whale with grandiose images.

The metaphors also support attempts to make the whale sublime. For Melville, the magnitude of the whale is not limited to physical size. Throughout his novel he builds up the physical size of the whale, but he makes the whale’s metaphysical magnitude increase as well. Melville increases this aspect similarly to how he increases the physical size—through metaphors and associations. An example of this is in “The Whiteness of the Whale” where Ishmael says, “Is it by its indefiniteness it shadows forth the heartless voids and immensities of the universe, and thus stabs us from behind with the thought of annihilation, when beholding the white depths of the milky way?” (Melville 175). This chapter focuses on Moby Dick’s peculiar hue and Ishmael places deep meaning on this single trait. Based exclusively on the color of Moby Dick, Melville creates associations between his whiteness and the sublime feeling of looking into regions of space. Ishmael philosophizes the color of Moby Dick to the level of spirituality, turning a natural anomaly into a terrifying aspect. Ishmael says, “This elusive quality it is, which causes the thought of whiteness, when. . . coupled with any object terrible in itself, to heighten that terror to the furthest bounds” (169). Melville juxtaposes the association of the color
white with purity or innocence against Moby Dick, which he portrays as terrifying and malicious. Using only his color, Melville elevates Moby Dick beyond a physical monster to one violating an aspect of nature. Ishmael says, “[the color white] is at once the most meaning symbol of spiritual things, nay, the very veil of the Christian’s Deity; and yet should be as it is, the intensifying agent in things the most appalling to mankind” (175). In creating philosophical and metaphysical associations Melville enforces the sublime image of Moby Dick.

Moby Dick is made sublime by being unknown. Melville achieves this status for his avenging whale by first using metaphoric language to supplement his scientific rhetoric when discussing the normal sperm whale, making the magnitude of the entire species momentous. Then he elevates Moby Dick even beyond the magnificence of the ordinary sperm whale. This particular whale’s distinct characteristics allow him to elude capture by science since he does not fit the physical description of a typical sperm whale or exhibit typical sperm whale behavior. Thereby Moby Dick represents the terror of the undefined unknown. Melville knows that science works to alleviate this terror by making the unknown known; once something is known it can be rationalized. By remaining unknown Moby Dick cannot be rationalized. Because Moby Dick remains unknown and beyond scientific definition, his thematic magnitude increases as one scientific explanation after another fails to encompass all that the whale signifies. Each failure makes Ishmael and readers more aware of the whales’ sublime nature. As Barbara Glenn says, “Among all creatures, [Edmund] Burke cites leviathan as sublime, and Melville brings the full machinery of Burke’s prescriptions of sublimity to the description of whales” (168).
These two strategies- to compare the whale to large worldly structures and to infuse the cetology chapters with ideas of the sublime- are also evident in Chapter 79, “The Prairie.” Here Ishmael says, “For as in landscape gardening, a spire, cupola, monument, or tower of some sort, is deemed almost indispensible to the completion of the scene; so no face can be. . . without the. . . belfry of the nose” (310). In this example, the language of the metaphor grows in size. Melville begins with “spire” and ends with “tower” and the growing size of landscape structures increases the image of the whale’s head. The brow is another feature portrayed in metaphoric magnitude. Ishmael says, “Human or animal, the mystical brow is as that great golden seal affixed by the German Emperors to their decrees” (310). This metaphor does not compare physical size; rather, authoritative magnitude. There is not a direct connection between the seal of German Emperors and the forehead of a sperm whale. However, Melville’s description creates an association between the two and likens the whale to a great ruler.

Similar to Melville’s use of metaphors about the brain, he associates the whale’s brow with very large structures. In “The Prairie” and “The Nut” the phrenological analysis of the whale’s head suggests the feature is similar the brows of humans. Making this comparison, Melville is personifying the whale and showing its potential for conscious thought. However, he exaggerates it further, saying that “in the great Sperm Whale, this high and mighty god-like dignity inherent in the brow is so immensely amplified, that gazing on it. . . you feel the Deity and the dread powers more forcibly than in beholding any other object in living nature” (311). “The Prairie” begins by comparing the whale’s head to a human head and closes by comparing the brow of the whale to a divine presence, which shows Melville building on a metaphor. The metaphors enhance
the magnitude of the whale by associating metaphysical elements with it, which Melville
uses to increase the size of the whale beyond the physical. Perceiving the whale’s
magnitude as metaphysically massive helps to convey the frightening image of Moby
Dick Melville is thematically aiming for.

From these examples it becomes clear that the purpose of Melville mirroring a
scientific text, then, is less concerned with organizing the actual information regarding
the whale as about the image of the whale. Melville’s goal is to make the sperm whale a
monstrous, sublime creature. He creates this image through metaphors, which turn the
scientific information to literary uses. One example of Melville’s privileging image over
science is when Ishmael says in Chapter 80, “The Nut,” (about the whale’s brain), “It is
plain, then, that phrenologically the head of this Leviathan, in the creature’s living intact
state, is an entire delusion. As for his true brain, you can see no indications of it, nor feel
any. The whale, like all things that are mighty, wears a false brow to the common world”
(Melville 312). Here, the narrator is applying phrenological analysis to the head of the
whale. Typically an analysis performed on a human, this extreme, and somewhat
comical, exaggeration of phrenology and the image Melville creates by it is vastly more
important to the perception of the whale than is dry scientific description. A
phrenological analysis determines characteristics about a person based on the structure of
their head. Melville’s suggestion the same analysis could be conducted on a whale
associates character traits from human to whales. Personifying the whale increases the
sublimity of it by showing it capable of intentional thought. This also, of course,
decreases the uniqueness of humans, making them as potentially common as any other
creature in nature. Giving the whale this capacity belittles the perceived exclusivity of
human self-awareness. This aspect of the whale psychologically increases its magnitude in comparison to humans. Portraying the whale as a thinking, conscious entity also supports Melville’s claims about Moby Dick being “malicious” or “vengeful.”

Melville implements two particular species of chapters about whales, those exclusively designed to convey scientific information and others that are narrative driven but fueled by scientific research. An example of the latter is Chapter 65, “The Whale as a Dish,” which discusses eating whale meat in the context of the narrative, but in doing so includes pertinent anatomical information. The metaphor in this chapter does not directly refer to cetology. Instead, the metaphor focuses on the cannibal nature of the world. Melville shows the inhabitants of the world as connected: “Look at your knife-handle, there, my civilized and enlightened gourmand. . . what is that handle made of? –what but the bones of the brother of the very ox you are eating?” (271). This is an example of the numerous supplemental ideas beyond the cetology Melville is presenting in Moby Dick. However, this discussion stems from a chapter on cetology, which Melville often uses as a jumping off point for other ideas he wants to convey. In alternating between narrative and purely scientific chapters, Melville is able to limit and gauge the information given to readers as the novel progresses, which allows the narrative and the scientific information to build on and through each other. As the scientific information regarding the physiology and magnitude of the whale increases, so too does the perception of the whale in the narrative.
Science functions to dispel myths about the unknown and does so through empirical understanding. It takes larger concepts and breaks them down into compartmentalized, easier to understand, pieces. In doing so, the wonder and awe of the unknown is dispelled. In *Education’s End*, Anthony Kronman discusses the relationship between science and human knowledge: “[Science] satisfies more fully than any other form of knowledge we possess a second elementary desire, the desire to understand” (215). Melville, however, portrays science as epistemologically incapable of embodying all aspects of reality. Whales represent a topic well researched by science but regardless of how in-depth science may go, the whale cannot be fully embodied by it. In “The Whale’s Skeleton” Ishmael says:

> How vain and foolish, then, thought I, for timid untraveled man to try to comprehend aright this wondrous whale, by merely poring over his dead attenuated skeleton . . . Only in the heart of quickest perils; only when within the eddyings of his angry flukes; only on the profound unbounded sea, can the fully invested whale be truly and livingly found out. (Melville 405)

Here and elsewhere Melville challenges the idea a whale can be understood by studying its physical characteristics. The physical aspect is presented as only a single side of the whale. Melville’s Ishmael would agree with Kronman when he says, “The human study of the world thus both begins and ends in wonder” (216).
Through *Moby Dick*, Melville aims to exhibit the wonder evoked by the overwhelming confrontation with nature, which cannot be captured by science. The exposure results in an experience with the sublime, which is the unknown. No scientific research could prepare Ishmael or Ahab for their encounters with Moby Dick because he represents a degree of magnitude beyond the empirical, knowable realm of knowledge. Moby Dick is nature in its purest form and not compartmentalized. Kronman says, “The modern sciences of nature surpass all other modes of human knowledge—religious, philosophical, historical, and literary—in their capacity to satisfy our desire to understand” (218). Melville objects to holding science in this regard. Science may satisfy our desire to understand, he illustrates through Ishmael, but it shouldn’t stop there. The epistemological ramification of accepting science as final excludes the possibility of the unknown. Ishmael says, “we account the whale immortal in his species, however perishable in his individuality” (413). For him the whale represents an immortal aspect of nature, which cannot be seen by breaking it apart. It can only be recognized in the whole, which includes the massive immortality of the universe. Science turns away from these considerations because they cause humans to feel small and inconsequential, but these are ideas Melville confronts. The novel closes with, “then all collapsed, and the great shroud of the sea rolled on as it rolled five thousand years ago”(508). Whales predate the dawn of human civilization, which is why they are an excellent representation of the immortal magnitude of nature.

As J. Lasley Dameron points out, “To the reader, *Moby Dick* is a pervasive, all encompassing symbol conveyed by an infinite number of related narrative elements, especially descriptive images” (96). These “descriptive images” often sound scientific, as
if grounded in objective research. To achieve this scientific aura, Melville at times leans heavily not only on Beale’s information but on his very language. Significantly, in the chapters containing the greatest amounts of seeming scientific research, the language used by Melville and Ishmael is very similar to the language used by Beale. Beale covers all of the sections of physiology of the sperm whale addressed by Melville in his text and the information presented by Melville closely resembles the presentation and diction used by Beale. For examples, he says in “Of the Cranium,”

The gigantic skull of this animal forms more than a third of the whole length of the skeleton; it is wedged–shaped, and begins with a very thin edge anteriorly, and rises gradually in height, forming an angle on its upper surface (Beale).

Melville in Chapter 77, “The Great Heidelburgh Tun,” similarly notes the attention to the angle of the skull, prompting Ishmael’s definition of “quoin.” Ishmael, rather scientifically says,

Regarding the Sperm Whale’s head as a solid oblong, you may, on an inclined plane, sideways divide it into two quoins, whereof the lower is the bony structure, forming the cranium and jaws, and the upper an unctuous mass wholly free from bones (304).

Of the term “quoin,” Ishmael clarifies by saying, “Quoin is not a Euclidean term. It belongs to the pure nautical mathematics. I know not that it has been defined before” (304). In Chapter 76 Ishmael compares himself to a “sensible physiologist” (302). The inclusion of this information creates authority in Ishmael, even allowing him to define previously “undefined” nautical terms.
In addressing topics of whale physiology, Melville and Beale also use similar language and describe specific parts with similar terms. More important, Melville and Beale both choose their language to convey that the magnitude of the whale extends beyond the indication of measurements and mathematical figures. The term “leviathan” is used numerous times in both texts, but more prominently in *Moby Dick*. Melville uses the term somewhat differently than Beale, frequently capitalizing the “L” and sometimes addressing it as a proper noun. Leviathan is used many times in Chapter 32 “Cetology” to describe different species of whale. An example of the lower case term is when Ishmael says, “the Pequod’s weedy hull rolls side by side with the barnacled hulls of the leviathan” (Melville 116). Using the capitalized version, Ishmael says, “But of my own knowledge, I know that down to the year 1850, sharks, shad, alewives, and herring, against Linnaeus’s express edict, were still found dividing the possession of the same seas with the Leviathan” (118).

In the quotes used in Melville’s “Extracts,” the term leviathan is referenced twelve times by different authors, each appearing to refer to the mythological creature. Here, the consistent use of the upper case “L” addresses the creature as the monster from antiquity. The quotes include lines from the Book of Isaiah: “In that day, the Lord… shall punish Leviathan the piercing serpent, even Leviathan that crooked serpent; and he shall slay the dragon that is in the sea” (xlii). In addition to mythological references, Melville also includes an opening statement from Thomas Hobbes’s work, *Leviathan*: “By art is created that great Leviathan, called a Commonwealth or State. . . which is but an artificial man” (xlv). The juxtaposition in definitions appears to set up Melville’s use of the term leviathan to reference size or magnitude.
Melville uses the adjective “leviathanic” to express extraordinary magnitude as well as to describe information pertaining to whales. In Chapter 32 Ishmael says, “it is but well to attend to a matter almost indispensable to a thorough appreciative understanding of the more special leviathanic revelations” (117). He later says, “I do by no means exclude from the leviathanic brotherhood any sea creature hitherto identified with the whale” (119). In Chapter 56, discussing artistic depictions of whales, Ishmael identifies one engraving as being “in the very heart of the Leviathanic life” (243). The terms are capitalized haphazardly, but Melville consistently uses both to express magnitude. Although the terms leviathan and leviathanic could be passed off as mythological references used by Melville to increase the size of the whale, leviathan is an expression used throughout Beale’s text as well.

It is possible Beale’s inclusion and use of the term influenced Melville’s. Both authors use the term to convey a sense of physical and metaphorical magnitude by connecting a term used as analogous for whale to a Biblical, mythological creature. The Oxford English Dictionary identifies leviathan as “The name of some aquatic animal (real or imaginary) of enormous size, frequently mentioned in Hebrew poetry” (OED). Both Melville and Beale use the term as an attempt to grasp the magnitude of the sperm whale in language. This expression refers to the physical magnitude of the whale as well as the massive metaphysical spirit it embodies, which is contained in the mythological definition. The image Melville is creating has to depict Moby Dick as not simply an enormous ocean dwelling creature, but the largest and most terrifying ocean dwelling animal and his repeated use of “this Leviathan” brings a biblical, mythic connotation to Moby Dick throughout the novel.
There are other terms common to both Melville and Beale, but the specific and similar use of the term leviathan makes it stand out. However, on several occasions, Melville’s specific language and wording so greatly mirror Beale’s that they are worth special note. These instances appear to reference Melville’s direct use of information from Beale. One of the best examples is found in Chapter 102, titled “A Bower in the Arsacides,” where Ishmael says while discussing whale skeletons that

…there are skeleton authorities you can refer to, to test my accuracy. There is a Leviathanic Museum, they tell me, in Hull, England, one of the whaling ports of that country, where they have some fine specimens of finbacks and other whales. (Melville 402)

In the section of Chapter VIII pertaining to the skeleton of the sperm whale, Beale says:

A pleasant rivalry was manifested among the scientific gentlemen of Hull, in showing and explaining to me all that they knew respecting the leviathans of the deep, of which the Museum of Natural History at Hull can boast of several fine skeletons, particularly of that of a finback… (Beale Chapter VIII)

In addition to the topic being identical, there are numerous similarities in the statements by Beale and Melville. In both instances, the authors are discussing the skeleton of the whale. Initially, both authors reference the knowledge of the authorities, which leads to a reference of the museum in Hull, England, although Melville does not give the actual name of the museum as Beale does. (Melville generically identifies the museum as a “Leviathanic Museum,” whereas Beale identifies it as the “Museum of Natural History at Hull.”) Melville as well as Beale uses the term leviathan in these passages to describe the contents of the museum. Melville capitalizes both “Leviathanic” and “Museum,” as if
addressing the name of a factual location, similar to how Beale capitalizes the name of the actual museum. However, for Melville’s purposes the idea of a museum dedicated exclusively to whales increases the image of the whale; this is an animal enthralling enough to have a museum solely dedicated to it.

Given the similarity of Melville’s passage in comparison to Beale’s, the “skeleton authorities” Ishmael speaks of, through which readers can “test” his “accuracy” may actually be referring only to Beale. Although he is not explicitly mentioned, considering Melville’s extensive use of Beale’s text and the direct similarities between these two sections, it is possible to infer Beale is the authority mentioned.

One of the most striking similarities between the two passages is that Melville cites the same display at the Hull museum as Beale does, even using the same adjective to describe it. Both authors reference the museum having numerous displays, but both specifically mention the finback whale. The matching line from Beale is, “the Museum of Natural History at Hull can boast of several fine skeletons, particularly of that of a finback “ (Beale Chapter VIII). The strikingly similar text from Melville is: “where they have some fine specimens of finbacks and other whales” (Melville 402). Melville says the museum has “some” specimens and “other whales,” which indicates other displays. Beale is more particular with the subject and identifies the displays as “skeletons,” of which he says the museum has “several.” There are numerous similarities in these lines, but Melville’s selection of the adjective “fine” and identification of the finback show how closely Melville mimics the language and content of Beale’s text in his own. Beyond the similarities in the language, the organization of the statements closely resembles each other. However, it is not only the organization of these individual statements that
Melville borrows, it is also the location of the passage in the broader context of the chapter and subject.

Following this passage, Beale begins his discussion of the skeleton of the whale. The immediate sub section is titled “General Characters” and is followed by “Of the Cranium.” In each section, Beale provides specific measurements. In “General Characters” he writes:

> Extreme length of the skeleton, 49 feet 7 inches; extreme breadth of the chest, 8 feet 8 inches; extreme height of the chest, from the spinous processes of the dorsal vertebrae to the lower portion of the sternum, 8 feet 2 inches; extreme length of the chest from the first to the last rib, 7 feet 4 inches… (Chapter VIII)

For each section of the skeletal anatomy of the whale, Beale goes into precise detail concerning exact measurements, mirroring the structure from “General Characters.” The other sections regarding the skeleton are ordered: “Of the Lower Jaw, Of the Spinal Column, Of the Cervical Vertebrae, Of the Terminal Vertebrae, Of the Spinal Canal, Of the Pelvis, Of the Ribs, Of the Sternum, Of the Scapula,” and “Of the Bones Which Form the Fins.” Although all these sections contain specific information, Beale spends the greatest length discussing the spinal column, specifically the various vertebrae, and the ribs. Of the ribs, Beale says,

> These are ten in number. . . The first rib is in span 4 feet 4 inches, and forms an arch of 1 foot 8 inches in height, the second rib is in span 5 feet 6 inches, and forms an arch of 2 feet 9 inches in height. . . (Chapter VIII)

Concerning the vertebrae and spinal column, he says, “The spinal column, consisting of forty-four vertebrae, forms nearly a straight line throughout the whole of its extent”
(Chapter VIII). These sections proceed into the rest of his discussion and sub chapters about other features of sperm whale anatomy. The statement about the Hull museum leads directly into this discussion of the skeleton for Beale and it also does for Melville.

Following Melville’s similar passage concerning the museum in Hull, he begins his discussion of the skeleton of the sperm whale with Chapter 103, which is appropriately titled “Measurement of the Whale’s Skeleton.” Like Beale, he begins with general remarks about the size of the whale and proceeds to discuss specific parts of the skeleton. Ishmael says, “Having already in various ways put before you his skull, spout-hole, jaw, teeth, tail, forehead, fins, and divers other parts, I shall now simply point out what is most interesting in the general bulk of his unobstructed bones” (404). Ishmael mentions parts of the skeleton he discussed in previous chapters, but the two areas most primarily focused on are the ribs and the vertebrae. Of the ribs he says,

The ribs were ten on each side. The first, to begin from the neck, was nearly six feet long; the second, third and fourth were each successively longer until you came to the climax of the fifth, or one of the middle ribs, which measured eight feet and some inches. From that, the ribs diminished, till the tenth and last only spanned five feet and some inches. (404)

Referencing the spinal column and vertebrae, he says, “There are forty and odd vertebrae in all, which in the skeleton are not locked together. They mostly lie like the great knobbed blocks on a Gothic spire. . .” (405). The shift into discussion of the skeleton after the Hull museum is very similar in both texts by Beale and Melville.

Melville discusses specific parts of the skeleton of the whale at various parts in the novel, but Chapter 103 has the most concentrated information. The placement of this
information is dramatically similar to Beale’s. Melville, too, describes particular measurements of the skeleton. Both Melville and Beale place an emphasis on the vertebrae, spinal column, and ribs. The most similar component in this section between the two writers is Melville’s way of describing the ribs of the whale. Beale begins his section by saying, “These are ten in number” and follows with measurements of each rib. Melville begins quite similarly with, “The ribs were ten on each side” and continues by providing a synopsis of measurements and showing the expanding and contracting nature of the lengths, which match up with Beale’s information, and he appears to be giving readers a summation of Beale’s extensive measurements.

Beale’s text describes each rib growing in length and reaching a peak at the fifth rib, which, “is in span 6 feet 1 inch” (Chapter VIII). Melville says this in simpler terms saying that the “third and fourth were each successively longer until you came to the climax of the fifth, or one of the middle ribs, which measured eight feet and some inches” (Melville 404). Despite Melville’s conveyance of the general trend of rib expansion, there is a discrepancy in information. Where Beale identifies the largest rib spanning just over six feet, Melville claims it reaches eight feet. Considering Melville’s apparent heavy use of Beale for information in this section of the novel, including the direct similarities in language and structure, this discrepancy becomes somewhat representative of Melville’s collective use of Beale: taking the scientific research and placing metaphors around it to convey the increasing size of the whale. Melville’s assertion of the rib spanning eight feet rather than six is a minor detail and only a slight exaggeration, but it sets up the relationship between the information provided by Beale and Melville’s use of it.
Another text both Melville, and Beale, used for information regarding whales was an essay from John Hunter titled *Observations on the Structure and Oeconomy of Whales*, which discusses bones of various whales but does not give exact measurements or bear the similarities in language between Beale and Melville. Regarding the ribs, Hunter’s comments are sparse: “An immense head, a small neck, few ribs, and in many a short sternum, and no pelvis, with a long spine. . .” (Of the Bones). Although Melville was familiar with Hunter’s work, he clearly relied on Beale for the specificities in measurements and details.

These numerous similarities between Melville and Beale show the novelist’s heavy reliance on *The Natural History*. Melville’s dependence on Beale for information on the whale’s skeleton is representative of other places where he leans on the scientist. Because of Beale, Melville did not have to extensively research other works. Parker says, “When he [Melville] alluded (ch. 32 “Cetology”) to Scoresby, Cuvier, Hunter, and Lesson as if he had consulted them all, he was drawing quotations from a single page of Beale” (731). Although there are many naturalists and authors referenced in Chapter 32, *Cetology*, Beale receives repeated commendations throughout the rest of the text. In addition to receiving a sound bite, in *Extracts*, Beale’s depiction of the sperm whale is also favorably referenced in Chapter 56, *Of the Less Erroneous Pictures of Whales, and the True Pictures of Whaling Scenes*, where Ishmael describes attempts throughout history to depict whales in art. He concludes that:

. . .by great odds, Beale’s [attempt] is the best. All Beale’s drawings of this whale are good. . . His frontispiece, boats attacking Sperm Whales, though no doubt
calculated to excite the civil skepticism of some parlor men, is admirably correct and life-life in its general effect (Melville 241).

Although Melville accurately portrays a wealth of information from Beale, *Moby Dick* is also rife with instances of Melville toying with and interpreting certain information provided by Beale. The first instance of this comes as early as the “Extracts.” Melville’s chosen excerpt is a direct quote from Beale:

> Mad with the agonies he endures from these fresh attacks, the infuriated Sperm Whale rolls over and over; he rears his enormous head, and with wide expanded jaws snaps at everything around him; he rushes at the boats with his head; they are propelled before him with vast swiftness, and sometimes utterly destroyed. . . .

> It is a matter of great astonishment that the consideration of the habits of so interesting, and, in a commercial point of view, so important an animal [as the Sperm Whale] should have been so entirely neglected, or should have excited so little curiosity among the numerous, and many of them competent observers, that of late years, must have possessed the most abundant and the most convenient opportunities of witnessing their habits. (xlix-l)

The image of the sperm whale provided in this excerpt is dramatic and terrifying, which propels the image of the whale in the minds of readers to mythological proportions. The whale in this passage appears to be violent, monstrous, and a threat to humans. Melville’s inclusion of the passage in the “Extracts” aids in elevating the image of the whale before the novel even begins. For Melville’s narrative, the passage is an excellent depiction of humans in peril against a whale. However, it is not representative of the information the scientist usually provides.
The quote from the excerpt occurs in Beale’s work in Chapter XIII, subtitled “Chase and Capture of the Sperm Whale.” The subject of this portion is the topic of whaling and the whaling voyage. In these sections, Beale’s writing becomes less scientific and becomes more romantic. Of whalers and whaling he says in Chapter XIII,

> It is not in the field, jungle, or thick forest, that these hardy adventurers seed their prey, upon man’s natural element, and where, should any untoward accident occur, assistance of some kind can be readily obtained, but on the vast ocean, at times thousands of miles distant from any habitable land, where he is not only exposed to the dangers which beset him in his adventures with the monster of the deep, but to others still more terrible… (Chapter XIII)

This passage illustrates Beale’s language shift in the later sections of his work, where he moves from exact measurements and detailed descriptions to elaborated storytelling about whaling, which is relayed in rhetoric quite different from his physiological information about the sperm whale. Shortly after this passage is the section Melville uses for “Extracts.” The highly stylized nature of these sections is deeply contrasted to the objective attitude exhibited by the majority of Beale’s text, which is aimed at accurately portraying sperm whales apart from myths and stories. In *Moby Dick* Melville will also employ different rhetoric to achieve multiple effects as he moves from chapter to chapter. However, like Beale, he will both romanticize Moby Dick and emphasize his monstrosity.

Melville may also have been influenced to include legendary and mythological information about whales from reading Beale, whose “Introductory Remarks” contains research debunking myths surrounding the sperm whale. In the second paragraph of these
remarks Beale says, “Since the earliest days of natural history down to the present time, the sperm whale has been subjected to misrepresentation.” He goes on to quote another naturalist, also mentioned by Melville several times in *Moby Dick*, Baron Cuvier, who claims sperm whale representation has been the product “of that heated imagination which leads some enthusiasts to see nothing in nature but miracles and monsters” (Introductory Remarks). Beale’s attitude about previous research concerning the sperm whale is quite outspoken. He spends a majority of the introduction identifying popular opinion that run opposite to scientific fact. Concerning previous research he says, “although many thousands of persons have been from time to time engaged in the pursuit [of the sperm whale]. . . not one has stepped forward to vindicate its history from the absurd and fabulous accounts with which it has been loaded” (Introductory Remarks). Included in the introductory section are many myths regarding the sperm whale Beale finds to be the most unjust. Melville includes many of these same myths in his narrative to enhance the image of Moby Dick.

There are several key myths Beale rails especially strongly against. Most are myths about characteristics and behavior of the whale reported by naturalists. Many of these rumors elevate the whale to the status of a terrible, frightening creature, which would prove useful for the purposes of Melville. Initially, Beale seeks to identify myths surrounding the sperm whale and to attack the naturalists who claimed them as facts. One of Beale’s most pointed attacks is against fellow naturalist Baron Cuvier. Beale finds much of his information to be loosely grounded and misinformed, saying that “the Baron Cuvier, in the compilation of its natural history. . . has obtained [his information] from many incorrect sources. . . (Introductory Remarks). Beale challenges the assertion of
another team of naturalists, Olassen and Povelsen, also used by Melville, saying they misrepresent the sperm whale as “the most savage and ferocious of marine animals. . . [that] according to their accounts. . . actually possesses a relish for human flesh, which we are led to suppose they wish to satiate” (Introductory Remarks).

Beale makes it clear he is correcting misperceptions and providing previously unreported scientific depiction of the sperm whale. Beale says, “Now that we are more acquainted with the real habits of the sperm whale, that the authorities of which previous writers have availed themselves… [we see they] have all either willfully misrepresented the natural habits of this animal, or have mistaken the cachalot from some other whale which possesses these voracious and combative dispositions” (Introductory Remarks). These areas of myth and pieces of information that Beale corrects will be very important to Melville.

Most of the myths Beale seeks to downplay surround the belief that sperm whales are violent and malicious, both in their “conscious” attitude toward humans and their behavior in nature. Regarding the sperm whale’s “taste for flesh,” Beale objectively explains that “it would be quite impossible for him to swallow such monstrous victims, as his throat is scarcely sufficiently capacious to admit the body of a man” and “also from the fact of his teeth not possessing the power of separating. . . he is totally unable to wound seriously, much more to tear to pieces and devour” (Introductory Remarks). Beale makes a strong case, saying,

For not only does the sperm whale in reality happen to be a most timid and inoffensive animal as I have before stated, readily endeavoring to escape from the slightest thing which bears an unusual appearance, but he is also quite incapable
of being guilty of the acts of which he is so strongly accused. (Introductory Remarks)

Regarding the possibility of a whale attacking a ship Beale says, “If these huge but timid animals happen to see or hear the approach of a ship or boat, their fear in all cases is excessive, and they either dive into the depths of the ocean, or skim along its surface. . .” (Introductory Remarks). Even when pursued, Beale says, “they rarely turn upon their cruel adversaries, for although man and boats are frequently destroyed in these rencontres, they are more the effect of accident during violent contortions and struggles to escape, than from any willful attack” (Introductory Remarks). Beale’s introductory discussion sets up the attitude of the rest of his text, which portrays sperm whales from a factual perspective.

Beale’s scientific refutations of the most horrific beliefs about whales in his introductory section makes the whale appear less like a monster and more containable within scientific research. By breaking the sperm whale down and analyzing it through physiology and anatomy in his chapters that follow, the whale loses many of the frightening characteristics purported by myths. The sperm whale is difficult to perceive in its entirety, but through dissection it becomes a comprehensible whole of many small parts. Evaluating the sperm whale from an objective perspective strips it of some of the mystery it once possessed, which appears to be Beale’s purpose. His scientific approach in the bulk of his book portrays the sperm whale as less frightening than other authors have purported, but also less magnificent and terrifying then it appears in actuality.

Melville, however, does just the opposite: for the purposes of his narrative he makes the sperm whale appear even more frightening and mysterious than it is in real
life. For his purposes, Moby Dick must possess an imaginative magnitude that surpasses all previous conceptions of whales. Through Ishmael, Melville must attempt to take the image of the sperm whale to the edge of physical perception and breach the realm of metaphysical magnitude. To this end Melville uses myth and legend to exaggerate the sperm whale in his novel and it is possible Melville’s exposure to Beale’s introduction gave him some of the material he used to do this. Perhaps even the idea to include legend and myth along with scientific information came from Beale’s inclusion of these sources in his work. If so, Beale’s text is even more important as a source for *Moby Dick*. The text may have informed Melville of both fact and myth and given him a model of combining the two in a single text.

Melville’s genius lies in his use of his source material, though. The sperm whale is a massive animal, which is conveyed consistently through Beale’s text in measurements and figures. Beale says, “Extreme length of the skeleton, 49 feet 7 inches; extreme breadth of the chest, 8 feet 8 inches” (Of the Skeleton). In these figures, the whale loses perceived size and becomes a number. This is where the task of Melville becomes increasingly impressive, as he manages to incorporate Beale’s scientific information about cetology and use it to make the sperm whale appear grander, physically and in spirit, than before. Melville says, “the eternal whale will still survive, and rearing upon the topmost crest of the equatorial flood, spout his frothed defiance to the skies” (Melville 413). This statement - which is quintessential Melvillian prose - could never be mistaken as Beale’s.

An especially good example of the unique use that Melville makes of Beale’s information is in Chapter 45, “The Affidavit,” where Melville says,
So ignorant are most landsmen of some of the plainest and most palpable wonders of the world, that without some hints touching the plain facts, historical and otherwise, of the fishery, they might scout at Moby Dick as a monstrous fable, or still worse and more detestable, a hideous and intolerable allegory. (Melville 184)

It is not the “historical” but the “otherwise” Melville pulls from Beale’s text to inflate the image of the whale. In this chapter, Melville seeks to address the possibility of a sperm whale’s behavior including the capacity to attack a vessel in pursuit of it. He says, “The Sperm Whale is in some cases sufficiently powerful, knowing, and judiciously malicious, as with direct aforethought to stave in, utterly destroy, and sink a large ship; and what is more, the Sperm Whale HAS done it” (185). Melville goes on to reference past incidents involving whales and ships including the Essex, an incident noted by Beale in Chapter XIII. Melville, quoting an account, says, “suddenly, a very large whale… bore directly down upon this ship. Dashing his forehead against he hull, he so stoved her in, that in less than ‘ten minutes’ she settled down and fell over” (185). Although Beale cites instances of infrequent attacks on ships by whales described as “malicious” and attacking “with direct aforethought,” (as Melville describes Moby Dick’s assault on the Pequod), such accounts run contrary to the bulk of research provided by Beale, who asserts the sperm whale to normally be a “most timid and inoffensive animal” (Introductory Remarks). But For Melville’s narrative the idea of a whale being conscious and capable of retaliating against its attackers creates a desirably monstrous picture in the minds of readers. So here and elsewhere Melville uses information Beale portrays as scientific misinformation to magnify the image of Moby Dick.
Another important place where Melville exaggerates Beale’s information to heighten the impact of Moby Dick comes in Chapter 41 “Moby Dick.” Here Melville directly references concepts from previous naturalists challenged by Beale. Melville says, “we find some book naturalists- Olassen and Povelson- declaring the Sperm Whale not only to be a consternation to every other creature in the sea but also to be so incredibly ferocious as continually to be athirst for human blood” (Melville 161). Beale identifies this statement as incorrect, claiming, “If these huge but timid animals happen to see or hear the approach of a ship or boat, their fear in all cases is excessive” (Introductory Remarks). Melville reverses Beale’s information, yet he maintains a certain ambiguity in his language that leaves the scientific actuality of sperm whale behavior unclear. Melville gives blatant examples of Moby Dick’s “malice” against ships, but is quick to mention these are accounts narrated by whalers. The uncertainty created by Melville and the information obtained from Beale further enhances the image of the whale in the minds of readers.

Although Melville twists the information provided by Beale, it is possible without being exposed to this scientist’s work Melville would not have been able to amass and creatively re-formulate so much information supporting his elevation of Moby Dick into mythic proportions. If this is true, then the information Beale identifies as myth is perhaps more important than the information he claims is science. In railing against the depiction of the sperm whale as “murderous,” Beale is providing Melville with traits for Moby Dick. Essentially, everything that Beale claims the sperm whale is not is what Moby Dick becomes. Beale quotes Olassen and Povelsen in saying, “[the sperm whale is] represented as . . . the most savage and ferocious of all marine animals. . . [and] actually
possesses a relish for human flesh” (Introductory Remarks). In Chapter 41, describing Moby Dick, Melville references this exact passage, almost verbatim from Beale, as fact concerning Moby Dick saying “Olassen and Povelsen- declaring the Sperm Whale not only to be a consternation to every other creature in the sea but also to be so incredibly ferocious as continually to be athirst for human blood” (Melville 161). Aside from a near direct quote from Beale, Melville provides information from credible naturalists supporting his intended (but not factual) claims about Moby Dick. So, every aspect of science in the novel, accurate or otherwise, works to enforce the metaphor surrounding Moby Dick. If this metaphor collapses so does the novel.

Chapter 41 focuses on Moby Dick, and here Melville weaves facts and myths together. Ishmael, who seems to admit the suspicious nature of his statement, says, “One of the wild suggestions referred to. . . was the unearthly conceit that Moby Dick was ubiquitous; that he had actually been encountered in opposite latitudes at one and the same instant of time” (Melville 162). Although a completely impossible feat, this rumor is mentioned within proximity of events Ishmael claims to be true. For example, it is mentioned closely to the whale attack that sank the Essex, a well-known historic incident that seems almost equally unbelievable. Ishmael follows in the immediate paragraph saying that sperm whales “from time to time have originated the most curious and contradictory speculations regarding them, especially concerning the mystic modes whereby. . . he transports himself with such vast swiftness” (162). Placing myth within proximity to fact creates ambiguity; it becomes unclear what is scientifically verifiable regarding whales based on Ishmael’s information.
CHAPTER 4

**Naming the Whale**

An important aspect in Melville’s novel is the naming of Moby Dick, both the whale and the novel. In science, classification and nomenclature is essential to organizing knowledge and understanding the natural world. When something is named by science, it is done so because it possesses characteristics setting it apart from similar items. Beale spends several pages clarifying the differences in the scientific names of the sperm whale used by numerous naturalists and describing the difficulties in attempting to give definite whale characteristics. He claims he provides this discussion “To convince the reader of the utter confusion which exists among the historians of this animal” (Introductory Remarks). His discussion makes clear the importance of naming in the scientific community.

Giving a specific name to a creature in science denotes it is unique enough to be designated as separate. The whale that comes to be known as Moby Dick is certainly unique, and Melville’s designation of a specific sperm whale as “Moby Dick” acts in a very similar way as a scientific classification. It is possible Melville was influenced by the classification structures he found in Beale to set Moby Dick apart from other whales through nomenclature. As is true in a scientific sense, once something is designated with a specific name it must be proven different enough to be justified in being labeled. In many ways, Melville’s inclusion of specific information about Moby Dick performs this function. Melville portrays Moby Dick as unique and the information he provides about
other whales is presented as a way of juxtaposing Moby Dick with “typical” sperm whales. Ishmael emphasizes this difference in Chapter 41 when he describes his emotions upon hearing about Moby Dick for the first time: “With greedy ears I learned the history of that murderous monster against whom I and all the others had taken our oaths of violence and revenge” (Melville 159). One physically distinctive feature of Moby Dick which adds to his mystique is his unusual color, which is explained as particularly working on the imagination in “The Whiteness of the Whale” chapter. Of the whiteness, Ishmael says, “It was the whiteness of the whale that above all things appalled me” (Melville 168).

In addition to the identifying unique physical features associated with Moby Dick, such as his “whiteness,” there are transcendent and historic properties attributed to him. A trait particular to Moby Dick is his association with Ahab. Although Ahab’s dismemberment is an event that could have occurred with any whale, it is essential to the narrative that Moby Dick seemed to target Ahab. This trait, as much as any physical characteristic, designates Moby Dick as a separate entity from all other sperm whales and is therefore in alignment with a scientific designation of a specific title. Although Melville designates Moby Dick as being a sperm whale, given his unique characteristics Moby Dick could be rather representative of a different species. Beale speaks of the extreme difficulty facing naturalists when attempting to classify the sperm whales under a collective category, since “they resemble each other in some respects, and differ so widely in other parts of their formation, and also in their habits, that they each necessarily belong to distinct classes of beings” (Introductory Remarks). With the name designated
by Melville and the metaphors he uses to create the image of Moby Dick, it could be argued Moby Dick is no longer even a whale, but something different.

Melville spends a large portion of the novel attempting to show how Moby Dick stands apart from other whales, and in places he portrays Moby Dick as separate from whales altogether. Ishmael says, “as of late the Sperm Whale fishery had been marked by various and not unfrequented instances of great ferocity, cunning, and malice in the monster attacked” (159). Considering Melville’s use of myths and legends Beale acknowledges as pure fabrications it seems Melville here is no longer describing a scientifically classified whale but an animal derived from mythology. In Chapter 41, Ishmael ponders “that unexampled, intelligent malignity which, according to specific accounts, he had over and over again evinced in his assaults” (160). Here and elsewhere it becomes clear how much Moby Dick is different from other whales.

Naming Moby Dick also makes this one specific whale stand out against a multitude of others. The combination of unique characteristics and bearing its own name makes Moby Dick entirely separate from other whales. The scientific information regarding whale anatomy shows what a whale looks like, but Moby Dick does not resemble this description. In addition to his whiteness, Moby Dick has a “deformed jaw” and “wrinkled brow.” Ishmael says, “Nor was it his unwonted magnitude, nor his remarkable hue, nor yet his deformed lower jaw that so much invested the whale with natural terror, as that unexampled, intelligent malignity” (Melville 163). Melville places an emphasis on multiple distinguishing characteristics of Moby Dick.

Additionally important, from the perspective of scientific nomenclature, is the title the subtitle of the novel- *Moby Dick; or, The Whale*. Moby Dick is not only named
as a character, but the entire work bears his name. Moby Dick is the goal of the journey of the Pequod, the centerpiece of the entire novel. The subtitle does not contain the generic article “a,” rather the very distinctive “the.” The subtitle “or, the Whale” acts as much of a subtitle for the creature Moby Dick as it does for the novel. Moby Dick becomes the embodiment of scientific and mythological information presented by Melville in the text, encompassing all scientific information regarding sperm whales gleaned from Beale, and more. Moby Dick is not representative of ordinary whales, for he is not “a” whale, but “the” whale. Melville also leaves the specific species of “the” whale ambiguous, perhaps purporting the possibility of Moby Dick representing a different scientific species.
CHAPTER 5

The Role of Beale and Science in *Moby Dick*

Melville uses the information provided by Beale throughout *Moby Dick* as a means to provide a literal image of whales and to propel the narrative. In general, science plays an important role in the novel by enhancing the narrative. However, the science provided by Melville, or information he portrays as scientific fact, is not always accurate, as is evidenced by his use of myths and exaggerating characteristics regarding sperm whales. It is possible, therefore, that the use of science in *Moby Dick* is representative of Melville’s attitude about the value of scientific knowledge: certain aspects of nature can be contained within the confines of science, but the vastness of nature exceeds the full grasp of the human mind. In Chapter 105, Ishmael says, “if ever the world is to be again flooded. . . then the eternal whale will still survive” (Melville 413). Here and elsewhere Melville suggests that humans possess great knowledge about whales but there remains a wealth of information left unknown.

In *Moby Dick*, it is the unknown contrasted with the known that rapidly increases the image and size of whales for readers. The scientific chapters of the novel highlight how much is known by naturalists concerning whales, but Melville quickly juxtaposes this information with myth that is often in direct conflict with his provided “facts.” Chapter 32, “Cetology,” is the first of the formal chapters regarding whales and whale physiology, containing mostly information derived from science. However, even in this chapter Captain Scoresby is quoted as saying, “No branch of Zoology is so much
involved as that which is entitled Cetology” (Melville 117). Harold Beaver argues “the list [of whales] in Moby Dick’s chapter 32. . . is meant, of course, to stun the reader rather than introduce a true note of scientific inquiry” (Quoted in Sisk 80). The next chapter containing information regarding whales is Chapter 41, “Moby Dick,” which is primarily focused on legends and myths surrounding the whale. At one point, Ishmael acknowledges the belief by sailors Moby Dick may be “immortal” (163). Ishmael says that sailors were “overawed by rumors and portents concerning him” (161). It frequently seems this is the attitude Melville is hoping to inspire in readers regarding Moby Dick. By allowing the unknown and mythological to eclipse science, Moby Dick becomes larger than reality and unable to be captured by whalers or scientific fact.

Ishmael often presents information in the cetology chapters and claims at the end of the chapters he is either unqualified to comment on the information or it is impossible to convey everything about the subject in language. For instance in “The Prairie” after spending the majority of the chapter applying physiognomy to the sperm whale, Ishmael says, “Physiognomy, like every other human science, is but a passing fable” (Melville 311). He goes on to ask, “how may unlettered Ishmael hope to read the awful Chaldee of the Sperm Whale’s brow? I put that brow before you. Read it if you can” (311). Melville has Ishmael speak authoritatively about the scientific research in the chapter but a sudden change in confidence at the end happens on several occasions. Another example of this is in Chapter 86 “The Tail.” Throughout the chapter, Ishmael reports on the motions of the sperm whale tail: “Five great motions are peculiar to it” (337). He closes the chapter by saying, “The more I consider this mighty tail, the more do I deplore my inability to express it. . . But if I know not even the tail of this whale, how understand his head?”
(339). In these examples, Melville leaves the reader knowing less about the topic than when the chapter begins. The presentation of science contradicted with latter uncertainty suggests there is more to be known than human science presently knows. This technique enhances Melville’s assertion that the whale exceeds science, which aids in increasing the metaphysical magnitude of the whale. Suggesting the unknown aspects of the whale exceed the known increases the magnitude.

By the novel’s end, Melville has elevated the image of Moby Dick through science to the level of sublime. Barbara Glenn says, “terror is the ruling principle of the sublime: whatever is fitted in any sort to excite the ideas of pain, and danger, . . . whatever is. . . terrible. . . is a source of the sublime” (165-166). The sublime produces an unrivaled emotion of terror. It is the product of human incomprehension of some aspect of nature. Nowhere is this more evident than in the chapter “The Whiteness of the Whale.” Here the whiteness that eludes scientific explanation is a source of terror for Ishmael. He says, “there was another thought, or rather vague, nameless horror concerning him. . . I almost despair of putting it in a comprehensible form. It was the whiteness of the whale that above all things appalled me” (Melville 42). He goes on to say, “there yet lurks an elusive something in the innermost idea of this hue, which strikes more of panic into the soul than that redness which affrights in blood” (42). That “elusive something” is sublimity. Indeed, Moby Dick is the embodiment of the sublime (Glenn 169).

Therefore, the scientific information is not provided by Melville solely- or even most importantly- as a means of conveying actual scientific research. The science and physiology provided by Melville function most significantly as a means of enhancing the images of whales and Moby Dick in the minds of readers. Despite its plethora of
scientific data, at no point does the novel attempt to pass as a work of science nor is this Melville’s goal: Melville is more interested in conveying the image of his narrative than attempting to provide readers with a lecture in cetology. So the data Melville pulls from Beale functions to make the exaggerated sections of myth and purported fact seem even greater. And considering the lack of knowledge the common reader would have regarding whales and science surrounding them, Melville has to introduce readers to this information in order to later exaggerate it.

In Chapter 32 Ishmael begins by saying, “at the outset it is but well to attend to a matter almost indispensable to a thorough appreciative understanding of the more special leviathanic revelations and allusions of all sorts which are to follow” (Melville 116). This marks the beginning of the cetology chapters, which provide dense details about whale skulls, organs, and other anatomical features. These chapters are essential to Melville’s complete image and exaggerated metaphor of Moby Dick he is attempting to convey. The presence of science is essential so Melville must educate readers concerning whales and whale anatomy, which he will then inflate, augment with myth, legends, history, rumors, and other types of information to produce the image of Moby Dick as both real and mythically more than real.

The goal of Melville’s inclusion of Beale and science is to provide enough information to create an enhanced image of Moby Dick. His scientific chapters are often extensive and comprise a large portion of the second half of the book. Regarding the amount of information available about sperm whales, Ishmael says in Chapter 32, “the sperm whale, scientific or poetic, lives not complete in any literature. Far above all other hunted whales, his is an unwritten life” (117). By providing an extensive amount of
research and showing that an entire area of science is dedicated to whales, the image of the sperm whale grows larger.

It is essential to the narrative that Melville depicts Moby Dick as the most terrifying and threatening creature possible. The inclusion of factual science from Beale works to enhance this image to a point, but the unfortunately tame actuality of sperm whales does not help the image Melville is attempting to create, nor would it support the narrative. It is important for the Pequod to be both hunter and hunted, and it is even more important for Moby Dick to be hunter as well as hunted, but it would be factually impossible for Melville to use the information as it is presented from Beale and still convey this picture. Therefore, Melville’s careful selection of research from Beale portrays both representation and tactful misrepresentation. Melville uses information from a variety of naturalists, but the details used from Beale’s text contribute the greatest to forming the most frightening image.

Beale’s text is specifically important to the science in *Moby Dick* as it allowed Melville to represent a culmination of scientific knowledge from a single volume. In addition to the science and whale anatomy he gleaned from Beale, he also gained information concerning whaling and incidents that potentially fueled his creation of the narrative. Melville biographer Hershel Parker says, “Beale proved to contain information that Melville could manipulate so as to give the impression that he had read more reference books than had in fact come his way” (731). In turn, Ishmael is able to sound as if he has read more resources than he possibly actually has. In addition, the variety of information provided by Beale allowed for Melville to be flexible in his presentation of accurate scientific information. Parker describes the author’s novel as “a manuscript that
gave him proper sea-room to tell the truth in” (766). Beale gave Melville enough freedom with scientific information to weave fact and fiction and create the image of Moby Dick and successfully elevate the whale in the narrative.

As an asset to Melville, Beale’s text was extremely valuable in providing enough accurate information in addition to supplemental myths and rumors. It is equally important that Beale attempted to resolve these myths surrounding sperm whales with scientific information, as this gave Melville grounds to give examples and call the science into question. Although Beale consistently attempts to portray the sperm whale as docile, in the latter portion of his work concerning whaling he gives multiple examples of whales attacking and destroying ships, specifically the Essex. Beale says, “It is a well authenticated fact, that an American whale-ship called the “Essex” was destroyed in the South Pacific Ocean by an enormous sperm whale” (Beale). The seeming contradictory nature of this information runs contrary to the message about sperm whales Beale portrays in the first part of his work and is ripe material for Melville to utilize. In Chapter 45, Melville says, “That point is this: The Sperm Whale is in some cases sufficiently powerful, knowing, and judiciously malicious, as with direct aforethought to stave in, utterly destroy, and sink a large ship; and what is more, the Sperm Whale HAS done it” (Melville 185). For this reason, Beale’s text was of extreme importance to Melville as it gave him the ability to use the science while simultaneously being given enough room to work in the possibility of the myth being true. The realm of possibility is where Moby Dick achieves the greatest magnitude.

Melville was writing a work of fiction and in no way possessed any responsibility to provide accurate scientific information to readers. Melville could just as easily have
fabricated all of the knowledge regarding whales from his past experiences or purely based it on myth entirely. However, science is still an extraordinarily influential factor on the novel whether it is in form or content. Melville’s *use* of science and, more specifically, of Beale’s work are integral to the success of the narrative of *Moby Dick*. There is accurate scientific information regarding whales and cetology in *Moby Dick*, but purely concentrating on these sections would strip the novel of its greatest component, which is the grand metaphor created by Melville with the juxtaposition of science and myth. This juxtaposition creates ambiguity that would have been potentially impossible without the use of Beale’s text. The science in *Moby Dick* is not valid in its entirety, but this arguably makes the work even more impressive from a literary perspective when considering Melville’s ability to contextualize the text from a scientific angle and still achieve a mythological depiction of Moby Dick. Also, it is a unique example of a primary work of science being used by an author to enhance a work of fiction. Regardless of the science, Beale clearly proves to be one of the most influential factors on Melville in composing *Moby Dick*. In Chapter 104, Melville says, “To produce a mighty book, you must choose a mighty theme” (Melville 407). In writing *Moby Dick* Melville certainly chose a mighty theme. Even considering the questionable validity of much of the science, the whale’s magnitude by no means diminishes, nor does the magnitude of Melville’s *Moby Dick*. 
WORKS CITED


VITA

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