

**MOBY DICK AS AN EARLY APPLICATION OF THE HEAT-DEATH METAPHOR**

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**Abstract**

*A close reading of Moby Dick shows that Herman Melville's 1851 novel incorporates an early notion of the "heat death" concept that was to become familiar to the scientific world in the last half of the nineteenth century. Heat death, the logical consequence of the empirical observation that an engine cannot produce enough energy to fuel itself, has philosophical implications for literature because of the further observation that the ultimate result of heat dissipation is the end of all things. Although there is no evidence that Melville was knowledgeable about recent discoveries in thermodynamics, he nonetheless employed the heat metaphor in a complicated and somewhat unstable pattern throughout Moby Dick.*

When Herman Melville booked his return trip to America from England in 1850, he had a novel choice in modes of transportation. He could either take one of the new steam-powered ships and cross the Atlantic in a few days, or he could sail on a traditional wind-driven ship and cross in a few weeks. Melville decided on the latter, perhaps in part because he wanted to save the then-substantial surcharge of \$100 for the faster steamships, or perhaps because the extended sailing time offered the writer a quiet period to begin planning his next novel, *Moby Dick* (Parker 643). However, the very choice that Melville had made in transportation perhaps also led him to muse over the significance that the newfangled steam engines had for the world in general and seafaring in particular.

Melville may have also pondered the scientific and technological changes that were so profoundly changing his home country. Melville was apparently not an avid reader of the science of his day, as evidenced by a list of the 568 books he is known to have read or at least perused during his lifetime (Sealts). But one doesn't necessarily have to be steeped in the language and the details of experimental science and its resulting technology to be immersed in its social and even metaphysical consequences. The purpose of this paper will be to demonstrate that *Moby Dick* incorporates an early notion of the "heat death" concept that was to become familiar to the scientific world in the decade Melville was writing his major novels. Heat death, the logical consequence of the empirical observation that an engine cannot produce enough energy to fuel itself, was to become a significant metaphor for writers

such as Mark Twain and Henry Adams. But as the work of Leo Marx on the relationship between literature and technology has shown, the locomotive as a symbolic device in the works of the 1880's actually had antecedents in earlier literature. It stands to reason that a scientific concept such as heat death, like new technological advances, could also be reflected in earlier texts.

Before turning to a reading of Melville's magnum opus, it is first necessary to discuss briefly the history of the idea of heat death as it emerged in the mid-nineteenth century, and also to explain further the assumption that industrial metaphors can exist with little or no reference to actual machines. In the 1850s an idea arose that gained prominence rapidly and persuasively: not only would the new steam machines uniformly fail to keep themselves running by producing their own power source, but would not even come close to breaking even. Moreover, this ultimate dissipation of energy seemed to be hard-wired into the very structure of the universe. Therefore, all observations of machine phenomena showed that the heat from the functioning of the device would leak into the environment and spread out evenly. As an end result, all concentrated sources of energy would eventually be used up and all heat would ultimately fan out evenly throughout the universe. Hence the term "heat death."

Indeed, works later than Melville's novels such as *The Education of Henry Adams* demonstrate a sophisticated and nuanced understanding of heat death, but the basic principles by Adams's time had been bandied about in the popular press for decades. According to N. Katherine Hayles, the nineteenth-century understanding of thermodynamics and especially entropy—and development of a new metaphor for the ultimate fate of the universe—dates to an article printed in German in 1850 by Rudolf Clausius titled "On the Motive Power of Heat, and on the Laws Which Can Be Deduced from It for the Theory of Heat," and from papers published in English in 1852 by Lord Kelvin (Hayles 209-37). Although no evidence exists that Melville was familiar with either of these works, Melville's lifetime reading list shows that he indeed read a few books on popular science during the time he was writing *Moby Dick*. For example, his brother Allan gave him a volume of the Baron Cuvier's *The Animal Kingdom Arranged in Conformity with its Organization* on Jan. 1, 1851, when Melville was at work on the novel (Sealts 54). Also, a few years before, Melville had purchased a copy of Darwin's *Journal of Researches into the Natural History and Geography of the Countries Visited During the Voyage of the H.M.S Beagle* (Sealts 55) But in the latter case, the question is whether Melville was interested in the book as an early report on variations in species, or as a literary account of a sea voyage. Likely the answer is a bit of both—that Melville avidly read other writers' accounts of sea voyages, but was also interested precisely what they were up to in embarking on their adventures. Melville also checked out an introductory book on visual astronomy from the New York Public Library in the years he was writing *Moby Dick* (Sealts 60). But again, his interest in the topic may have been motivated more by his enthusiasm for researching all things related to sea adventures than by a drive to apprehend all things of the natural world for knowledge's own sake. After all, a working knowledge of the heavens was crucial in Melville's day to any sea navigator who wished to keep his boat off the coastal rocks and sand bars.

Nor does the record of the textbooks Melville used during his spotty formal education display much innate enthusiasm for the formal study of science. In an 1828 letter to his maternal grandmother, the nine-year-old Melville reported (in “the third letter that I ever wrote”) that his class was studying “Geography, Gramar [sic], Arithmetic, Writing, Speaking, Spelling,” and that they were “reading in the Scientific class book.” (Sealts 8) The Melville scholar Tyrus Hillway has suggested that this book was Levi W. Leonard’s 1825 textbook *The Literary and Scientific Class Book, Embracing the Leading Facts and Principles of Science*. (Sealts 8).

In sum, it’s hard to argue that scientific fact was Melville’s foremost concern, and probably no one ever has attempted to do so. But the formal role of the scientist and the metaphoric constructions that become the province of the fiction writer attempting to apprehend the world about him are perhaps mutually compatible in the sense that an organic metaphor depends in some sense on its connection with the reality of everyday, solid objects to avoid drifting into parable or allegory. This idea has been in play since Samuel Taylor Coleridge published his *Biographia Literaria* in 1817, but a 1987 work by Leon Chai, *The Romantic Foundations of the American Renaissance*, adds that the transformation of metaphor from a base of allegory (i.e., the thing is a renaming of another thing, with no real-world material connection) to a base of synecdoche (i.e., the thing is a renaming, but the renaming takes as its basis a part of the other thing) is central not only to the Romantic poets of England, but also to the great American writers of the nineteenth century who were heavily influenced by them. Chai describes the outcome of this shift in figurative language thus:

Among such concepts and tendencies I include the shift from allegory to symbolism, that is, from a mode of writing based upon a theory of correspondences between fictional signs and their objects to one that attempts to reveal through Nature an immanent divine presence; forms of science in the Romantic Age, including biological classification, vitalism, and the theory of probability; the secularization of religion; the gradual emergence of a historical consciousness and a philosophy of history; pantheism; the theory of subjectivity and objectivity in Romantic philosophy, that is, the relation between mind and or self and external Nature; and finally, Romantic poetics or theory of literature, with its emphasis upon the role of the creative and perceiving consciousness. (Chai xi)

Chai offers an elaboration in a passage about Ralph Waldo Emerson a few pages later. If one tacitly assumes the M.H. Abrams view that the Romantic movement was largely about the consciousness of the self as opposed to the earlier view of the self as a body reflecting outside influence, then it follows that any symbolic structure somehow relates to self-consciousness. Chai calls this “the mind’s relationship to its own allegory,” and notes that Emerson is acutely concerned with “the experience of pure seeing, devoid of all phenomenal content received through external impressions” (8). Chai further states:

In such experience, the mind necessarily confronts the process of its own consciousness, or the reality of consciousness itself. This sublime moment Emerson also characterizes as an apprehension of the divine essence. For him in his early phase, that essence is nothing other

than consciousness's apprehension of itself. At such moments, all trace of individuality or self disappears. What remains is the overwhelming experience of divine consciousness. (8) Notions about "divine consciousness" do not necessarily comport well with a thoroughly agnostic metaphor such as heat death, unless one takes into consideration the possibility that, for Melville, it is this very moment of total disappearance of individuality that makes the possibility of heat death—and the obverse possibility of islands of existential concentration, or "energy concentration"—a vital concern for the individual consciousness.

My argument is that the heat-death metaphor's overall aesthetic function in *Moby Dick* is that of a unifying, organic principle that implicates the reader into the universe of Ishmael, Ahab, and of course, the whale itself. Further, the heat-death metaphor must necessarily have something to do with either converging or diverging spheres of influence, power, concern, or mere essence, for the metaphor is inherently involved in accumulation, stasis, or dispersal. Also, because it is difficult to see how a grand epic of such gigantic human achievements and failings Captain Ahab's could have anything to do with stasis, then it follows that the novel is involved in the flow of energy, however metaphoric. And finally, given that technology has been an important in American literature, then it is ultimately necessary to question whether the notion of heat death" in *Moby Dick* is an appropriate one for American intellectual history. To discuss the last point, it is necessary to return to Leo Marx.

To draw Marx's argument fully into a discussion of heat death as a metaphor necessitates the introduction and discussion of an additional metaphor—namely, the primeval garden as a proving ground for Americans. Marx's most influential book, *The Machine in the Garden*, argues that many important facets of American culture—not to mention much of American literature—can be summed up as the complex interaction European immigrants to America have had with the environment in the construction of a new order. In other words, Europeans have, for the last 500 years, held the virginal land in the New World in high esteem, but ironically have done so only insofar as the virginal land is suitable for exploitation. Hence, the "machine" is the various machinations European settlers have undertaken to exploit the garden of the bountiful new world for their gain. "Machinations" is an appropriate substitute word in this regard, because Marx is not primarily concerned with a history of given technologies such as the internal combustion engine or steam engine, but rather the impetus that has put those machines to use.

Therefore, Marx sets up a bipolarity in which there is an arcadia, on the one hand, and an intrusive engine of progress, on the other. The standard metaphor for this machine in the mid-nineteenth century is the locomotive, but Melville's *Moby Dick* is not necessarily limited to a standard repertoire of literary artifices. In fact, the fact that the novel concerns a whale search on a boat employing technology that is now quite archaic posits the question of whether the "machine in the garden" motif is even valid. The reading of *Moby Dick* that follows will attempt to answer this question in the affirmative, beginning with the assumption that the whale is indeed related to mankind as an organic metaphor, that the whale focuses the gaze of representative man in the forms of Ishmael and Ahab because of the whale's own sublime nature, and that Ishmael himself embodies the very schizoid attitude American society has

had toward technological progress in the New World. Ultimately, the reading will ideally answer the question of what “heat energy” precisely is dissipating, if the heat-death metaphor is indeed valid.

A longer study of the heat-death metaphor in Herman Melville’s novels would argue that there are very fundamental differences in how he employs the concept. For example, *The Confidence-Man* links optimistic investment on the individual’s part with the ultimate fate of the American sphere of influence, whereas *Benito Cereno* sets up disturbing questions about the relationship between capitalistic exploitation and justice in the drive toward global hegemony. But in *Moby Dick*, the primary metaphor relating to American power is fire, sometimes coming in the form of the dozens if not hundreds of references to the sun, and others having to do with fire-like dispositions, fervent desires for revenge, and such. Perhaps the most general blanket statement about Melville’s approach to the metaphor of concentrating or dissipating energy (heat concentration or heat death) is that there is no middle ground, that either one or the other is destiny for all beings and all entities, and that the time will ultimately come in the modern world—and especially in an America often regarded as the New World in the sense of the “new hope”—when one pathway will inexorably be taken. To quote once again from Leo Marx:

True, it may be said that agents of urban power had been ravaging the countryside throughout recorded history. After they had withdrawn, however, the character of rural life had remained essentially unchanged. But here the case is different: the distinctive attribute of the new order is its technological power, a power that does not remain confined to the traditional boundaries of the city. It is a centrifugal force that threatens to break down, once and for all, the conventional contrast between these two styles of life. (32)

The fact that Ishmael will mediate this contrast is one reason why he is assigned the task of narrating the story. Neither a firebrand who would strike the sun that offended him, nor a milquetoast who would confine himself to tending his own hedgerow and letting the world do as it will, Ishmael is, in fact, the ideal narrator and ideal observer at the same time, because his very undecidability also serves to provide dramatic tension throughout the entire 600-plus pages of text.

The story of the whale hunt is literally not finished until Ishmael is safely on the deck of the *Rachael*, even though the prime human mover of the tale, Ahab, has already been crushed when whipped out of the boat, or else has drowned with all the others in the whirlpool left by his sinking ship. And, as has been pointed out countless times by generations of readers, Ishmael’s undecidability begins with the very first three words of the text, with the tentative “Call me Ishmael” leaving us perplexed as to whether we even know his real name. But it is a bit of heat that he is after, for he states his returning to sea as his need to deal with “the damp, drizzly November in my soul,” and it also fends off existential oblivion, for “this is my substitute for pistol and ball” (Melville 4). Moreover, the sea offers a sort of pastoral retreat, albeit a complex one, for the waters of the world are not solely American, but paradoxically, are nonetheless an Arcadian playground where a certain type of economic endeavor can further American hegemony. Also, it should be pointed out—though Ishmael doesn’t—that

water is incompatible with fire. Thus, a certain type of fire in the soul can be quenched with water, and Ishmael thinks this is true of many human beings:

Why is almost every robust healthy boy with a robust healthy soul in him, at some time or other crazy to go to sea? Why upon your first voyage as a passenger, did you yourself feel such a mystical vibration, when first told that you and your ship were now out of sight of land? ...Surely all this is not without meaning. And still deeper the meaning of that story of Narcissus, who because he could not grasp the tormenting, mild image he saw in the fountain, plunged into it and was drowned. But that same image, we ourselves see in all rivers and oceans. It is the image of the ungraspable phantom of life; and this is the key to it all. (5)

Surfaces of water, then, are not only the homeostasis of life, the “ungraspable phantom,” but also the reflecting surface by which one’s own consciousness is perceived. This is an important consideration, for while it is not particularly difficult to link the whale with the sublime because of its sheer terror—and by extension link it to the organic metaphor favored by the Romantic poets and their successors—it is somewhat more arduous a task to do the same with a mere reflecting surface. Yet the task can be accomplished, because water not only holds its own terrors (which are addressed in later parts of the novel, but not necessarily in the opening chapter), but it also makes clear that the self-reflection of a human being’s own essence is also an integral part of the natural world, and thus a viable symbol in a symbolic system that employs individual entities as synecdoches for the whole.

Ishmael’s ambivalent nature comes into play again in the early pages, when he says he prefers not to be a cook on ship, but will settle for the less remunerative position of “a simple sailor” (5-6). Yet, he is not necessarily inured to the discomforts that come with the life of one who is closest in spirit to the “magic stream,” because the bitter cold of New Bedford when he arrives in the dead of winter has him quickly scurrying toward the Swordfish Inn, from which emanated such warm rays of light “that it seemed to have melted the packed snow and ice from before the house, for everywhere else the congealed frost lay ten inches thick in a hard, asphaltic pavement” (10). However, he catches himself and decides to forego a stay at the Swordfish Inn because it is “too expensive and jolly” (10). Ishmael is indeed one of the many Americans who can’t decide whether he prefers the garden, or the factory and its mechanized output that provide them the economic leisure of additional garden-time.

Finally, Ishmael compromises and head for the “out-hanging light” of the Spouter-Inn, where he also encounters the stiff northwest wind the Greeks knew as “Euroclydon,” thereby departing for a moment from the heat metaphor to the energy of the winds (though perhaps Melville had heard by 1851 that the sun’s energy was responsible for the winds and all other weather phenomena). But the wind allusion is not a departure from the heat metaphor, for Melville explains that when “thou observest it from that sashless window, where the frost is on both sides”—in other words, when the observer is in thermal equilibrium with the outside environment, “the wight Death is the only glazier” (11). Therefore, totally abandoning oneself to the surroundings is loss of self. But paradoxically, failing to do so is a death of an even worse sort, as is the case with Dives when he finds himself in Hell after a life of luxury. Dives asks for the beggar Lazarus, who has died and gone to have, to bring a drop of water to

place on his burning tongue. Abraham, who is apparently acting in the stead of God Himself in this particular parable, replies more or less that the exchange of things is confined to life, and though Dives refused to let Lazarus have even a crumb when the two were living, he must now come to terms with the fact that “the great gulf is fixed” (King James Version, Luke 16:19-31). Ishmael, in retelling the parable, stops short of the interpretation by Abraham, focusing instead on the coldness of Lazarus on the street and the warmth of Dives in his home, but stating that Dives himself lived in an “ice palace” due to his isolation from human concerns (12)

Ishmael, taking his room in the Spouter-Inn, is soon lying in his bed in a cold room, associating the preference of confining himself to the warm bed with the necessity of having done so when, as a child, he climbed up the chimney at home (28). This comically depressing thought of confinement to warmth as a source of punishment is mediated, however, by his having hit it off well with the islander Queequeeg, with whom he shares the warm bed. Ishmael and Queequeeg share more than mutual bodily warmth; they also belie the innkeeper’s wry observation that there may be “too many heads in the world” with a genuine feeling of brotherhood (19). No longer confined to the provincial New England whaling culture where people of like backgrounds huddle together to achieve their economic ends, Ishmael finds himself more naturally affianced with a person from a culture as different from his own as it can possibly be. The sun also makes its first appearance in these pages, when Ishmael speculates that the hot sun of the tropical South Pacific islands is responsible for Queequeeg’s skin tone (23).

Another kindred spirit whom Ishmael finds in New Bedford is Father Mapple, who enters the chapel to preach his sermon during a winter storm with no umbrella. “His tarpaulin hat ran down with melting sleet, and his great pilot cloth jacket seemed almost to drag him to the floor with the weight of the water it had absorbed” (43). Shucking off the weight of the water, Father Mapple proceeds with a sermon built around the book of Jonah and the story of its eponymous character’s being swallowed by a whale. He, like Ishmael, departs from the standard Biblical text in tone, but substantively in his assertion that the story provides “a lesson to me as a pilot of the living God” (47). Mapple is not God himself, nor is he Jonah, but instead is the mediator between God and those in his own day who need to learn the lesson that Jonah learned. Further, he imparts the lesson by dint of “what murky light may be mine” (53). Being appointed the pilot-prophet has its requirements of broadcasting “those unwelcome truths in the ears of a wicket Nineveh,” and the shirking of this duty will result in death, unless a last-minute act of repentance resurrects one from the “shuddering cold and blackness of the sea” toward “the warm and pleasant sun” (53). The finality of the game of life comes with the final exhortation “O Father...I have striven to be Thine, more than to be this world’s, or mine own” (54). There may be a choice, but choosing the pathway of the world or self-fulfillment is fulfillment. Yet, it is impossible to live in the world while being totally “Thine,” because to do so is, like Ishmael’s choice, one of self-negation and oblivion. Ishmael and Mapple may differ in their theology, but their available choices seem very similar.

After being properly shrivened and later having acquired another insight on the nature of warmth while in bed with Queequeg (“to enjoy bodily warmth, some small part of you must be cold” (59)), Ishmael is ready to sign himself onto a whaling vessel. In doing so he discovers that not all Quaker ship owners subscribe entirely to the advice Abraham gave the hapless Dives, for Captain Bildad drives so hard a bargain that Ishmael is inclined to remind him of the scriptural injunction to “Lay not up for yourselves treasures upon earth” (85). In any case, Ishmael is learning fast that “this world pays dividends,” and that, regardless of his own inclinations, the whole affair of whaling is a business enterprise from beginning to end. Or at least he assumes this to be so until Ahab’s motives are brought to the light.

By the beginning of the voyage, the text has provided sufficient details for the reader to know how the heat metaphor will function through the remainder of the book. We have seen that neither an overabundance of heat nor of cold is good for the body physically or morally; that Christianity can be interpreted as being complicit in this regard as long as one is human (with death, of course, offering the up-down dichotomy of heaven or hell); that heat and its absence can be inverted (Dive’s “hell” being an “ice-castle” on Earth); that human commerce and communal currency-free cooperation both somehow being associated with the warmth of human interactions, and that the mediator between warmth and cold is both a storyteller of the past and, to the extent, perhaps, that one chances the possibility of oblivion, a seer of the future. But Captain Ahab is a different case entirely.

When the Pequod sails out of Nantucket on Christmas morning, Captain Bildad offers what seems to be a naïve estimation of Captain Ahab, who he knows well:

“I hope ye’ll have fine weather now, so that Captain Ahab may soon be moving among ye—a pleasant sun is all he needs, and ye’ll have plenty of them in the tropic voyage ye go.” (114)

Many a reader, upon becoming acquainted with the manic drive of Ahab, has probably thought back to these lines as either displaying the limited knowledge of Bildad, or as an ironic red herring on the part of Melville. But relative to the heat metaphor, the line is not particularly even ironic, for Ahab is indeed a creature who needs sun, because a sun-like concentration of power is essentially what he wishes to become. Subsequent to the introduction of Ahab, there are literally dozens of references to the sun, though by no means all are direct references to him. Ishmael, for example, defines the sun early in the book as a sort of analogue to Plato’s allegory of the cave: “In looking at things spiritual, we are too much like oysters, observing the sun through the water, and thinking that thick water the thinnest of air” (42). Ishmael here is discussing death in the chapter that includes the chapel cenotaphs. Undoubtedly musing on memorials to humans whose bodies are never recovered, Ishmael likens his Earthly existence to “a shadow,” with his body being “but the lees of my better being.” The sun, therefore, stands for the truth, which is often difficult to see because of the muddied vision between it and the observer. But the very difficulty in perception tends to make the observer himself less corporeal. And, in addition to standing for truth, the sun is also likened to closeness to God. In Mapple’s sermon, God “spake upon the fish; and from the shuddering cold and blackness of the sea, the whale came breaching up towards the warm



and pleasant sun, and all the delights of air and earth, and vomited out Jonah upon the dry land” (53).

Not only is Ahab likened to the sun throughout the novel, but also fire. In his first bodily appearance in Chapter 28, for example, Ishmael perceives him as “a man cut away from the stake, when the fire has overrunningly wasted all the limbs without consuming them, or taking away one particle from their compacted aged robustness” (134). This metaphor, grim as it is to liken a person to one burned at the stake, reinforces the already stated opinion of Ahab’s acquaintances that the sea captain has been, in effect, tested by fire, or perhaps reforged in the smithy of the soul of an indifferent creation, or even purified of all excess corporeal essence. Any reference to a person being “tested by fire” can normally be taken as a cliché, but Melville has by this point in the text laid the groundwork of the firing of human bodies as an organic metaphor. To say that Admiral Horatio Hornblower was tested by fire might be a cliché, but to say the same of Ahab is not, for the reader is already involved in a pattern of metaphor that links Ahab with the concentration of heat energy. What’s more, Ahab has the distinction of being both a man who has been tested or purified by fire, as well as one who burns as a fire himself. And as if anyone would miss the point of his having been through the fire, he is also described as having a lightning-like scar running from his face to an undetermined point inside his clothing. “Not till he was full forty years old did Ahab become that way branded, and then it came upon him, not in the fury of any mortal fray, but in an elemental strife at sea,” Ishmael is told (135). So the test of fire is not merely a quarrel or fight with another human, or something of the sort, but an existential struggle against the very texture of creation.

Apparently Ahab burns literally as well as figuratively, for Stubb relates some information from the cabin boy after his frightening encounter with the captain early in the voyage:

Didn’t that Dough-Boy, the steward, tell me that of a morning he always finds the old man’s hammock clothes all rumpled and tumbled, and the sheets down at the foot, and the coverlid almost tied into knots, and the pillow a sort of frightful hot, as though a baked brick had been on it? A hot old man! (139)

And on top of it all, Ahab smokes. But reminded of the death of a harpooned whale, Ahab realizes that a man such as he, walking along the deck giving off vapors, belies his hoped-for immortality:

Here I have been unconsciously toiling, not pleasuring,—aye, and ignorantly smoking to windward all the while; to windward, and with such nervous whiffs, as if, like the dying whale, my final jets were the strongest and fullest of trouble. What business have I with this pipe? The thing that is meant for sereneness, to send up mind white vapors among mild white hairs, not among torn iron-grey locks like mine. I’ll smoke no more. (141)

It is significant that Ahab rejects the pipe because he doesn’t want to be lulled into pacification. In effect, he throws the fire away so that he can burn even more. Fire, then, can paradoxically be a becalming as well as a consuming.

The sun, a complex metaphor even before the Pequod has been long to sea, continues to take on new significance as the voyage progresses. In the “Quarter-Deck” chapter in which Ahab

takes the entire crew into collusion on his quest to kill the white whale, “the ratifying sun” is the entity validating the pact (181). Pouring up a drought that’s “hot as Satan’s hoof,” in a sort of upside-down Eucharist, Ahab and his crew lift their goblets and drink “with a hiss.” And sometime later the same day, as Ahab watches the sun go down, “my soul mounts up” (182). Here, the sun is not merely a regulator of Ahab’s rising and falling energy, but almost an antagonist; it is not any longer so much as a “ratifying sun” as a sign that Ahab is burning brightly in his quest for the white whale, but also using himself up: “Oh, hard,” he says, “that to fire others, the match itself must needs be wasting” (183).

To return to the notion of heat death, the question emerges whether Ahab’s endeavors are a dissipation or an accumulation. He is the latter, because the “hot fire of his purpose” requires him to “use tools,” which in turn requires “intellectual mastership...in a sort of corporeal relation” with his men and the ship itself (230). Much of the technology of the ship is standard fare for whaling voyages, perhaps most vividly described in the section about the try-works. Here, the quest of the whalers to concentrate their energies into obtaining a single concentration of energy--refined oil—is a romantic but ultimately economically-driven endeavor that defines the Nantucketers as a particularly American manifestation of Yankee derring-do. So the American economic engine emerges as an inherent concentration of energy, for the whalers of Nantucket and New Bedford have a singular purpose in getting the best oil for the world market, albeit an oil that comes from the particularly dangerous sperm whale. The cost is high, but the profit is high as well, and the payoff for success about as certain as any human endeavor can be. But the try-works are designed to refine the oil of the generic sperm whale, not the older, experienced individual like Moby Dick, whose oil is of no more value than that of a younger, inexperienced bull who is more easily and safely killed. The killing of any sperm whale may be a concentration of energy, leading in a small but integral way to a greater concentration of American prominence in the world, but if one source of oil is as good as the next, then the taking of additional risks is ultimately a bad concentration of effort. Ahab, as both the concentration and embodiment of this effort, is thus like a sun burning out of control, perhaps warming the environs as any other such entity would do, but doomed to fail early and spectacularly.

Since this paper has argued that a symbol is, at the same time, both a representation of another thing and a part of it, the question also remains whether Ahab is both like a sun burning out of control, but at the same time in some literal way actually using himself up. This is not to say that all human thoughts and motives are inextricably bound to the material world, for as Ahab says at one point:

O Nature, and O Soul of man! How far beyond all utterance are your linked analogies! Not the smallest atoms stirs or lives in matter, but has its cunning duplicate in mind.” (340)

In other words, matter is always linked with mind, but there is also the implication that not all mind may necessarily be linked with matter. Yet, much is, and this linked part is that which allows the Starbucks of the world to go on orderly whaling expeditions—brutal, cruel, dangerous, and wasteful, perhaps, but still as orderly as any economic activity can be—in fruitful endeavors that add both to individual prosperity and to the commonweal. Ahab’s

excess is precisely that part which, between the lines, seems to argue that there is a possible excess of spirit available to humans that can be accessed through sheer force of will. This excess is an overabundance of the energy that spills over the correspondence between matter and spirit.

How, then, is Ishmael the mediator of the disequilibrium between matter and spirit? The answer can perhaps be adduced from a type of narrative form that the critic James Guetti ascribes to Ishmael. Guetti suggests that Ishmael's many references to cetology throughout the novel are indeed a specific use of language, but also a strategy linking the "spouting fish with a horizontal tail" with a sublime creature representative of "all that must lie beyond the confines of this narrow perspective" (Guetti 16). In other words, the very grounding of the textual image of the whale in the realities of the natural world comprise acts of attributing to the whale certain concepts that exist only in the mind. The whale as one encounters it in nature is indeed dangerous, and is so because of the size and muscularity of its tail, the whale's sheer mass, and its demonstrated instincts of self-preservation. But a physical description also leads to the sublime possibility that the enormous creature is also capable of vengeance—a trait of the mind that has no relevance to the natural world other than its potential for destruction. If such an accumulation of sheer energy can devote any available reserve of spirit it may possess to vengeance, then the strong likelihood exists that anything or anyone in its way will suffer for the experience. And this is precisely how the sublime becomes an aesthetic device in a text: the sublime object does not pose a real-life threat to the reader, but rather draws the human emotions into a gut-catching moment of terror when something deep inside the spirit responds to the realization, conscious or unconscious, that the reader's existence is indeed at the mercy of such forces of nature. The text, then, links to the real world in making the mind aware of its physical mortality.

Halfway through the text of *Moby Dick*, the reader has been introduced to the notion of Ahab as a kind of "sun," or accumulation of energy in the pursuit of a lofty goal, but also a disturbing, problematic "sun" in his very excess. The heat metaphor is inherently unstable, because its very overdetermination tends to send it in the other direction of signification—toward the nothingness that is the primary feature of a totally peaceful, calm acquiescence in an utterly indifferent and homogeneous universe of dissipated energy. The attentive reader, therefore, approaches the end of the text already long having perceived forshadowings of doom for Ahab, as well as for those who are sucked into his sphere of influence. That death will occur has already long been textually established, for the reader has already been informed that, at the time Ishmael is recounting the story of the *Pequod*, that Bulkington is deceased, and Queequeg as well (68, 117). While it is not made clear that Ahab is directly responsible for their deaths, the reader is gradually made aware of this possibility through the sheer excessive drive of

Ahab, thereby making him a sort of sublimely dangerous entity himself. Ahab ultimately becomes a more sharply distinguished character through a correspondence between himself and the sublime menace of the whale. Though this correspondence is never explicitly stated in the text, the reader has also been set on early notice that a whale is demonstrably capable

of revenge. In the “Affidavit” chapter—another helpful case in which the use of language as a conveyor of accumulated knowledge adds to the sublime terror of the whale—Ishmael recounts various occasions when a whale has turned on the whaling ship and either caused it serious damage or sunk it entirely. The grimmest of these is the sinking of the *Essex*, an 1820 occurrence with which nineteenth-century readers, at least, would have been quite familiar. According to a detailed narrative on the walls of the whaling museum on Nantucket, the public at the time was more absorbed by the acts of cannibalism among the castaways who survived the initial assault than the assault itself, but the message would have not been lost on nineteenth-century Americans that a whale could be capable of an act that led directly to the desperate survival measure of cannibalism.

That the whale could be aware of the self-destructiveness of revenge is not particularly important. For one thing, attributing such reasoning to animals is a bit too anthropomorphic for Melville and most modern readers alike. But Ahab can still be taken as the “Moby Dick of sea captains” insofar as he rejects the fear of self-destruction and forges ahead in his quest for revenge. The whale may ram a multi-hundred-ton, sturdily built ship with little thought to the mortal wounds it may receive, but Ahab also purifies himself for the confrontation with Moby Dick by purging himself of the fear of such consequences. The aforementioned act of giving up his pipe because it affords a too-human sense of soothed nerves, as well as every other perception by Ishmael the narrator, indicates that this is so.

If the question is how much Ahab and Moby Dick truly have in common, the answer comes in an otherwise innocuous discussion of whale anatomy from Ishmael. In the chapter on the tail of whales, Ishmael notes that a whale’s more natural instinct is to flick his tail in defense (444). This is significant because we are also informed in a later chapter, “The Dying Whale,” that sperm whales characteristically face the sun when mortally wounded, as if to meet finally the source of life and the pathway toward death. However, if the normal instinct of a whale is to face away from the source of imminent danger and use the tail as a defense mechanism, then the ramming of a ship head-on is akin to the act of defiance so characteristic of Ahab.

Piecing together various narrative hints from Ishmael, then, we are led to believe that Moby Dick—and any other whale that would face its tormentor head-on in defiance of death—is a being of the same stamp as Ahab himself. This sense of revenge goes well beyond the normal world of confronting dangers simply because revenge itself has no economic benefit. If a swipe of the tale is good enough for the typical whale who wishes only to go on with its destiny in creation—i.e., to reproduce and provide for those in the orbit of one’s concern—and a well-controlled whaling voyage where only nondangerous whales are taken is good enough for typical whalers like Starbuck who wish only to provide for their families, then revenge has no rational place in the material world. Therefore, only a magnificently destructive whale like Moby Dick would face its attacker head-on, turning from the sun in its imminent moment of danger and facing its would-be destroyer. And only a magnificently destructive whaler like Ahab would, himself, turn away from the sun so as not to mimic the death-throes of his adversary.

In conclusion, the heat metaphor is not a direct allusion to the science of the nineteenth century, but a complicated and somewhat unstable pattern throughout the novel giving added significance to the self-destructive motives of Ahab. As Ishmael told us long before the final confrontation, the state of warmth is not perceivable without a slight presence of cold, and by the same token, the mad dash toward an all-consuming revenge is not totally perceivable without the contrast of more reasonably motivated characters. Ishmael realizes that humans must live in a middle zone between an absolute and peaceful cohesion with nature, lest he fall off the mast and meet an even more final sort of oblivion, and an all-consuming drive to an ultimate goal, and this is the very contrast that adds a slight dash of narrative “cold” to Ahab’s excessive “warmth.”

The heat death metaphor, then, is in keeping with Leo Marx’s assertion that modern technology was more subtly evident in the mid-nineteenth-century American texts than those appearing later, when America unabashedly began its drive toward full-blown industrialization and reliance on technology to achieve its dominance in the world. Nevertheless, the fact that Ahab accumulates the energy of those around him, like a heat engine out of control, is eerily prescient of the theory soon to emerge in the world of science that all physical energy ultimately spreads out evenly in the world, to the point that individual entities will ultimately cease to exist. Even more eerily, perhaps, is the novel’s anticipation of the twentieth-century theory that an overabundant accumulation of energy will ultimately turn into nothingness.

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<sup>1</sup> In a 35th anniversary review of Marx's *The Machine in the Garden*, Jeffrey L. Meikle writes that "the initial stimulus for the book came to Marx in 1947, when he encountered a remark by the literary critic Edmund Wilson to the effect that American writers of the 1880s and 1890s were the first to respond to industrialism." Marx, however, believed that various mid-century texts were steeped in various allusions to the fruits of technology, and that the impact of industrialization could be traced in various works (Meikle 148).

<sup>2</sup> Actually, the novel begins with a dozen pages of "extracts" from various literary and historical sources through the centuries that have mentioned whales.

<sup>3</sup> Melville, Herman. *Moby Dick: 150<sup>th</sup> Anniversary Edition*. Penguin: New York, 2001. All subsequent quotations from the text will be taken from this edition.

<sup>4</sup> This reading assumes that Ahab's soliloquies are the imagined constructions of Ishmael based on the overt actions of Ahab, and not an occasional change of the first-person narrative voice to one of omniscience.